

# City of Bellevue Development Services Department Land Use Staff Report

Proposal Name: Filoteo Reasonable Use Exception & Variance

Proposal Address: 4628 125<sup>th</sup> Ave SE

Proposal Description: Critical Areas Land Use Permit and Land Use Code

Variance approval to allow 4,310 square feet of permanent disturbance to construct a single-family residence. The site contains a category III wetland, Type-F stream, steep slope, and their associated buffers and setbacks. No buildable area outside of these critical areas and buffers exists on site. The site is subject to the Reasonable Use Exception (RUE) limiting total disturbance to a maximum of 3,000 square feet. The Variance request is to exceed this maximum disturbance area by approximately 1,310 square feet and to provide additional lot coverage for development. The proposal is supported by a critical areas report, geotechnical report, and mitigation

planting plan.

File Number: 20-109420-LO, 21-101797-LS

Applicant: Jerry Filoteo

**Decisions Included:** Critical Areas Land Use Permit

(Process II. LUC 20.30P)

Variance from the Land Use Code

(Process II. LUC 20.30G)

Planner: David Wong, Planner

State Environmental Policy Act

Threshold Determination: Exempt (WAC 197-11-800)

Director's Decision: Approval with Conditions

Elizabeth Stead

Elizabeth Stead, Land Use Director Development Services Department

Application Date: May 26, 2020; January 25, 2021

Notice of Application Publication Date: July 16, 2020; April 22, 2021

Decision Publication Date: July 9, 2021
Project Appeal Deadline: July 22, 2021

For information on how to appeal a proposal, visit Development Services Center at City Hall or call (425) 452-6800. Comments on State Environmental Policy Act (SEPA) Determinations can be made with or without appealing the proposal within the noted comment period for a SEPA Determination. Appeal of the Decision must be received in the City's Clerk's Office by 5 PM on the date noted for appeal of the decision.

# **CONTENTS**

I.	Proposal Description	1
II.	Site Description, Zoning, Land Use and Critical Areas	2
III.	Consistency with Land Use Code Requirements:	7
IV.	Public Notice and Comment	10
V.	Summary of Technical Reviews	10
VI.	State Environmental Policy Act (SEPA)	11
VII.	Change to Proposal as a Result of City Review	11
VIII.	Decision Criteria	11
IX.	Conclusion and Decision	15
Χ.	Conditions of Approval	15

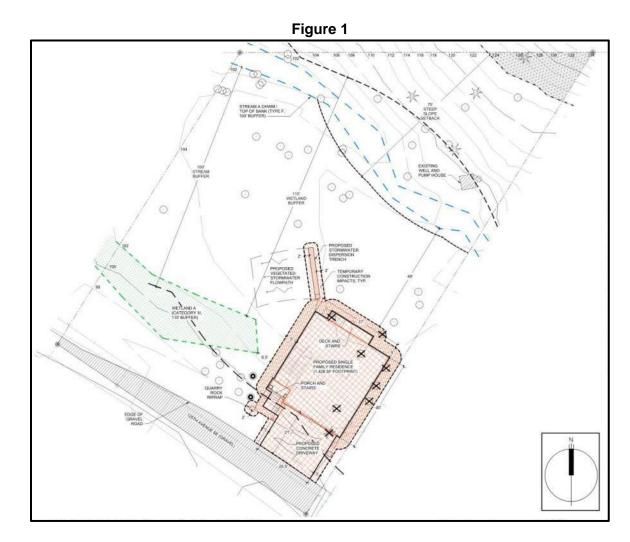
# **Attachments**

- 1. Site Plan
- 2. Mitigation and Restoration Plan
- 3. Critical Areas Study (in file)
- 4. Geotechnical Engineering Study (in file)

# I. Proposal Description

The applicant proposes 4,310 square feet of permanent disturbance to construct a 1,550 square feet single-family residence, 540 square-foot driveway, and to provide 5 feet of maintenance space around the proposed residence. The site is entirely encumbered by critical areas and critical area buffers, and therefore qualifies for a reasonable use exception under LUC 20.25H.200.

Proposals to develop a single-family residence on parcels that do not contain the minimum amount of developable area as specified in LUC 20.25H.200.A.2.i, in this case 3,000 square feet, are required to receive approval of a Reasonable Use Exception (RUE) through a Critical Areas Land Use Permit (CALUP). The Variance request is to exceed this maximum disturbance area by approximately 1,310 square feet, and to increase the allowed lot coverage from 35% to to 58.7%. See Figure 1 for proposed conditions.



Proposals to modify Land Use Code standards, except where expressly prohibited from modification, are required to receive approval of a Variance from the Land Use Code (Variance). Review of a Variance is subject to the requirements of LUC 20.30G and sections of the Land Use Code which the Variance requests to modify.

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

# A. Site Description

The subject undeveloped property is located at 4628 125<sup>th</sup> Ave SE and is listed under King County tax parcel number 1624059318. The size of the lot is 24,136.6 square feet and is entirely encumbered by a category III wetland, Type-F stream, steep slope and their associated buffers and setbacks. Vegetation on site is characterized by medium to large native deciduous trees species such as, red alder (*Alnus rubra*) and cottonwood (*Populus trichocarpa*), and a variety of native understory and groundcover associated with wetland and stream environments. Large areas of Himalayan blackberry (*Rubus bifrons*) and giant horsetail (*Equisetum spp.*) are found through much of the site and the wetland and wetland buffer. See Figure 2 for existing site conditions.



Figure 2

# B. Zoning, Subarea, and Comprehensive Plan

The underlying zoning of the property is R-2.5 (a single-family zoning district) and it is located within the Newport Hills subarea. The property has a Comprehensive Plan designation of Single-Family Medium Density (SF-M). See Figure 3 for zoning; Figure 4 for subarea; and Figure 5 for Comprehensive Plan designations.

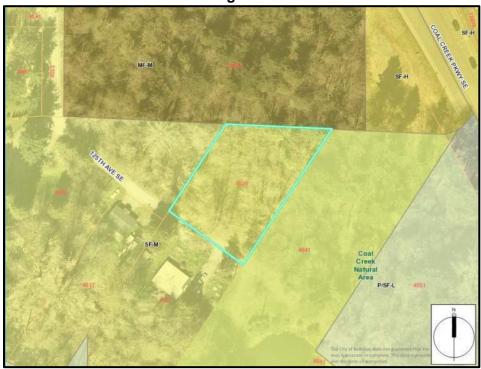
Figure 3



Figure 4



Figure 5



# C. Land Use Context

The property is bordered to the south and southwest by single-family development and zoning (R-2.5); to the north by multifamily zoning (R-20); and to the east by Coal Creek Natural Area (R-1) See Figure 6 for land use context information.

Figure 6



### D. Critical Areas

## i. Streams

A Type-F stream that is centrally located on-site, bisects the site flowing west to east near the base of the steep slope critical area, and functions as a tributary stream to Coal Creek. Type-F streams on undeveloped site have a buffer of 100 feet and a structure setback of 20 feet.

### ii. Wetlands

There is a category III wetland on and adjacent (west) to the subject property in the southern portion along the private street. The wetland is associated with the Type-F stream that bisects the property from west to east, and is dominated by red alder (*Alnus rubra*), cottonwood (*Populus trichocarpa*), salmonberry (*Rubus spectabilis*), and dense Himalayan blackberry (*Rubus bifrons*). The wetland was determined to have a habitat score of 5 points, which requires a buffer of 110 feet and a structure setback of 15 feet.

## iii. Steep Slopes

A steep slope critical area with a south-facing aspect is located in the northern half of the site with approximately 35 feet of elevation change (100-135 ASL). A structure setback of 75 feet is applied from the toe of the steep slope, and which occurs approximately where the Type-F stream is located.

## E. Critical Areas Functions and Values

# i. Streams and Riparian Areas

Most of the elements necessary for a healthy aquatic environment rely on processes sustained by dynamic interaction between the stream and the adjacent riparian area (Naiman et al., 1992). Riparian vegetation in floodplains and along stream banks provides a buffer to help mitigate the impacts of urbanization (Finkenbine et al., 2000 in Bolton and Shellberg, 2001). Riparian areas support healthy stream conditions.

Riparian vegetation, particularly forested riparian areas, affect water temperature by providing shade to reduce solar exposure and regulate high ambient air temperatures, slowing or preventing increases in water temperature (Brazier and Brown, 1973; Corbett and Lynch, 1985).

Upland and wetland riparian areas retain sediments, nutrients, pesticides, pathogens, and other pollutants that may be present in runoff, protecting water quality in streams (Ecology, 2001; City of Portland 2001). The roots of riparian plants also hold soil and prevent erosion and sedimentation that may affect spawning success or other behaviors, such as feeding.

Both upland and wetland riparian areas reduce the effects of flood flows. Riparian areas and wetlands reduce and desynchronize peak crests and flow rates of floods (Novitzki, 1979; Verry and Boelter, 1979 in Mitsch and Gosselink, 1993). Upland and wetland areas can infiltrate floodflows, which in turn, are released to the stream as

### baseflow

Stream riparian areas, or buffers, can be a significant factor in determining the quality of wildlife habitat. For example, buffers comprised of native vegetation with multicanopy structure, snags, and down logs provide habitat for the greatest range of wildlife species (McMillan, 2000). Vegetated riparian areas also provide a source of large woody debris that helps create and maintain diverse in-stream habitat, as well as create woody debris jams that store sediments and moderate flood velocities.

Sparsely vegetated or vegetated buffers with non-native species may not perform the needed functions of stream buffers. In cases where the buffer is not well vegetated, it is necessary to either increase the buffer width or require that the standard buffer width be restored or revegetated (May 2003). Until the newly planted buffer is established the near-term goals for buffer functions may not be attained.

Riparian areas often have shallow groundwater tables, as well as areas where groundwater and surface waters interact. Groundwater flows out of riparian wetlands, seeps, and springs to support stream baseflows. Surface water that flows into riparian areas during floods or as direct precipitation infiltrates into groundwater in riparian areas and is stored for later discharge to the stream (Ecology, 2001; City of Portland, 2001).

### ii. Wetlands

Wetlands provide important functions and values for both the human and biological environment—these functions include flood control, water quality improvement, and nutrient production. These "functions and values" to both the environment and the citizens of Bellevue depend on their size and location within a basin, as well as their diversity and quality. While Bellevue's wetlands provide various beneficial functions, not all wetlands perform all functions, nor do they perform all functions equally well (Novitski et al., 1995). However, the combined effect of functional processes of wetlands within basins provides benefits to both natural and human environments. For example, wetlands provide significant stormwater control, even if they are degraded and comprise only a small percentage of area within a basin.

### iii. Steep Slopes and Geologic Hazard Areas

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

Steep slopes may serve several other functions and possess other values for the City and its residents. Several of Bellevue's remaining large blocks of forest are located in steep slope areas, providing habitat for a variety of wildlife species and

important linkages between habitat areas in the City. These steep slope areas also act as conduits for groundwater, which drains from hillsides to provides a water source for the City's wetlands and stream systems. Vegetated steep slopes also provide a visual amenity in the City, providing a "green" backdrop for urbanized areas enhancing property values and buffering urban development.

### iv. Habitat Associated with Species of Local Importance

Urbanization, the increase in human settlement density and associated intensification of land use, has a profound and lasting effect on the natural environment and wildlife habitat (McKinney 2002, Blair 2004, Marzluff 2005 Munns 2006), is a major cause of native species local extinctions (Czech et al 2000), and is likely to become the primary cause of extinctions in the coming century (Marzluff et al. 2001a). Cities are typically located along rivers, on coastlines, or near large bodies of water. The associated floodplains and riparian systems make up a relatively small percentage of land cover in the western United States, yet they provide habitat for rich wildlife communities (Knopf et al. 1988), which in turn provide a source for urban habitat patches or reserves. Consequently, urban areas can support rich wildlife communities. In fact, species richness peaks for some groups, including songbirds, at an intermediate level of development (Blair 1999, Marzluff 2005). Protected wild areas alone cannot be depended on to conserve wildlife species. Impacts from catastrophic events, environmental changes, and evolutionary processes (genetic drift, inbreeding, colonization) can be magnified when a taxonomic group or unit is confined to a specific area, and no one area or group of areas is likely to support the biological processes necessary to maintain biodiversity over a range of geographic scales (Shaughnessy and O'Neil 2001). As well, typological approaches to taxonomy or the use of indicators present the risk that evolutionary potential will be lost when depending on reserves for preservation (Rojas 2007). Urban habitat is a vital link in the process of wildlife conservation in the U.S.

# III. Consistency with Land Use Code Requirements:

### A. Zoning District Dimensional Requirements 20.20.010:

This is a proposal to obtain a RUE for the construction of a single-family residence. The property is zoned R-2.5 and is subject to the dimensional requirements of LUC 20.20.010 which include, but is not limited to, setbacks, lot coverage and impervious surface. The entire property is encumbered by critical areas and critical area buffers. The proposal is consistent with the underlying zoning district and applicable dimensional requirements based on the materials submitted. Conformance with all zoning requirements will be verified as part of the required building permit review. See Section X for Conditions of Approval related to required Building Permit.

See Table 1 for more information on the conformance with the dimensional standards of LUC 20.20.010.

Table 1

	Requirement	Proposed	Conforms (Yes or No)
Front Yard Setback	20 Feet	20 Feet	Yes
Rear Yard Setback	25 Feet	25 Feet	Yes
Side Yard Setback	5 Feet	5 Feet	Yes
Combined 2 Side Yard	15 Feet	15 Feet	Yes
Lot Coverage (35%)	924.5 SF*	1,550 SF	Yes**
Impervious Surface (50%)	12,068.3 SF	3,420 SF	Yes
Greenscape (50%)	1595 SF***	1,609 SF	Yes

<sup>\*</sup> Lot coverage of 35% applied to net lot area (critical area, stream buffer, and private road area subtracted from gross lot area)

## B. Critical Areas Requirements LUC 20.25H:

# v. Consistency with LUC 20.25H.200 – Reasonable Use Exception (RUE)

A reasonable use exception may be granted when no other reasonable use of property exists by the application of the regulations of LUC 20.25H.200. The site is entirely encumbered (24,136.6 square feet) by critical areas and critical area buffers. When the development density/intensity calculations outlined in LUC 20.25H.045 are applied to this situation the site does not have the potential for a single dwelling unit. As such, the site meets the definition of a small lot as defined in LUC 20.25H.200.A.2.a. Under this definition, a lot in the R-2.5 land use district with less than 3,000 square feet of developable area on the site is considered to have no reasonable use and would qualify for a reasonable use exception.

In addition to the reasonable use exception request, the applicant has also requested a Variance to exceed 3,000 square feet of permanent disturbance to a total of 4,310 square feet. The requested increase is due to the location of an existing private road (approx. 1,325 square feet) and road easement along the south property line. See Section III.C for Variance analysis.

# C. Consistency with Land Use Code Critical Areas Performance Standards:

### i. Reasonable Use Performance Standards – 20.25H.205

a. The structure shall be located on the site in order to minimize the impact on the critical area or critical area buffer, including modifying the noncritical area setbacks to the maximum extent allowed under LUC 20.25H.040;

The structure is being located on the site at the southeastern extreme of the property in order to avoid direct impacts to the wetland. Reduction of standard zoning setbacks is limited due to the presence of a road easement within the property along the south property line. See Section X for Conditions of Approval related to maximum permanent disturbance area.

<sup>\*\*</sup> The proposal includes a variance for lot coverage to allow for design consistent with the provisions for a Reasonable Use Exception per Section X of LUC 20.25H

<sup>\*\*\*</sup> Includes 10-foot setback from road easement

b. Ground floor access points on portions of the structure adjacent to undisturbed critical area or critical area buffer shall be limited to the minimum necessary to comply with the requirements of the International Building Code and International Fire Code, as adopted and amended by the City of Bellevue;

The access points for the new structure will be from the south side of the structure away from the critical areas. Any other access points will be situated to minimize disturbance to the adjacent critical area buffer but shall comply with International Building Code and International Fire Code requirements adopted by the City of Bellevue. See Section X for Conditions of Approval related to ground floor access.

c. Associated development, including access driveways and utility infrastructure shall be located outside of the critical area or critical area buffer to the maximum extent technically feasible;

The access drive will be on the south side of the structure, adjacent to the private street (125<sup>th</sup> Ave SE), which is the location furthest from the most sensitive areas of the property. Water, sewer, and gas infrastructure are located within 125<sup>th</sup> Ave SE and are designed to avoid stream and wetland buffer impacts outside of permanent impacts required for house and driveway construction.

d. Areas of disturbance for associated development, including access and utility infrastructure shall be consolidated to the maximum extent technically feasible;

Access and utilities infrastructure are being consolidated within the same area to avoid unnecessary impacts outside of the allowed permanent disturbance area.

e. All areas of temporary disturbance associated with utility installation, construction staging and other development shall be determined by the Director and delineated in the field prior to construction and temporary disturbance shall be restored pursuant to a restoration plan meeting the requirements of LUC 20.25H.210;

A temporary restoration plan meeting the requirements of LUC 20.25H.210 will be required to be submitted with the required Building and Utility permit as part of the submittal documents. See Section X for Conditions of Approval related to temporary restoration.

f. Areas of permanent disturbance shall be mitigated to the maximum extent feasible on-site pursuant to a mitigation plan meeting the requirements of LUC 20.25H.210; and

There will be no areas of permanent disturbance outside of the 4,310 square-foot area allowed under the reasonable use exception and Variance. A mitigation and restoration plan for 3,840 square feet of native planting has been provided (Attachment 2) to restore and mitigate 2,980 square feet of impacts associated with the single-family dwelling, driveway, walkway, 5-foot

maintenance area, and storm dispersion trench. <u>See Section X for Conditions</u> of Approval related to mitigation and restoration plan requirements.

g. Fencing, signage and/or additional buffer plantings should be incorporated into the site development in order to prevent long-term disturbance within the critical area or critical area buffer.

Signage identifying the edge of the permanent disturbance will be included in the mitigation and restoration plan and will be required for approval of the single-family dwelling. See Section X for Conditions of Approval related to required signage.

### IV. Public Notice and Comment

 Application Date:
 5/26/2020 (CALUP); 1/25/2021 (Variance)

 Public Notice (500 feet):
 7/16/2020 (CALUP); 4/22/2021 (Variance)

 Minimum Comment Period:
 7/30/2020 (CALUP); 5/6/2021 (Variance)

The Notice of Applications for this project was published in the City of Bellevue weekly permit bulletin on July 16, 2020 for the CALUP and April 22, 2021 for the Variance. They were mailed to property owners within 500 feet of the project site. King County Wastewater Treatment Division notified City staff of the presence of a sewer trunk line in the vicinity. King County staff requested plans and were provided documentation contained within the project file. No comments have been received from the public as of the writing of this staff report.

# V. Summary of Technical Reviews

## Clearing & Grading:

The Clearing & Grading Division of the Development Services Department has reviewed the proposed development for compliance with Clearing & Grading codes and standards. The Clearing and Grading staff found no issues with the proposed development. Due to the proximity to stream and wetland critical area, site development is restricted during the rainy season to avoid risk of impacts to the stream and wetland critical areas, and all pesticides, insecticides, and fertilizer use shall be in accordance with City of Bellevue Environmental Best Management Practices. See Section X for Condition of Approval related to rainy season restrictions and pesticide, insecticide, and fertilizer use.

### **Utilities:**

The Utilities Division of the Development Services Department has reviewed the proposed development for compliance with Utilities codes and standards. The Utilities staff found no issues with the proposed development.

# **Transportation:**

The Transportation Division of the Development Services Department has reviewed the proposed development for compliance with Transportation codes and standards. The Transportation staff found no issues with the proposed development.

# VI. State Environmental Policy Act (SEPA)

Construction of a single-family residence is categorically exemption per WAC 197-11-800 (1).

# VII. Changes to Proposal as a Result of City Review

No changes were requested by the City during the review of this proposal.

## VIII. Decision Criteria

The proposal, as conditioned below, meets the applicable regulations and decision criteria for a variance to the Land Use Code pursuant to LUC Section 20.30G and a Critical Areas Land Use Permit pursuant to LUC Section 20.30P.

### A. Variance to the Land Use Code Decision Criteria 20.30G

The Director may approve or approve with modifications an application for a variance from the provisions of the Land Use Code if:

 The variance will not constitute a grant of special privilege inconsistent with the limitation upon uses of other properties in the vicinity and land use district of the subject property; and

Finding: The variance request is the minimum necessary to provide permanent disturbance area consistent with the provisions of the Reasonable Use Exception (LUC 20.25H.200), while taking into consideration the existing private road and road easement. The existing private road accounts for approximately 1,325 square feet of permanent disturbance, which to avoid a variance would require the single-family structure, utilities improvements, driveway, walkway, and defensible space to not exceed 1,680 square feet. Furthermore, the road easement limits the use of administrative setback modifications allowed under LUC 20.25H.040. See Section X for Conditions of Approval related to maximum permanent disturbance allowed.

The variance also requests allowance for lot coverage for this proposal beyond what is available by Land Use Code. LUC 20.20.010 (13) and (14) exclude critical areas, stream buffers, and area of private roads on a site for the purpose of calculating lot coverage. In this case, a large portion (26,495 SF) of the lot is encumbered by critical areas, stream buffer, and private road, and results in an allowable lot coverage of 924.5 square feet (35%). The variance request is to provide approximately 1,550 square feet (58.7%) of lot coverage for the construction of the single-family dwelling which would have greater consistency with the area granted

for RUE. In the vicinity, and for comparison, seven (7) single-family dwellings are located along 125<sup>th</sup> Ave SE, and footprint sizes for those dwellings range from 760 SF to 7,240 SF. The proposed footprint of 1,550 SF would represent the second smallest footprint among the existing single-family developments, and where the smallest footprint (4617 125<sup>th</sup> Ave) is approximately 400 SF less than that proposed. See Section X for Conditions of Approval related to maximum lot coverage allowed.

2. The variance is necessary because of special circumstances relating to the size, shape, topography, location or surroundings of the subject property to provide it with use rights and privileges permitted to other properties in the vicinity and in the land use district of the subject property; and

Finding: As discussed previously, the need for variance is specific to the existing private road and road easement on-site, and the significantly reduced net lot area for lot coverage. Residential development of this site is severely limited by requiring the residential development to include the existing road as part of the permanent disturbance limit under the RUE table.

3. The granting of the variance will not be materially detrimental to property or improvements in the immediate vicinity of the subject property; and

Finding: Granting of a variance is not expected to be materially detrimental to other property or improvements in the vicinity. The proposal will allow for development of the site in a manner similar in size, or below, to the neighboring single-family developments to the south and southwest. RUE performance standards direct development to the southeast corner of the site in order to avoid direct impact to the stream, wetland, and steep slope. The proposal maintains standard zoning dimensional requirements, as discussed in Section III.A of this report, and also complies with the required setback from the road easement.

4. The variance is not inconsistent with the Comprehensive Plan; and

Finding: The variance will facilitate the reasonable development of a single-family residence and in a manner that is both safe and sensitive to the environmental features of the site. The variance is not inconsistent with the Comprehensive Plan and specifically meets the following goals of the Comprehensive Plan:

LU-6. Encourage new residential development to achieve a substantial portion of the maximum density allowed on the net buildable acreage.

EN-20. Maintain surface water quality, defined as meeting federal and state standards and restore surface water that has become degraded, to the maximum extent practicable

EN-24. Reduce runoff from streets, parking lots and other impervious surfaces and improve surface water quality by utilizing low impact development techniques in new development and redevelopment.

- EN-58. Encourage property owners to incorporate suitable indigenous plants in critical areas and buffers, consistent with the site's habitat type and successional stage.
- EN-69. Preserve and enhance native vegetation in Critical Area buffers and integrate suitable native plants in urban landscape development
- EN-82. Use prescriptive development regulations for critical areas based on the type of critical area and the functions to be protected; and as an alternative to the prescriptive regulations, allow for a site specific or programmatic critical areas study to provide a science-based approach to development that will achieve an equal or better result for the critical area functions
- EN-84. Use science-based mitigation for unavoidable adverse impacts to critical areas to protect overall critical areas function in the watershed.
- S-NH-3. Recognize land uses as depicted on the Land Use Plan.
- S-NH-5d. Utilize the Sensitive Areas Overlay District regulations (Land Use Code Part 20.25H) in effect at the adoption of the land use designation to determine the maximum number of dwellings to be developed on the sites. [Amended Ord. 4803]
- S-NH-8. Protect significant trees and environmentally-sensitive areas (steep slopes, riparian corridors, and wetlands) in accordance with the provisions of the Land Use Code.
- S-NH-27. Encourage new commercial and residential development and redevelopment to minimize impervious surfaces.
- S-NH-28. Ensure that all new development and redevelopment includes measures to protect and enhance surface water quality.
- S-NH-30. Protect and enhance fish and wildlife habitat in environmentally-sensitive areas.
- 5. A variance to the requirements of Part 20.25H LUC may be granted only if the applicant demonstrates that a variance from other provisions of the LUC, where allowed under this part or Part 20.30H LUC, is not feasible. For purposes of this section, variances from the other provisions of the LUC shall be considered not feasible only when, considering the function to be served by the proposal, a variance to other provisions of the LUC, including non-critical area setbacks, will not realize the intended function of the proposal; and Finding: Variance to other portions of the Land Use Code will not address the limited net lot area for calculating lot coverage; address the limitation of the required setback from the road easement; or address the existing permanent disturbance

(private road) located within the road easement.

6. Where the variance involves disturbance of a critical area or critical area buffer, the variance includes a mitigation plan meeting the requirements of LUC 20.25H.210; and

Finding: As discussed in Section III of this report, a mitigation plan meeting the requirements of LUC 20.25H.210 has been provided. The plan includes native planting; invasive species removal and control; and short- and long-term management provisions; and contingencies and assurances for completion and success. See Section X for Conditions of Approval related to mitigation plans, restoration plans, performance standards, and assurance devices.

# B. Critical Areas Land Use Permit Decision Criteria 20.30P

The Director may approve or approve with modifications an application for a critical areas land use permit if:

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

Finding: The applicant must obtain a Single-Family Building before beginning any work. See Section X for Conditions of Approval related to required Building Permit.

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

Finding: The site is entirely encumbered by stream, wetland, steep slope, and their associated buffer, and avoidance of impact to the associated buffers is not possible. The proposal utilizes the best available construction, design, and development techniques which have resulted no impact to on-site critical areas.

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

Finding: As discussed in Section III of this report, the proposal meets the performance standards of LUC 20.25H.220 for a REU into a critical area buffer.

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

Finding: The proposed single-family residence is consistent with the surrounding land uses and will be adequately served by public facilities. All necessary services and ancillary utilities are currently available within 125<sup>th</sup> Ave SE.

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

Finding: All areas of temporary disturbance associated with the construction and staging of the new single-family residence and appurtenances will be restored per approved mitigation and restoration plans. The permanent disturbance will occur within the 4,310 square feet requested under variance of 20.25H.190.

# 6. The proposal complies with other applicable requirements of this code.

As discussed in Section III of this report, the proposal complies with all other applicable requirements of the Land Use Code.

### IX. Conclusion and Decision

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, SEPA, City Code and Standard compliance reviews, the Director of Land Use does hereby approve with conditions the proposal to obtain a reasonable use exception for the construction of a single-family residence at 4628 125<sup>th</sup> Ave SE; variance to the reasonable use permanent disturbance limit to allow for 4,310 square feet of permanent disturbance; and variance to lot coverage to allow for 1,550 square feet of lot coverage.

<u>Note - Expiration of Approval:</u> In accordance with LUC 20.30P.150 a Critical Areas Land Use Permit automatically expires and is void if the applicant fails to file for a Building Permit or other necessary development permits within one year of the effective date of the approval.

# X. Conditions of Approval

The applicant shall comply with all applicable Bellevue City Codes and Ordinances including but not limited to:

Applicable Ordinances	Contact Person			
Clearing and Grading Code- BCC 23.76	Savina Uzunow, 425-452-7860			
Land Use Code- BCC 20	David Wong, 425-452-4282			
Transportation Code- BCC 14	Tyler Moore, 425-452-6933			
Utilities Code- BCC 24	Jason Felgar, 425-452-7851			

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

### 1. Building Permit:

Approval of this Critical Areas Land Use Permit does not constitute an approval of a development permit. Application for a building permit or other required permits must be submitted and approved. Plans submitted as part of either permit application shall be consistent with the activity permitted under this approval.

Authority: Land Use Code 20.30P.140 Reviewer: David Wong, Land Use

### 2. Maximum Permanent Disturbance:

A maximum permanent disturbance area of 4,310 square feet is granted for the development of the single-family residence, driveway, and maintenance space in

Filoteo RUE & Variance 20-109420-LO, 21-101797-LS Page **16** 

accordance with the allowances of the Reasonable Use Exception and Variance from the Land Use Code.

Authority: Land Use Code 20.25H.200.A.2, 20.30G

Reviewer: David Wong, Land Use

# 3. Maximum Lot Coverage:

A maximum lot coverage of 1550 (58.7%) square feet is granted for the development of the single-family residence in accordance with the allowances of the Variance from the Land Use Code.

Authority: Land Use Code 20.30G Reviewer: David Wong, Land Use

### 4. Ground Floor Access Points:

Ground floor access points shall be limited to the minimum necessary to comply with the requirements of the International Building Code and International Fire Code. This standard shall be reviewed on the Building Permits.

Authority: Land Use Code 20.25H.205 Reviewer: David Wong, Land Use

# 5. Rainy Season Restrictions:

Due to critical area proximity, no clearing and grading activity may occur during the rainy season, which is defined as October 1 through April 30 without written authorization of the Development Services Department. Should approval be granted for work during the rainy season, increased erosion and sedimentation measures, representing the best available technology must be implemented prior to beginning or resuming site work.

Authority: Bellevue City Code 23.76.093.A Reviewer: Savina Uzunow, Clearing & Grading

### 6. Restoration for Areas of Temporary Disturbance

A restoration plan for all areas of temporary disturbance outside of the designated permanent disturbance is required to be submitted for review and approval by the City of Bellevue as a component of the Single-Family Building Permit. The plan shall identify the full areas of temporary impacts expected by the connection to sewer infrastructure or other sources of temporary disturbance.

Authority: Land Use Code 20.25H.220.H

Reviewer: David Wong, Land Use

## 7. Final Mitigation and Restoration Plans

Mitigation and restoration plans conforming to the plan under this review (Attachment 2) shall be submitted as a component of the Building Permit. The plan shall include and identify

Filoteo RUE & Variance 20-109420-LO, 21-101797-LS Page **17** 

mitigation for significant tree removal as depicted on the mitigation, restoration, and enhancement plan.

Authority: Land Use Code 20.25H.205.F

Reviewer: David Wong, Land Use

### 8. Monitoring

The planting area outlined in the mitigation and restoration plans shall be maintained and monitored for a period of five (5) years following Land Use inspection. Annual monitoring reports are to be submitted to the Land Use Division each of the five years at the end of each growing season or December 31st. Photos from selected photo points will be included in the monitoring reports to document the planting. The following schedule and performance standards apply and are evaluated in the report for each year:

Year 1 (from date of plant installation)

- 100% survival of all installed woody plant material
- Less than 10% coverage of invasive plants in planting area

Year 2 (from date of plant installation)

- At least 90% survival of all installed wood plant material
- 40% coverage or native recolonization of the planting area
- Less than 10% coverage of invasive plants in planting area

Year 3, 4, & 5 (from date of plant installation)

- At least 85% survival of all installed woody plant material
- At least 60% (Year 3) and 80% (Year 5) coverage of the planting area by native plants in each year respectively
- Less than 10% coverage by invasive species or non-native/ornamental vegetation

The reports, along with a copy of the restoration plan, can be sent to David Wong at dwong@bellevuewa.gov or to the address below:

Environmental Planning Manager Development Services Department City of Bellevue PO Box 90012 Bellevue, WA 98009-9012

Authority: Land Use Code 20.25H.220.D

Reviewer: David Wong, Land Use

## 9. Planting Cost Estimate

A planting cost estimate detailing the cost for materials and labor identified on the mitigation and restoration plan shall be submitted as part of the Building Permit application. The

Filoteo RUE & Variance 20-109420-LO, 21-101797-LS Page **18** 

estimate shall also include the cost of five years of maintenance and monitoring activities as described in the maintenance and monitoring plan.

Authority: Land Use Code 20.25H.220.F

Reviewer: David Wong, Land Use

### 10. Maintenance & Monitoring Surety

A financial maintenance surety of 100% of the cost of the plant materials and labor, or 20% of the 5-year maintenance and monitoring contract cost is required prior to Building Permit approval. Final inspection is required at the end of the fifth year for release of the surety.

Authority: Land Use Code 20.25H.220.F

Reviewer: David Wong, Land Use

# 11. Permanent Disturbance Area Signage

Signs identifying the limits of the permanent disturbance area shall be installed at the edge of the approved permanent disturbance area on intervals of not greater than 30 feet. Signage shall include wording prohibiting the alteration or removal of vegetation within the restoration area, and sign contents will be reviewed under the Building Permit application.

Authority: Land Use Code 20.25H.205.G

Reviewer: David Wong, Land Use

### 12. Land Use Inspection

A Land Use (600) inspection is required prior to Building Permit final inspection to verify plant installation is complete and according to the mitigation, restoration, and enhancement plan.

Authority: Land Use Code 20.25H.220.F

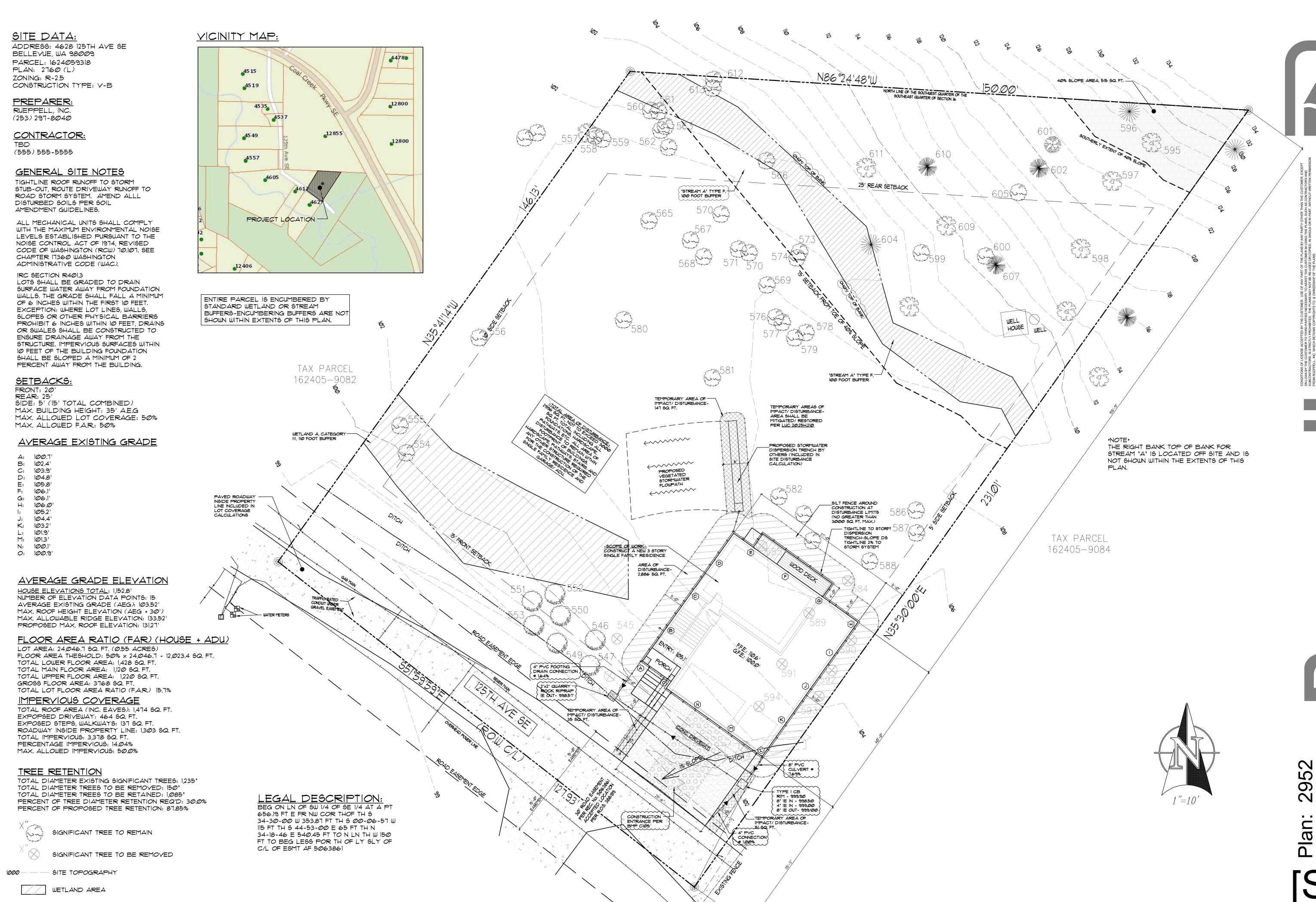
Reviewer: David Wong, Land Use

## 13. Pesticides, Insecticides, and Fertilizers

The applicant must submit as part of the required Building Permit information regarding the use of pesticides, insecticides, and fertilizers in accordance with the City of Bellevue's "Environmental Best Management Practices".

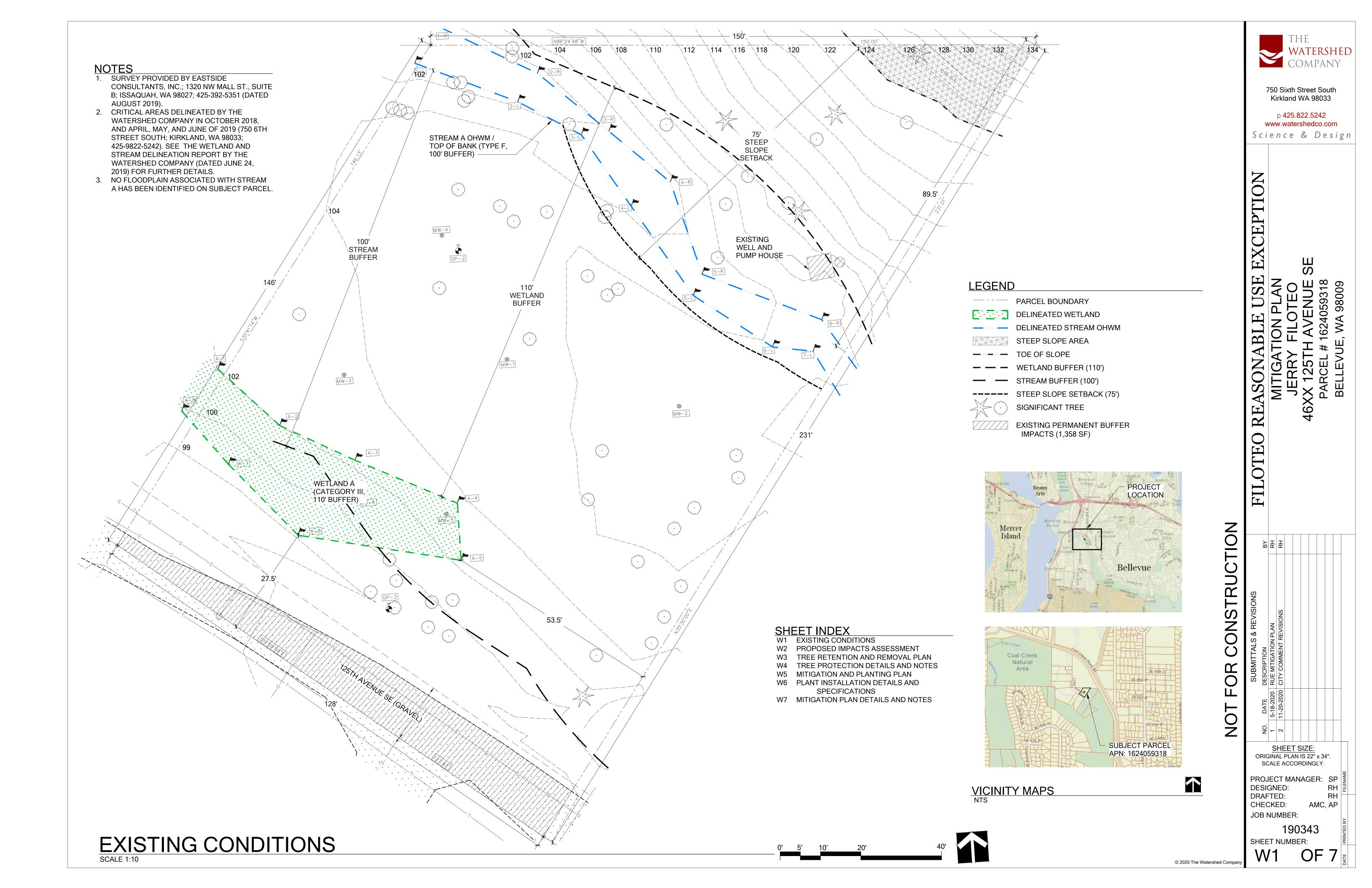
Authority: Land Use Code 20.25H.080.A, 20.25H.100.F

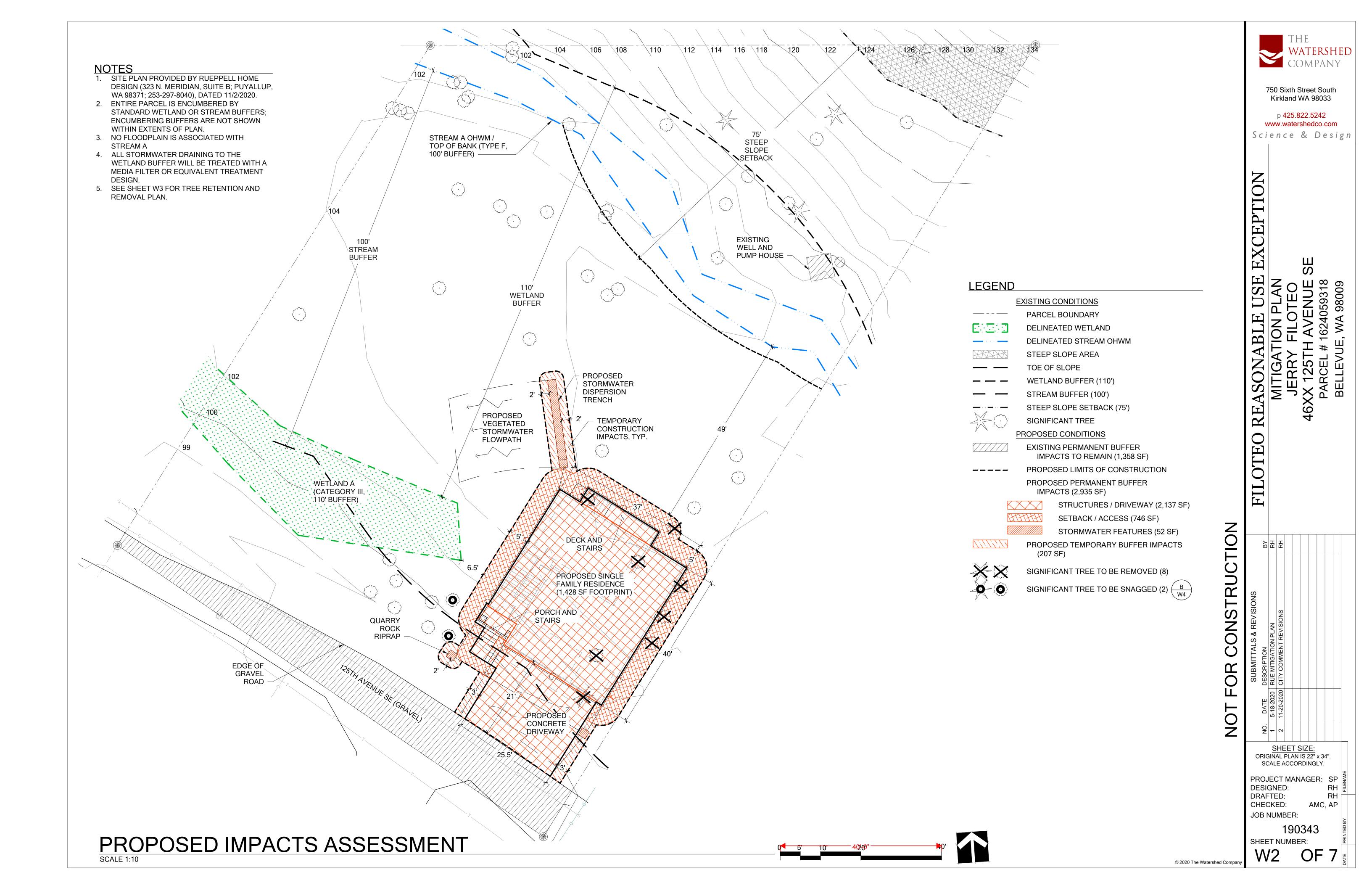
Reviewer: David Wong, Land Use

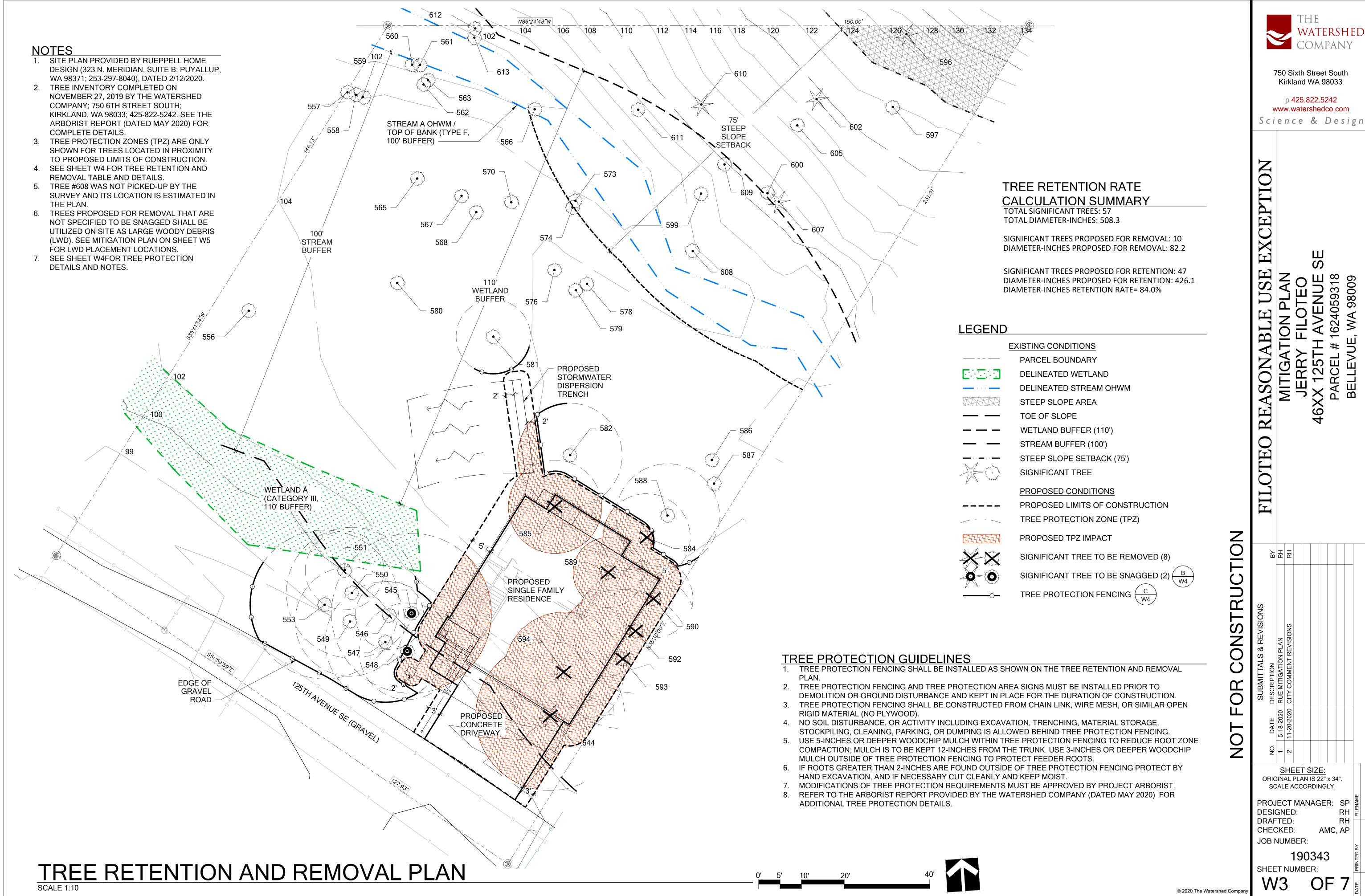


Job#: Filoteo Custom Date: 10/28/20 Revision Date: 09/28/20 Drawn by: EL Phone: (253) 297-8040

SP-1







# TREE RETENTION AND REMOVAL TABLE

By State	#		COMBINED DBH (IN)	DIAMETER-INCHES (IN)	CRITICAL ROOT ZONE (FT)	CONDITION	CRITICAL ROOT ZONE IMPACT	PROPOSED FOR REMOVAL	DIAMETER-INCHES PROPOSED FOR RETENTION
six by         Populs salamifers (Black cuttomsone)         8.0         8.0         8.0         1.0         8.0         8.0         1.0         1.0         0.0         0.0         7.0         9.0         5.0         7.0         9.0         7.0         9.0         7.0         9.0	TAG	TREE NAME	S (S	P O S	<u> </u>	Ö	CRI	PRC	PRC RET
6361         Populus blasmiters (Black cottomwood)         4.1         7.1         14.1         7.3         No.         N.0         7.2           547         Populus blasmiters (Black cottomwood)         11.3         7.1         14.1         7.31         7.0         1.0         1.7           548         Populus blasmiters (Black cottomwood)         12.8         6.4         12.8         1.6         1.0         No.         1.0         1.0           552         Populus blasmiters (Black cottomwood)         12.8         4.6         12.8         1.0         No.         No.         1.0         1.0           552         Populus blasmiters (Black cottomwood)         12.8         4.8         12.0         1.0         No.         1.0         1.0         1.0         1.0         No.         1.0         1.	544	Thuja plicata (Western red cedar)	17.4	17.4	17.4	Good	Yes	Yes	N/A
348         Populus balasmifera (slack cottonwood)         14.3         5.7         1.13         6.7         1.6         1.7         1.8         Populus balasmifera (slack cottonwood)         11.3         5.7         1.13         6.7         1.8	545	Populus balsamifera (Black cottonwood)	18.7	9.4	18.7	Good	Yes	Yes	N/A
6368         Populus balamifera (Black cottonwood)         13.3         8.7         11.3         6.7         No.         No.         6.4           549         Populus balamifera (Black cottonwood)         12.8         6.4         12.8         Four         No.         10.0         1.6           550         Populus balamifera (Black cottonwood)         17.4         8.7         17.4         6.0         No.         10.0         1.8           553         Populus balamifera (Black cottonwood)         17.4         8.3         12.1         No.         No.         10.2           553         Almas rubra (Red alder)         8.3         4.2         8.3         Fair         No.         No.         10.0	546	Populus balsamifera (Black cottonwood)	8.0	4.0	8.0	Good	No	No	4.0
350         Populus bilamifera (Black cottonwood)         12.8         6.4         12.8         Fair         No.         No.         7.7           530         Populus balamifera (Black cottonwood)         12.7         4.6         15.3         Fair         No.         18.0	547	Populus balsamifera (Black cottonwood)	14.1	7.1	14.1	Fair	No	No	7.1
550         Populus balsamifera (Black cottonwood         15.3         7.7         15.3         Fair         No         No         A.6           527         Populus balsamifera (Black cottonwood         9.2         4.6         9.2         Fair         No         No         4.6           538         Populus balsamifera (Black cottonwood         1.7         4.0         1.0         No         4.2           537         Architer (Red dider)         8.0         8.0         9.0         1.0         No         No         1.0           538         Almus rubra (Red dider)         9.9         5.0         9.9         1.0         No         No         No         1.0           540         Almus rubra (Red dider)         9.3         4.7         1.53         6.0         1.0         No         No         1.7           542         Almus rubra (Red dider)         9.3         4.7         9.3         6.0         No         No         1.7           543         Almus rubra (Red dider)         9.3         4.3         8.0         7.0         No         1.0           544         Almus rubra (Red dider)         11.3         5.7         11.3         6.1         7.0         No         1.	548	Populus balsamifera (Black cottonwood)	11.3	5.7	11.3	Fair	Yes	Yes	N/A
SSS         Populus balsamifera (Black cottonwood)         9.2         4.6         9.2         14.6         1.0         No.         No.         8.3           SSS         Appulus balsamifera (Black cottonwood)         12.4         8.7         47.4         600         No.         1.0         8.7           SSS         Almus rubra (Red alder)         9.9         5.0         9.9         1.0         No.         1.0         No.         1.0           SSS         Almus rubra (Red alder)         9.9         5.0         9.9         600         No.         No.         1.0           SSS         Almus rubra (Red alder)         19.3         4.7         15.3         Fair         No.         1.0         1.0         No.         1.0 </td <td>549</td> <td>Populus balsamifera (Black cottonwood)</td> <td>12.8</td> <td>6.4</td> <td>12.8</td> <td>Fair</td> <td>No</td> <td>No</td> <td>6.4</td>	549	Populus balsamifera (Black cottonwood)	12.8	6.4	12.8	Fair	No	No	6.4
558         Populus balsamifera (Black cottonwood)         7.4         8.7         2.7.4         Cool         No.         No.         4.2           558         Albuser ubra (Bed alder!         8.0         8.0         8.0         1.6         No.         No.         4.2           557         Acer macraphyllum (Bigleaf maple)         9.9         5.0         9.9         Fair         No.         No.         5.0           558         Alhuser ubra (Red alder)         9.9         5.0         9.9         Fair         No.         No.         7.0           550         Alhuser ubra (Red alder)         9.9         5.0         9.9         Fair         No.         No.         7.0           552         Alhuser ubra (Red alder)         9.9         5.0         9.9         Fair         No.         7.0         7.0           554         Alhuser ubra (Red alder)         9.9         5.0         9.9         Fair         No.         No.         7.0         7.0           555         Alhuser ubra (Red alder)         11.3         5.7         1.3         7.0         No.         7.0         7.0         7.0         7.0         7.0         7.0         7.0         7.0         7.0         7.0	550	·				Fair	No	No	7.7
555         Almos rubra (ted alder)         8.3         4.2         8.3         Fair         No.         4.0           557         Acer macrophyllum (glegarmaple)         8.0         8.0         5.0         5.1         Fair         No.         No.         8.0           558         Almos rubra (ted alder)         9.9         5.0         9.9         Good         No.         No.         5.0           560         Almos rubra (ted alder)         15.3         7.7         15.3         Fair         No.         No.         4.0           561         Almos rubra (ted alder)         9.3         4.7         9.3         Good         No.         4.0           562         Almos rubra (ted alder)         8.3         4.2         8.3         Good         No.         4.0           563         Almos rubra (ted alder)         8.3         4.2         8.3         Fair         No.         No.         4.0           564         Almos rubra (ted alder)         8.6         4.3         8.5         Fair         No.         No.         4.0           565         Almos rubra (ted alder)         11.3         5.7         11.3         Fair         No.         No.         4.3							No		
557         Acer macrophyllum (Bigleafmaple)         8.0         8.0         Fair         No.         No.         7.0           558         Almusrubra (Red alder)         9.9         5.0         9.9         Fair         No.         15.0           559         Almusrubra (Red alder)         8.6         4.3         8.6         Fair         No.         15.0           551         Almusrubra (Red alder)         8.3         4.7         15.3         Fair         No.         No.         7.7           552         Almusrubra (Red alder)         8.3         4.2         8.3         Good         No.         No.         4.2           553         Almusrubra (Red alder)         8.3         4.2         8.3         Good         No.         No.         4.2           554         Almusrubra (Red alder)         11.3         7.2         14.3         Fair         No.         No.         4.0           555         Almusrubra (Red alder)         11.3         5.7         11.3         Fair         No.         No.         6.5           557         Almusrubra (Red alder)         11.3         5.7         11.0         Fair         No.         No.         5.6           572									<b></b>
558         Numer rubra (Red alder)         9.9         5.0         9.9         Fair         No.         No.         5.0           559         Amusr rubra (Red alder)         9.9         5.0         9.9         Good         No.         No.         4.3           550         Amusr rubra (Red alder)         15.3         7.7         15.3         Fair         No.         A.0         4.2           552         Amusr rubra (Red alder)         19.3         4.7         9.3         Good         No.         No.         4.2           553         Amusr rubra (Red alder)         9.9         5.0         9.9         Fair         No.         No.         5.0           556         Amusr rubra (Red alder)         14.3         7.2         14.3         Fair         No.         No.         5.0           558         Amusr rubra (Red alder)         11.3         5.7         11.3         Fair         No.         No.         5.0           558         Amusr rubra (Red alder)         11.3         5.7         11.3         Fair         No.         No.         5.5           558         Amusr rubra (Red alder)         11.3         5.7         11.3         Fair         No.         No.	ļ								
550         Almus rubra (Red alder)         9.9         5.0         9.9         Good         No.         No.         4.3           560         Almus rubra (Red alder)         8.6         4.3         8.6         Fair         No.         10.0         4.3           561         Almus rubra (Red alder)         9.3         4.7         9.3         Good         No.         10.0         4.7           562         Almus rubra (Red alder)         9.9         5.0         9.9         Fair         No.         No.         7.0           565         Almus rubra (Red alder)         14.3         7.2         14.3         Fair         No.         No.         15.0           566         Almus rubra (Red alder)         11.3         5.7         Fair         No.         No.         7.2           567         Almus rubra (Red alder)         11.3         5.7         Fair         No.         No.         6.8           572         Almus rubra (Red alder)         11.3         5.7         Fair         No.         No.         5.6           573         Almus rubra (Red alder)         11.2         5.6         11.0         7.0         No.         5.0         5.0           573									
560         Almus rubra (Red alder)         9.6         4.3         8.6         Fair         No         No         4.7           561         Almus rubra (Red alder)         9.3         4.7         9.3         Good         No         No         4.7           562         Almus rubra (Red alder)         9.3         4.7         9.3         Good         No         No         4.7           563         Almus rubra (Red alder)         9.3         5.0         9.9         15.1         No         No         7.2           565         Almus rubra (Red alder)         14.3         7.2         14.3         Fair         No         No         7.2           566         Almus rubra (Red alder)         11.3         5.7         11.3         Fair         No         No         6.9           571         Almus rubra (Red alder)         11.3         5.7         11.3         Fair         No         No         7.0           572         Almus rubra (Red alder)         11.3         5.0         9.9         Fair         No         No         6.0           572         Almus rubra (Red alder)         11.2         5.6         11.2         Fair         No         No         5.6						Fair	No	No	<del> </del>
561         Almus rubra (Red alder)         15.3         7.7         15.3         Fair         No         No         7.7           562         Almus rubra (Red alder)         9.3         4.7         9.3         Good         No         No         4.7           563         Almus rubra (Red alder)         9.9         4.7         9.3         Fair         No         No         5.0           565         Almus rubra (Red alder)         14.3         7.2         14.3         fair         No         No         2.2           566         Almus rubra (Red alder)         11.3         7.7         11.3         fair         No         No         6.9           568         Almus rubra (Red alder)         11.3         5.7         11.3         fair         No         No         6.9           577         Almus rubra (Red alder)         11.6         6.8         13.6         Good         No         No         5.0           578         Almus rubra (Red alder)         11.2         5.6         11.2         fair         No         No         5.5           575         Almus rubra (Red alder)         11.0         5.5         11.0         fair         No         No         7.5 <td>559</td> <td></td> <td></td> <td></td> <td></td> <td>Good</td> <td>No</td> <td>No</td> <td></td>	559					Good	No	No	
562         Alnus rubra (Red alder)         9.3         4.7         9.3         Good         No         4.0           563         Alnus rubra (Red alder)         9.9         5.0         9.9         Fair         No         No         5.0           564         Alnus rubra (Red alder)         14.3         7.2         14.3         Fair         No         No         7.2           565         Alnus rubra (Red alder)         13.7         6.9         13.7         Fair         No         No         6.9           566         Alnus rubra (Red alder)         11.3         5.7         11.3         Fair         No         No         6.9           572         Alnus rubra (Red alder)         11.6         6.8         13.6         Good         No         No         6.8           572         Alnus rubra (Red alder)         19.9         5.0         9.9         Fair         No         No         5.0           573         Alnus rubra (Red alder)         11.2         5.5         11.0         Fair         No         No         5.5           575         Alnus rubra (Red alder)         11.2         5.5         11.0         Fair         No         No         7.0         7.0 <td></td> <td></td> <td></td> <td></td> <td></td> <td>Fair</td> <td>No</td> <td>No</td> <td></td>						Fair	No	No	
563         Almus rubra (Red alder)         8.3         4.2         8.3         Good         No         No         4.2           564         Almus rubra (Red alder)         9.9         5.0         9.9         Fair         No         No         5.0           565         Almus rubra (Red alder)         13.3         7.2         14.3         Fair         No         No         7.2           566         Almus rubra (Red alder)         13.7         6.9         13.7         Fair         No         No         5.0           568         Almus rubra (Red alder)         11.3         5.7         11.3         Fair         No         No         5.0           572         Almus rubra (Red alder)         19.9         5.0         9.9         Fair         No         No         5.0           573         Almus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.5           575         Almus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.5           575         Almus rubra (Red alder)         13.4         6.7         13.4         600         No         No         7.0		,							
564         Alnus rubra (Red alder)         9.9         5.0         9.9         Fair         No         No.         2.2           565         Alnus rubra (Red alder)         14.3         7.2         14.3         Fair         No         No.         7.2           566         Alnus rubra (Red alder)         13.7         6.9         13.7         Fair         No         No.         6.9           567         Alnus rubra (Red alder)         13.6         6.8         13.6         Good         No         No.         6.6           572         Alnus rubra (Red alder)         13.6         6.8         13.6         Good         No         No         6.6           572         Alnus rubra (Red alder)         13.6         6.8         13.6         Fair         No         No         6.6           573         Alnus rubra (Red alder)         11.2         5.6         11.2         Fair         No         No         5.5           575         Alnus rubra (Red alder)         13.4         6.7         13.4         60         No         No         10.2           578         Alnus rubra (Red alder)         13.4         6.7         13.4         60         No         No         10.									<b></b>
555 Almus rubra (Red alder)         14.3         7.2         14.3         Fair         No         No         4.3           566 Almus rubra (Red alder)         3.5         4.3         8.5         Fair         No         No         4.3           567 Almus rubra (Red alder)         11.3         5.7         11.3         Fair         No         No         5.7           571 Almus rubra (Red alder)         11.3         5.7         11.3         Good         No         No         5.8           572 Almus rubra (Red alder)         9.9         5.0         9.9         Fair         No         No         5.6           573 Almus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.6           575 Almus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.5           575 Almus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.5           576 Almus rubra (Red alder)         13.4         6.7         13.4         6.0         No         No         7.0           577 Almus rubra (Red alder)         13.9         7.0         13.9         Fair	563	Alnus rubra (Red alder)	8.3	4.2	8.3	Good	No	No	4.2
566 Almus rubra (Red alder)         8.5         4.3         8.5         Fair         No         No         6.9           567 Almus rubra (Red alder)         11.3         6.9         13.7         Fair         No         No         6.9           568 Almus rubra (Red alder)         11.3         5.7         11.3         Fair         No         No         5.7           571 Almus rubra (Red alder)         13.6         6.8         13.6         Good         No         No         6.8           572 Almus rubra (Red alder)         9.9         5.0         9.9         Fair         No         No         5.0           573 Almus rubra (Red alder)         11.0         5.6         11.2         Fair         No         No         5.5           575 Almus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.5           576 Almus rubra (Red alder)         13.4         6.7         13.4         6.0         No         No         No         7.0           578 Almus rubra (Red alder)         13.9         7.0         13.9         Fair         No         No         7.0           579 Almus rubra (Red alder)         13.9         7.0         13.9	564	Alnus rubra (Red alder)	9.9	5.0	9.9	Fair	No	No	5.0
567         Alnus rubra (Red alder)         13.7         6.9         13.7         Fair         No         No         5.9           568         Alnus rubra (Red alder)         11.3         5.7         11.3         Fair         No         No         5.7           571         Alnus rubra (Red alder)         13.6         6.8         13.5         Good         No         No         6.8           572         Alnus rubra (Red alder)         19.9         5.0         9.9         Fair         No         No         5.0           573         Alnus rubra (Red alder)         11.2         5.6         11.2         Fair         No         No         5.5           575         Alnus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.5           576         Alnus rubra (Red alder)         13.4         6.7         13.4         Fair         No         No         6.7           578         Alnus rubra (Red alder)         13.4         6.7         13.4         600         No         No         6.7           579         Alnus rubra (Red alder)         13.4         6.7         13.4         600         No         No         7.0 </td <td>565</td> <td>Alnus rubra (Red alder)</td> <td>14.3</td> <td>7.2</td> <td>14.3</td> <td>Fair</td> <td>No</td> <td>No</td> <td>7.2</td>	565	Alnus rubra (Red alder)	14.3	7.2	14.3	Fair	No	No	7.2
568         Alnus rubra (Red alder)         11.3         5.7         11.3         Fair         No         No         6.8           571         Alnus rubra (Red alder)         13.6         6.8         13.6         Good         No         No         6.8           572         Alnus rubra (Red alder)         9.9         5.0         9.9         Fair         No         No         5.0           573         Alnus rubra (Red alder)         11.2         5.6         11.2         Fair         No         No         5.6           575         Alnus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.5           576         Alnus rubra (Red alder)         13.4         6.7         13.4         Good         No         No         7.0           579         Alnus rubra (Red alder)         13.9         7.0         13.9         Fair         No         No         7.0           580         Alnus rubra (Red alder)         13.9         7.0         13.9         Fair         No         No         7.0           581         Alnus rubra (Red alder)         13.9         7.0         13.9         Good         No         No         7.1<	566	Alnus rubra (Red alder)	8.5	4.3	8.5	Fair	No	No	4.3
571         Alnus rubra (Red alder)         13.6         6.8         13.6         Good         No         No         6.8           572         Alnus rubra (Red alder)         8.6         4.3         8.6         Fair         No         No         4.3           573         Alnus rubra (Red alder)         11.2         5.6         11.2         Fair         No         No         5.6           575         Alnus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.5           576         Alnus rubra (Red alder)         13.4         6.7         13.4         Good         No         No         6.7           578         Alnus rubra (Red alder)         13.9         7.0         13.9         Fair         No         No         6.7           579         Alnus rubra (Red alder)         8.6         4.3         8.6         Good         No         No         7.0           580         Alnus rubra (Red alder)         8.7         4.4         8.7         Good         No         No         6.1           583         Alnus rubra (Red alder)         10.2         5.1         10.2         Good         Yes         N/A	567	Alnus rubra (Red alder)	13.7	6.9	13.7	Fair	No	No	6.9
572         Alnus rubra (Red alder)         8.6         4.3         8.6         Fair         No         No         4.3           573         Alnus rubra (Red alder)         9.9         5.0         9.9         Fair         No         No         5.0           574         Alnus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.5           575         Alnus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         4.7           578         Alnus rubra (Red alder)         13.4         6.7         13.4         Good         No         No         6.7           579         Alnus rubra (Red alder)         8.6         4.3         8.6         Good         No         No         7.0           580         Alnus rubra (Red alder)         8.6         4.3         8.6         Good         No         No         6.1           581         Alnus rubra (Red alder)         12.2         6.1         12.2         600         No         No         7.1           582         Alnus rubra (Red alder)         10.2         5.1         10.2         Good         Yes         N/A	568	Alnus rubra (Red alder)	11.3	5.7	11.3	Fair	No	No	5.7
573         Alnus rubra (Red alder)         9.9         5.0         9.9         Fair         No         No         5.0           574         Alnus rubra (Red alder)         11.2         5.6         11.2         Fair         No         No         5.6           575         Alnus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.5           576         Alnus rubra (Red alder)         13.4         6.7         13.4         Good         No         No         6.7           578         Alnus rubra (Red alder)         13.9         7.0         13.9         Fair         No         No         6.7           580         Alnus rubra (Red alder)         8.6         4.3         8.6         Good         No         No         4.4           581         Alnus rubra (Red alder)         12.2         6.1         12.2         Good         Yes         No         6.1           583         Alnus rubra (Red alder)         10.2         5.1         10.2         Good         Yes         No         7.1           584         Alnus rubra (Red alder)         10.9         5.5         10.9         Good         Yes         No         6.1	571	Alnus rubra (Red alder)	13.6	6.8	13.6	Good	No	No	6.8
574         Alnus rubra (Red alder)         11.2         5.6         11.2         Fair         No         No         5.6           575         Alnus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.5           576         Alnus rubra (Red alder)         9.4         4.7         9.4         Fair         No         No         4.7           578         Alnus rubra (Red alder)         13.4         6.7         13.4         Good         No         No         6.7           579         Alnus rubra (Red alder)         8.6         4.3         8.6         Good         No         No         4.3           581         Alnus rubra (Red alder)         8.7         4.4         8.7         Good         No         No         6.1           582         Alnus rubra (Red alder)         10.2         5.1         10.2         Good         Yes         No         6.1           583         Alnus rubra (Red alder)         10.9         5.5         10.9         Good         Yes         No         6.1           584         Alnus rubra (Red alder)         11.5         7.3         14.5         Good         Yes         No         6.7 </td <td>572</td> <td>Alnus rubra (Red alder)</td> <td>8.6</td> <td>4.3</td> <td>8.6</td> <td>Fair</td> <td>No</td> <td>No</td> <td>4.3</td>	572	Alnus rubra (Red alder)	8.6	4.3	8.6	Fair	No	No	4.3
575         Ainus rubra (Red alder)         11.0         5.5         11.0         Fair         No         No         5.5           576         Ainus rubra (Red alder)         9.4         4.7         9.4         Fair         No         No         4.7           578         Ainus rubra (Red alder)         13.4         6.7         13.4         Good         No         No         6.7           579         Ainus rubra (Red alder)         13.9         7.0         13.9         Fair         No         No         7.0           580         Ainus rubra (Red alder)         8.6         4.3         8.6         Good         No         No         4.4           582         Ainus rubra (Red alder)         12.2         6.1         12.2         Good         Yes         No         6.1           583         Ainus rubra (Red alder)         10.2         5.1         10.2         Good         Yes         No         7.1           584         Ainus rubra (Red alder)         10.9         5.5         10.9         Good         Yes         No         7.3           585         Ainus rubra (Red alder)         11.5         7.3         14.5         Good         No         No         6.7	573	Alnus rubra (Red alder)	9.9	5.0	9.9	Fair	No	No	5.0
576         Alnus rubra (Red alder)         9.4         4.7         9.4         Fair         No         No         4.7           578         Alnus rubra (Red alder)         13.4         6.7         13.4         Good         No         No         6.7           579         Alnus rubra (Red alder)         13.9         7.0         13.9         Fair         No         No         7.0           580         Alnus rubra (Red alder)         8.6         4.3         8.6         Good         No         No         4.4           581         Alnus rubra (Red alder)         12.2         6.1         12.2         Good         Yes         No         6.1           583         Alnus rubra (Red alder)         10.2         5.1         10.2         Good         Yes         No         7.1           584         Alnus rubra (Red alder)         10.9         5.5         10.9         Good         Yes         Yes         No         6.7           585         Alnus rubra (Red alder)         11.5         7.3         14.5         Good         No         7.3           586         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         No         6	574	Alnus rubra (Red alder)	11.2	5.6	11.2	Fair	No	No	5.6
578         Alnus rubra (Red alder)         13.4         6.7         13.4         Good         No         No         6.7           579         Alnus rubra (Red alder)         13.9         7.0         13.9         Fair         No         No         7.0           580         Alnus rubra (Red alder)         8.6         4.3         8.6         Good         No         No         4.4           581         Alnus rubra (Red alder)         12.2         6.1         12.2         Good         Yes         No         6.1           582         Alnus rubra (Red alder)         9.5         4.8         9.5         Good         Yes         No         7.1           583         Alnus rubra (Red alder)         10.2         5.1         10.2         Good         Yes         Yes         N/A           585         Alnus rubra (Red alder)         10.9         5.5         10.9         Good         Yes         N/A           586         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         No         No         6.7           588         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         N/A	575	Alnus rubra (Red alder)	11.0	5.5	11.0	Fair	No	No	5.5
579         Alnus rubra (Red alder)         13.9         7.0         13.9         Fair         No         No         7.0           580         Alnus rubra (Red alder)         8.6         4.3         8.6         Good         No         No         4.3           581         Alnus rubra (Red alder)         12.2         6.1         12.2         Good         Yes         No         6.1           582         Alnus rubra (Red alder)         19.5         4.8         9.5         Good         Yes         No         7.1           584         Alnus rubra (Red alder)         10.9         5.5         10.9         Good         Yes         N/A           585         Alnus rubra (Red alder)         11.5         7.3         14.5         Good         Yes         N/A           586         Alnus rubra (Red alder)         11.3         6.7         13.3         Good         Yes         N/A           587         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         No         6.7           588         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         N/A           590         Alnus rubra (Red	576	Alnus rubra (Red alder)	9.4	4.7	9.4	Fair	No	No	4.7
580         Alnus rubra (Red alder)         8.6         4.3         8.6         Good         No         No         4.4           581         Alnus rubra (Red alder)         8.7         4.4         8.7         Good         No         No         4.4           582         Alnus rubra (Red alder)         12.2         6.1         12.2         Good         Yes         No         6.1           583         Alnus rubra (Red alder)         10.2         5.1         10.2         Good         Yes         N/A           585         Alnus rubra (Red alder)         10.9         5.5         10.9         Good         Yes         N/A           586         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         No         No         6.7           587         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         No         6.1           588         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         N/A           589         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         N/A           590         Alnus rubra (Red al	578	Alnus rubra (Red alder)	13.4	6.7	13.4	Good	No	No	6.7
581         Alnus rubra (Red alder)         8.7         4.4         8.7         Good         No         No         6.1           582         Alnus rubra (Red alder)         12.2         6.1         12.2         Good         Yes         No         6.1           583         Alnus rubra (Red alder)         10.2         5.1         10.2         Good         Yes         Yes         N/A           584         Alnus rubra (Red alder)         10.9         5.5         10.9         Good         Yes         N/A           585         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         No         No         7.3           586         Alnus rubra (Red alder)         13.3         6.7         13.3         Good         No         No         6.7           588         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         No         6.1           589         Alnus rubra (Red alder)         8.2         4.1         8.2         Good         Yes         N/A           590         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         Yes         N/A           593 <t< td=""><td>579</td><td>Alnus rubra (Red alder)</td><td>13.9</td><td>7.0</td><td>13.9</td><td>Fair</td><td>No</td><td>No</td><td>7.0</td></t<>	579	Alnus rubra (Red alder)	13.9	7.0	13.9	Fair	No	No	7.0
882 Alnus rubra (Red alder)         12.2         6.1         12.2         Good         Yes         No         6.1           583 Alnus rubra (Red alder)         9.5         4.8         9.5         Good         Yes         No         7.1           584 Alnus rubra (Red alder)         10.2         5.1         10.2         Good         Yes         N/A           585 Alnus rubra (Red alder)         10.9         5.5         10.9         Good         No         No         7.3           586 Alnus rubra (Red alder)         14.5         7.3         14.5         Good         No         No         6.7           588 Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         No         6.1           589 Alnus rubra (Red alder)         8.2         4.1         8.2         Good         Yes         No         6.1           590 Alnus rubra (Red alder)         9.2         4.6         9.2         Good         Yes         N/A           591 Alnus rubra (Red alder)         14.5         7.3         14.5         Good         Yes         N/A           592 Alnus rubra (Red alder)         14.0         7.0         14.0         Fair         Yes         N/A	580	Alnus rubra (Red alder)	8.6	4.3	8.6	Good	No	No	4.3
583         Alnus rubra (Red alder)         9.5         4.8         9.5         Good         Yes         No         7.1           584         Alnus rubra (Red alder)         10.2         5.1         10.2         Good         Yes         N/A           585         Alnus rubra (Red alder)         10.9         5.5         10.9         Good         Yes         N/A           586         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         No         No         6.7           587         Alnus rubra (Red alder)         13.3         6.7         13.3         Good         No         No         6.1           588         Alnus rubra (Red alder)         8.2         4.1         8.2         Good         Yes         No         6.1           589         Alnus rubra (Red alder)         9.2         4.6         9.2         Good         Yes         Yes         N/A           590         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         Yes         Yes         N/A           593         Acer macrophyllum (Bigleaf maple)         16.3         16.3         16.3         16.0         Yes         Yes         N/A	581	Alnus rubra (Red alder)	8.7	4.4	8.7	Good	No	No	4.4
584         Alnus rubra (Red alder)         10.2         5.1         10.2         Good         Yes         N/A           585         Alnus rubra (Red alder)         10.9         5.5         10.9         Good         Yes         N/A           586         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         No         No         6.7           587         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         No         6.1           588         Alnus rubra (Red alder)         8.2         4.1         8.2         Good         Yes         No         6.1           589         Alnus rubra (Red alder)         9.2         4.6         9.2         Good         Yes         Yes         N/A           590         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         Yes         N/A           593         Acer macrophyllum (Bigleafmaple)         16.3         16.3         16.3         Good         Yes         Yes         N/A           594         Alnus rubra (Red alder)         14.0         7.0         14.0         Fair         No         No         19.6           597 <td>582</td> <td>Alnus rubra (Red alder)</td> <td>12.2</td> <td>6.1</td> <td>12.2</td> <td>Good</td> <td>Yes</td> <td>No</td> <td>6.1</td>	582	Alnus rubra (Red alder)	12.2	6.1	12.2	Good	Yes	No	6.1
585         Alnus rubra (Red alder)         10.9         5.5         10.9         Good         Yes         N/A           586         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         No         No         7.3           587         Alnus rubra (Red alder)         13.3         6.7         13.3         Good         No         No         6.7           588         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         No         6.1           589         Alnus rubra (Red alder)         8.2         4.1         8.2         Good         Yes         Yes         N/A           590         Alnus rubra (Red alder)         9.2         4.6         9.2         Good         Yes         Yes         N/A           590         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         Yes         Yes         N/A           592         Acer macrophyllum (Bigleaf maple)         16.3         16.3         16.3         Good         Yes         Yes         N/A           594         Alnus rubra (Red alder)         19.6         19.6         19.6         Good         No         No         19.6	583	Alnus rubra (Red alder)	9.5	4.8	9.5	Good	Yes	No	7.1
586         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         No         No         7.3           587         Alnus rubra (Red alder)         13.3         6.7         13.3         Good         No         No         6.7           588         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         No         6.1           589         Alnus rubra (Red alder)         8.2         4.1         8.2         Good         Yes         N/A           590         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         Yes         N/A           592         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         Yes         N/A           593         Acer macrophyllum (Bigleaf maple)         16.3         16.3         16.3         Good         Yes         N/A           594         Alnus rubra (Red alder)         14.0         7.0         14.0         Fair         Yes         N/A           595         Pseudotsuga menziesii (Douglas-fir)         19.6         19.6         Good         No         No         19.6           597         Acer macrophyllum (Bigleaf maple)<	584	Alnus rubra (Red alder)	10.2	5.1	10.2	Good	Yes	Yes	N/A
587         Alnus rubra (Red alder)         13.3         6.7         13.3         Good         No         No         6.7           588         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         No         6.1           589         Alnus rubra (Red alder)         8.2         4.1         8.2         Good         Yes         Yes         N/A           590         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         Yes         Yes         N/A           593         Acer macrophyllum (Bigleaf maple)         16.3         16.3         Good         Yes         Yes         N/A           594         Alnus rubra (Red alder)         14.0         7.0         14.0         Fair         Yes         Yes         N/A           595         Acer macrophyllum (Bigleaf maple)         19.6         19.6         Good         No         No         19.6           597         Acer macrophyllum (Bigleaf maple)         26.2         26.2         26.2         Fair         No         No         13.4           599         Acer macrophyllum (Bigleaf maple)         11.5         11.5         Fair         No         No         15.0     <	585	Alnus rubra (Red alder)	10.9	5.5	10.9	Good	Yes	Yes	N/A
588         Alnus rubra (Red alder)         12.1         6.1         12.1         Good         Yes         No         6.1           589         Alnus rubra (Red alder)         8.2         4.1         8.2         Good         Yes         Yes         N/A           590         Alnus rubra (Red alder)         9.2         4.6         9.2         Good         Yes         Yes         N/A           592         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         Yes         Yes         N/A           593         Acer macrophyllum (Bigleaf maple)         16.3         16.3         16.3         Good         Yes         N/A           594         Alnus rubra (Red alder)         14.0         7.0         14.0         Fair         Yes         N/A           595         Acer macrophyllum (Bigleaf maple)         19.6         19.6         19.6         Good         No         No         19.6           597         Acer macrophyllum (Bigleaf maple)         26.2         26.2         Fair         No         No         13.4           599         Acer macrophyllum (Bigleaf maple)         11.5         11.5         11.5         Fair         No         No         11.5	586	Alnus rubra (Red alder)	14.5	7.3	14.5	Good	No	No	7.3
589 Alnus rubra (Red alder)         8.2         4.1         8.2         Good         Yes         N/A           590 Alnus rubra (Red alder)         9.2         4.6         9.2         Good         Yes         Yes         N/A           592 Alnus rubra (Red alder)         14.5         7.3         14.5         Good         Yes         Yes         N/A           593 Acer macrophyllum (Bigleafmaple)         16.3         16.3         16.3         Good         Yes         Yes         N/A           594 Alnus rubra (Red alder)         14.0         7.0         14.0         Fair         Yes         Yes         N/A           595 Pseudotsuga menziesii (Douglas-fir)         19.6         19.6         Good         No         No         19.6           597 Acer macrophyllum (Bigleafmaple)         13.4         13.4         13.4         Fair         No         No         13.4           599 Acer macrophyllum (Bigleafmaple)         26.2         26.2         26.2         Fair         No         No         11.5           600 Acer macrophyllum (Bigleafmaple)         11.5         11.5         11.5         Fair         No         No         16.0           607 Thuja plicata (Western red cedar)         22.5         22.5	587	Alnus rubra (Red alder)	13.3	6.7	13.3	Good	No	No	6.7
590         Alnus rubra (Red alder)         9.2         4.6         9.2         Good         Yes         Yes         N/A           592         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         Yes         Yes         N/A           593         Acer macrophyllum (Bigleaf maple)         16.3         16.3         16.3         Good         Yes         Yes         N/A           594         Alnus rubra (Red alder)         14.0         7.0         14.0         Fair         Yes         Yes         N/A           596         Pseudotsuga menziesii (Douglas-fir)         19.6         19.6         Good         No         No         19.6           597         Acer macrophyllum (Bigleaf maple)         13.4         13.4         13.4         Fair         No         No         13.4           599         Acer macrophyllum (Bigleaf maple)         26.2         26.2         Fair         No         No         26.2           600         Acer macrophyllum (Bigleaf maple)         11.5         11.5         Fair         No         No         11.5           602         Thuja plicata (Western red cedar)         11.6         5.8         11.6         Fair         No         No	588	Alnus rubra (Red alder)	12.1	6.1	12.1	Good	Yes	No	6.1
592         Alnus rubra (Red alder)         14.5         7.3         14.5         Good         Yes         N/A           593         Acer macrophyllum (Bigleaf maple)         16.3         16.3         16.3         Good         Yes         N/A           594         Alnus rubra (Red alder)         14.0         7.0         14.0         Fair         Yes         N/A           596         Pseudotsuga menziesii (Douglas-fir)         19.6         19.6         Good         No         No         19.6           597         Acer macrophyllum (Bigleaf maple)         13.4         13.4         Fair         No         No         13.4           599         Acer macrophyllum (Bigleaf maple)         26.2         26.2         Eair         No         No         26.2           600         Acer macrophyllum (Bigleaf maple)         11.5         11.5         Fair         No         No         11.5           602         Thuja plicata (Western red cedar)         16.0         16.0         16.0         Good         No         No         22.5           608         Acer macrophyllum (Bigleaf maple)         26.3         26.3         26.3         Good         No         No         22.5           609         A	589	Alnus rubra (Red alder)	8.2	4.1	8.2	Good	Yes	Yes	N/A
593         Acer macrophyllum (Bigleaf maple)         16.3         16.3         16.3         Good         Yes         N/A           594         Alnus rubra (Red alder)         14.0         7.0         14.0         Fair         Yes         N/A           596         Pseudotsuga menziesii (Douglas-fir)         19.6         19.6         19.6         Good         No         No         19.6           597         Acer macrophyllum (Bigleaf maple)         13.4         13.4         Fair         No         No         13.4           599         Acer macrophyllum (Bigleaf maple)         26.2         26.2         26.2         Fair         No         No         26.2           600         Acer macrophyllum (Bigleaf maple)         11.5         11.5         Fair         No         No         11.5           602         Thuja plicata (Western red cedar)         16.0         16.0         Good         No         No         16.0           605         Alnus rubra (Red alder)         11.6         5.8         11.6         Fair         No         No         22.5           608         Acer macrophyllum (Bigleaf maple)         26.3         26.3         26.3         Good         No         No         18.0	590	Alnus rubra (Red alder)	9.2	4.6	9.2	Good	Yes	Yes	N/A
594 Alnus rubra (Red alder)         14.0         7.0         14.0         Fair         Yes         N/A           596 Pseudotsuga menziesii (Douglas-fir)         19.6         19.6         19.6         Good         No         No         19.6           597 Acer macrophyllum (Bigleaf maple)         13.4         13.4         13.4         Fair         No         No         13.4           599 Acer macrophyllum (Bigleaf maple)         26.2         26.2         26.2         Fair         No         No         26.2           600 Acer macrophyllum (Bigleaf maple)         11.5         11.5         Fair         No         No         11.5           602 Thuja plicata (Western red cedar)         16.0         16.0         Good         No         No         16.0           605 Alnus rubra (Red alder)         11.6         5.8         11.6         Fair         No         No         5.8           607 Thuja plicata (Western red cedar)         22.5         22.5         22.5         Good         No         No         26.3           608 Acer macrophyllum (Bigleaf maple)         18.0         18.0         Good         No         No         18.0           610 Thuja plicata (Western red cedar)         12.3         12.3         Excellent	592	Alnus rubra (Red alder)	14.5	7.3	14.5	Good	Yes	Yes	N/A
596         Pseudotsuga menziesii (Douglas-fir)         19.6         19.6         19.6         Good         No         No         19.6           597         Acer macrophyllum (Bigleaf maple)         13.4         13.4         13.4         Fair         No         No         13.4           599         Acer macrophyllum (Bigleaf maple)         26.2         26.2         26.2         Fair         No         No         26.2           600         Acer macrophyllum (Bigleaf maple)         11.5         11.5         Fair         No         No         11.5           602         Thuja plicata (Western red cedar)         16.0         16.0         16.0         Good         No         No         16.0           605         Alnus rubra (Red alder)         11.6         5.8         11.6         Fair         No         No         5.8           607         Thuja plicata (Western red cedar)         22.5         22.5         22.5         Good         No         No         26.3           608         Acer macrophyllum (Bigleaf maple)         18.0         18.0         18.0         Good         No         No         12.3           610         Thuja plicata (Western red cedar)         12.3         12.3         12.3	593	Acer macrophyllum (Bigleaf maple)	16.3	16.3	16.3	Good	Yes	Yes	N/A
597         Acer macrophyllum (Bigleaf maple)         13.4         13.4         13.4         Fair         No         No         13.4           599         Acer macrophyllum (Bigleaf maple)         26.2         26.2         26.2         Fair         No         No         26.2           600         Acer macrophyllum (Bigleaf maple)         11.5         11.5         11.5         Fair         No         No         11.5           602         Thuja plicata (Western red cedar)         16.0         16.0         16.0         Good         No         No         16.0           605         Alnus rubra (Red alder)         11.6         5.8         11.6         Fair         No         No         5.8           607         Thuja plicata (Western red cedar)         22.5         22.5         22.5         Good         No         No         22.5           608         Acer macrophyllum (Bigleaf maple)         18.0         18.0         18.0         Good         No         No         18.0           610         Thuja plicata (Western red cedar)         12.3         12.3         12.3         Excellent         No         No         12.3           611         Acer macrophyllum (Bigleaf maple)         45.8         45.8 <td>594</td> <td>Alnus rubra (Red alder)</td> <td>14.0</td> <td>7.0</td> <td>14.0</td> <td>Fair</td> <td>Yes</td> <td>Yes</td> <td>N/A</td>	594	Alnus rubra (Red alder)	14.0	7.0	14.0	Fair	Yes	Yes	N/A
599         Acer macrophyllum (Bigleaf maple)         26.2         26.2         26.2         Fair         No         No         26.2           600         Acer macrophyllum (Bigleaf maple)         11.5         11.5         11.5         Fair         No         No         11.5           602         Thuja plicata (Western red cedar)         16.0         16.0         16.0         Good         No         No         16.0           605         Alnus rubra (Red alder)         11.6         5.8         11.6         Fair         No         No         16.0           607         Thuja plicata (Western red cedar)         22.5         22.5         22.5         Good         No         No         22.5           608         Acer macrophyllum (Bigleaf maple)         18.0         18.0         Good         No         No         18.0           610         Thuja plicata (Western red cedar)         12.3         12.3         12.3         Excellent         No         No         12.3           611         Acer macrophyllum (Bigleaf maple)         45.8         45.8         Fair         No         No         45.8           612         Alnus rubra (Red alder)         13.7         6.9         13.7         Good	596	Pseudotsuga menziesii (Douglas-fir)	19.6	19.6	19.6	Good	No	No	19.6
600       Acer macrophyllum (Bigleaf maple)       11.5       11.5       Fair       No       No       11.5         602       Thuja plicata (Western red cedar)       16.0       16.0       16.0       Good       No       No       16.0         605       Alnus rubra (Red alder)       11.6       5.8       11.6       Fair       No       No       5.8         607       Thuja plicata (Western red cedar)       22.5       22.5       22.5       Good       No       No       22.5         608       Acer macrophyllum (Bigleaf maple)       18.0       18.0       Good       No       No       18.0         609       Acer macrophyllum (Bigleaf maple)       18.0       18.0       Good       No       No       18.0         610       Thuja plicata (Western red cedar)       12.3       12.3       Excellent       No       No       12.3         611       Acer macrophyllum (Bigleaf maple)       45.8       45.8       Fair       No       No       45.8         612       Alnus rubra (Red alder)       13.7       6.9       13.7       Good       No       No       6.9         613       Alnus rubra (Red alder)       13.5       6.8       13.5       Good	597	Acer macrophyllum (Bigleaf maple)	13.4	13.4	13.4	Fair	No	No	13.4
602       Thuja plicata (Western red cedar)       16.0       16.0       Good       No       No       16.0         605       Alnus rubra (Red alder)       11.6       5.8       11.6       Fair       No       No       5.8         607       Thuja plicata (Western red cedar)       22.5       22.5       22.5       Good       No       No       22.5         608       Acer macrophyllum (Bigleaf maple)       26.3       26.3       26.3       Good       No       No       26.3         609       Acer macrophyllum (Bigleaf maple)       18.0       18.0       Good       No       No       18.0         610       Thuja plicata (Western red cedar)       12.3       12.3       Excellent       No       No       12.3         611       Acer macrophyllum (Bigleaf maple)       45.8       45.8       Fair       No       No       45.8         612       Alnus rubra (Red alder)       13.7       6.9       13.7       Good       No       No       6.8         613       Alnus rubra (Red alder)       13.5       6.8       13.5       Good       No       No       6.8	599	Acer macrophyllum (Bigleaf maple)	26.2	26.2	26.2	Fair	No	No	26.2
605       Alnus rubra (Red alder)       11.6       5.8       11.6       Fair       No       No       5.8         607       Thuja plicata (Western red cedar)       22.5       22.5       22.5       Good       No       No       22.5         608       Acer macrophyllum (Bigleaf maple)       26.3       26.3       26.3       Good       No       No       26.3         609       Acer macrophyllum (Bigleaf maple)       18.0       18.0       Good       No       No       18.0         610       Thuja plicata (Western red cedar)       12.3       12.3       Excellent       No       No       12.3         611       Acer macrophyllum (Bigleaf maple)       45.8       45.8       Fair       No       No       45.8         612       Alnus rubra (Red alder)       13.7       6.9       13.7       Good       No       No       6.9         613       Alnus rubra (Red alder)       13.5       6.8       13.5       Good       No       No       6.8	600	Acer macrophyllum (Bigleaf maple)	11.5	11.5	11.5	Fair	No	No	11.5
607         Thuja plicata (Western red cedar)         22.5         22.5         Good         No         No         22.5           608         Acer macrophyllum (Bigleaf maple)         26.3         26.3         26.3         Good         No         No         26.3           609         Acer macrophyllum (Bigleaf maple)         18.0         18.0         18.0         Good         No         No         18.0           610         Thuja plicata (Western red cedar)         12.3         12.3         Excellent         No         No         12.3           611         Acer macrophyllum (Bigleaf maple)         45.8         45.8         45.8         Fair         No         No         45.8           612         Alnus rubra (Red alder)         13.7         6.9         13.7         Good         No         No         6.9           613         Alnus rubra (Red alder)         13.5         6.8         13.5         Good         No         No         6.8	602	Thuja plicata (Western red cedar)	16.0	16.0	16.0	Good	No	No	16.0
608       Acer macrophyllum (Bigleaf maple)       26.3       26.3       26.3       Good       No       No       26.3         609       Acer macrophyllum (Bigleaf maple)       18.0       18.0       18.0       Good       No       No       18.0         610       Thuja plicata (Western red cedar)       12.3       12.3       Excellent       No       No       12.3         611       Acer macrophyllum (Bigleaf maple)       45.8       45.8       Fair       No       No       45.8         612       Alnus rubra (Red alder)       13.7       6.9       13.7       Good       No       No       6.9         613       Alnus rubra (Red alder)       13.5       6.8       13.5       Good       No       No       6.8	605	Alnus rubra (Red alder)	11.6	5.8	11.6	Fair	No	No	5.8
609       Acer macrophyllum (Bigleaf maple)       18.0       18.0       18.0       Good       No       No       18.0         610       Thuja plicata (Western red cedar)       12.3       12.3       Excellent       No       No       12.3         611       Acer macrophyllum (Bigleaf maple)       45.8       45.8       Fair       No       No       45.8         612       Alnus rubra (Red alder)       13.7       6.9       13.7       Good       No       No       6.9         613       Alnus rubra (Red alder)       13.5       6.8       13.5       Good       No       No       6.8	607	Thuja plicata (Western red cedar)	22.5	22.5	22.5	Good	No	No	22.5
610       Thuja plicata (Western red cedar)       12.3       12.3       Excellent       No       No       12.3         611       Acer macrophyllum (Bigleaf maple)       45.8       45.8       Fair       No       No       45.8         612       Alnus rubra (Red alder)       13.7       6.9       13.7       Good       No       No       6.9         613       Alnus rubra (Red alder)       13.5       6.8       13.5       Good       No       No       6.8	608	Acer macrophyllum (Bigleaf maple)	26.3	26.3	26.3	Good	No	No	26.3
611       Acer macrophyllum (Bigleaf maple)       45.8       45.8       45.8       Fair       No       No       45.8         612       Alnus rubra (Red alder)       13.7       6.9       13.7       Good       No       No       6.9         613       Alnus rubra (Red alder)       13.5       6.8       13.5       Good       No       No       6.8	609	Acer macrophyllum (Bigleaf maple)	18.0	18.0	18.0	Good	No	No	18.0
612 Alnus rubra (Red alder)       13.7       6.9       13.7       Good       No       No       6.9         613 Alnus rubra (Red alder)       13.5       6.8       13.5       Good       No       No       6.8	610	Thuja plicata (Western red cedar)	12.3	12.3	12.3	Excellent	No	No	12.3
613 Alnus rubra (Red alder) 13.5 6.8 13.5 Good No No 6.8	611	Acer macrophyllum (Bigleaf maple)	45.8	45.8	45.8	Fair	No	No	45.8
	612	Alnus rubra (Red alder)	13.7	6.9	13.7	Good	No	No	6.9
508.2 426.1	613	Alnus rubra (Red alder)	13.5	6.8	13.5	Good	No	No	6.8
				508.2					426.1

# NOTES: 1. LAYOUT OF DETAIL IS CONCEPTUAL. SEE PLAN FOR LOCATION. LAYOUT IN FIELD WITH ASSISTANCE FROM THE RESTORATION PROFESSIONAL. 2. FALLEN TREE SHALL BE BURIED 1/3 THE TOTAL LOG DIAMETER. 3. SEE SPECIFICATIONS. FALLEN TREES TO BE THE RESTORATION PROFESSIONAL. KEEP **ROOTS ATTACHED** WHERE POSSIBLE. **FINISHED GRADE**

# **NOTES**

- 1. TREE INVENTORY COMPLETED ON NOVEMBER 26, 2019 BY THE WATERSHED COMPANY; 750 6TH STREET SOUTH; KIRKLAND, WA 98033; 425-822-5242. SEE THE ARBORIST REPORT (DATED MAY 2020) FOR COMPLETE DETAILS.
- 2. SEE SHEET W3 FOR TREE RETENTION AND REMOVAL PLAN.



750 Sixth Street South Kirkland WA 98033

p 425.822.5242

www.watershedco.com Science & Design

# S

B H H

ORIGINAL PLAN IS 22" x 34". SCALE ACCORDINGLY.

PROJECT MANAGER: DRAFTED:

CHECKED: JOB NUMBER:

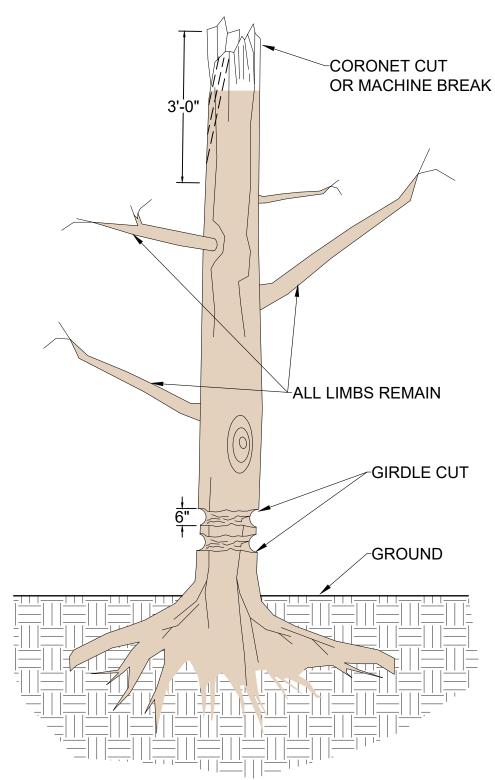
190343

SHEET NUMBER:

# LARGE WOODY DEBRIS PLACEMENT

SEE TREE RETENTION AND REMOVAL PLAN FOR TREES WHICH ARE TO BE RETAINED AS SNAGS.

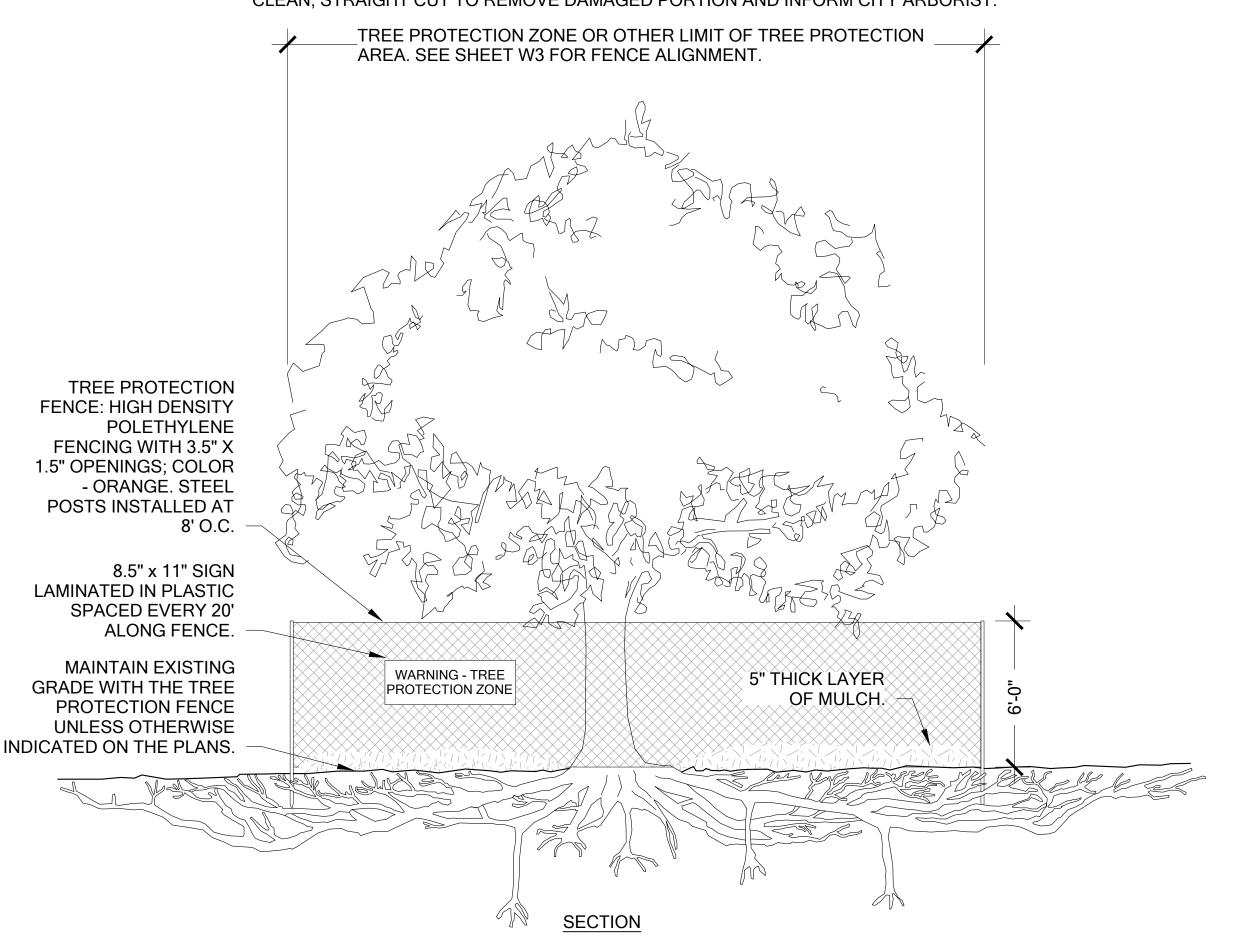
- 1. SNAGS ON SITE ARE TO BE TOPPED BY CLIMBING ARBORIST OR BROKEN
- 2. ONCE TOP HAS BEEN REMOVED ARBORIST IS TO MAKE A CORONET CUT TO GIVE A NATURAL BREAK APPEARANCE IF BROKEN BY MACHINE CORONET CUT IS NOT NECESSARY.
- 3. RETAIN ALL BRANCHES FOR PERCHES AND HABITAT STRUCTURES- DO
- 4. LIVE TREES SHOULD BE DEADENED BY CUTTING TWO 6" WIDE, ANGLED BAND AROUND THE BASE OF THE TREE WITH AN AXE OR BY MAKING TWO CUTS AROUND THE TREE WITH A CHAIN SAW TO A DEPTH OF APPROXIMATELY 1 INCH BELOW THE BARK LAYER.
- WATERSPOUTS MAY DEVELOP BELOW GIRDLING CUT DEPENDING ON SPECIES. THESE SHOULD BE REMOVED WITH ROUTINE MAINTENANCE AND MONITORING.



**SNAG CREATION** Scale: NTS

Scale: NTS

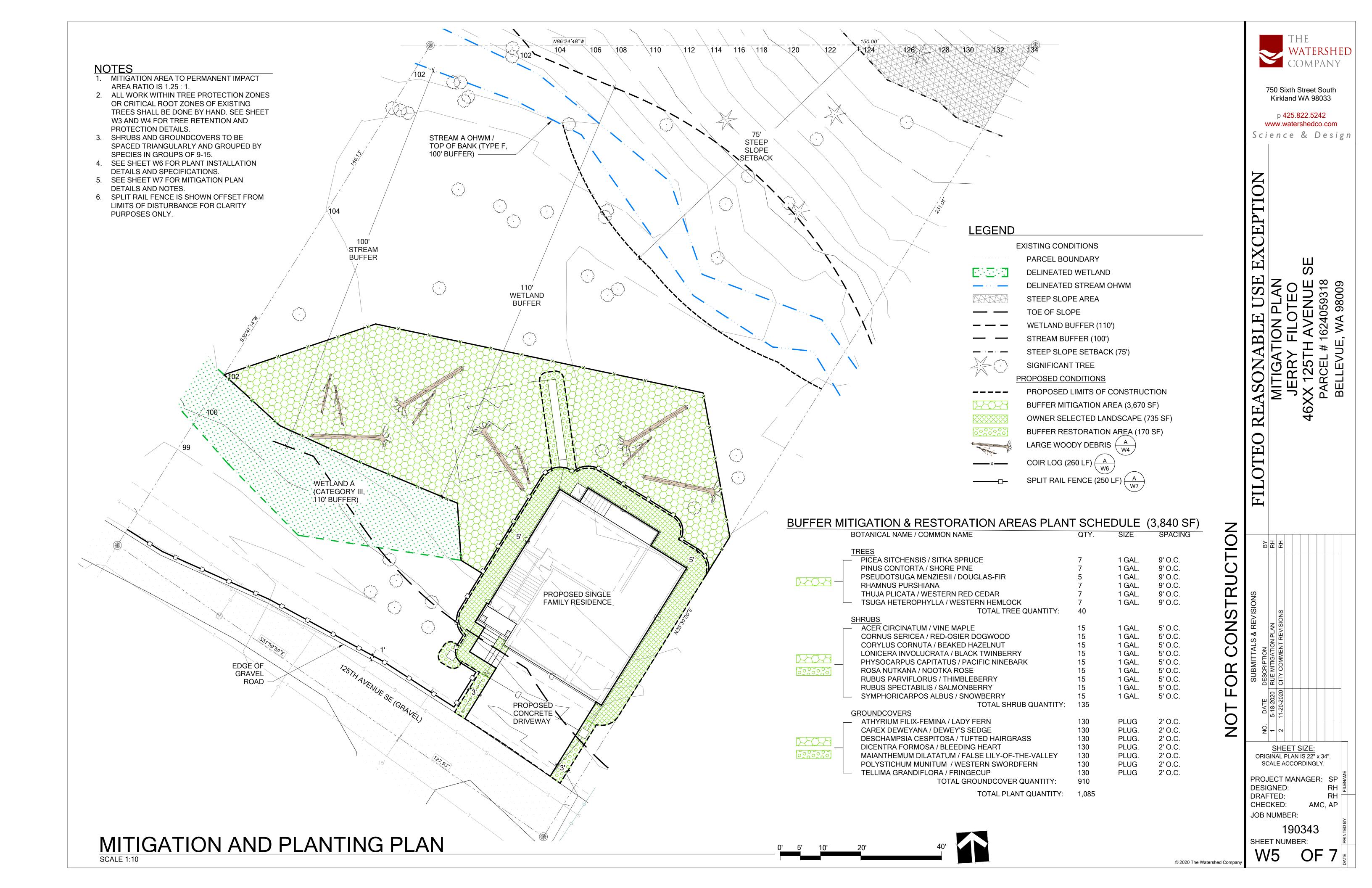
- . NO PRUNING SHALL BE PERFORMED UNLESS UNDER THE DIRECTION OF AN ARBORIST. 2. NO EQUIPMENT SHALL BE STORED OR OPERATED INSIDE THE PROTECTIVE FENCING
- INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
- 3. NO STORAGE OF MATERIALS SHALL OCCUR INSIDE THE PROTECTIVE FENCING.
- 4. UNAUTHORIZED ACTIVITIES IN TREE PROTECTION AREA MAY REQUIRE EVALUATION BY PRIVATE ARBORIST TO IDENTIFY IMPACTS AND MITIGATION REQUIRED.
- 5. EXPOSED ROOTS: FOR ROOTS GREATER THAN 1" DAMAGED DURING CONSTRUCTION, MAKE A CLEAN, STRAIGHT CUT TO REMOVE DAMAGED PORTION AND INFORM CITY ARBORIST



TREE PROTECTION FENCING

# TREE PROTECTION DETAILS AND NOTES

Scale: NTS



# 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
- 2. 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)
- 3. 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

- 1. 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.
- 2. 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
- 2. SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE RESTORATION CONSULTANT.
- 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
- 4. SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION

- PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE RESTORATION CONSULTANT 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
- THE RESTORATION CONSULTANT MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE RESTORATION CONSULTANT 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.
- 3. 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

1. 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 CONSULTANT 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 CONSULTANT AT TIME OF SUBMISSION.
- 2. 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 CONSULTANT 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT CONSULTANT MAY ARRANGE FOR INSPECTION.

# PLANT MATERIALS

- 1. 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.
- 2. 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

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

# REPLACEMENT

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

# PLANT MATERIAL

- 1. 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.
- 2. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CULTIVARS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

SEE PLANT LIST ON ACCOMPANYING PLANS AND PLANT SCHEDULES.

# ROOT TREATMENT

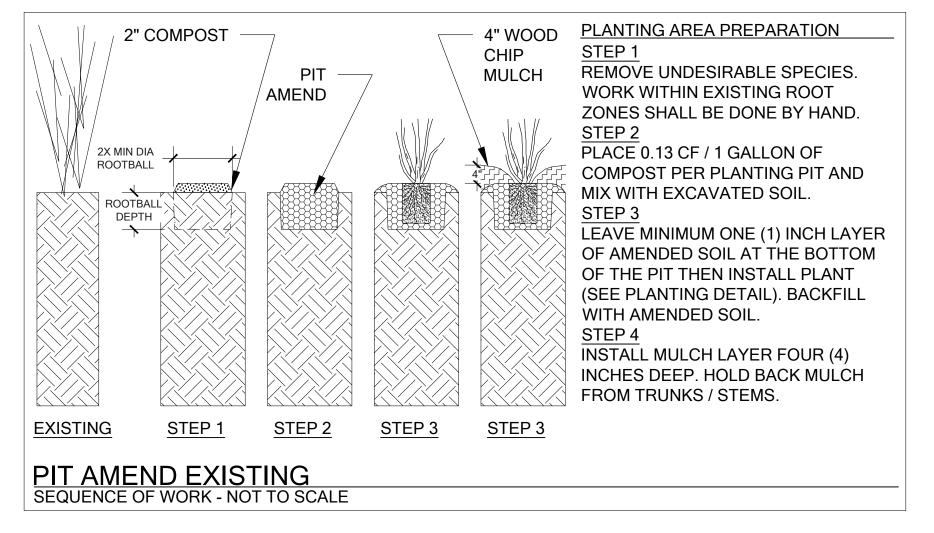
- 1. CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL
- 2. PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
- ROOTBALLS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

# NOTE: INSTALL COIR LOGS PARALLEL TO SLOPE CONTOUR PER SURFACE WATER DESIGN MANUAL - APPENDIX D (D.2.1.2.5)

UNTREATED  $\frac{3}{4}$ " X  $\frac{3}{4}$ " X 24" WOOD STAKE ACCUMULATED SEDIMENT, ORGANIC MATTER, NATIVE SEEDS, ETC. **EROSION CONTROL COIR FIBER LOGS** (BIODEGRADEABLE) STAKE THROUGH CENTER OF COIR LOG **ENTRENCH COIR LOG 5-7 INCHES** OR 1/2 - 2/3 INTO SUBGRADE

COIR LOG

Scale: NTS



# SITE PREPARATION - MITIGATION AND RESTORATION AREAS

Scale: NTS

# 1. PLANTING PIT SHALL NOT BE LESS THAN (2) TIMES THE WIDTH OF THE ROOT BALL DIA. 2. LOOSEN SIDES AND BOTTOM OF PLANT PIT 3. REMOVE FROM POT & ROUGH-UP ROOT BALL BEFORE INSTALLING. IF PLANT IS EXCEPTIONALLY ROOT-BOUND OR CONTAINS CIRCLING ROOTS, DO NOT PLANT AND RETURN TO NURSERY FOR AN ACCEPTABLE ALTERNATIVE. IF B&B STOCK, REMOVE ALL TWINE/WIRE, & REMOVE BURLAP FROM TOP 1/3RD OF ROOTBALL PRIOR TO PLANTING (NOTE: CONTAINER STOCK PREFERRED) 4. SOAK PLANTING PIT AFTER PLANTING 4" COARSE WOOD CHIP MULCH IN ALL PLANTING BEDS. HOLD BACK MULCH FROM TRUNK/STEMS. SLOW RELEASE GRANULAR FERTILIZER. APPLIED ONE YEAR AFTER INITIAL PLANTING REMOVE DEBRIS AND LARGE ROCKS AND BACKFILL WITH NATIVE SOIL. FIRM UP SOIL AROUND PLANT.

CONTAINER PLANTING

2X MIN DIA. ROOTBALL

Scale: NTS

Z 0

 $\bigcirc$ 

SHEET SIZE SCALE ACCORDINGLY.

JOB NUMBER:

PLANT INSTALLATION DETAILS AND SPECIFICATIONS

750 Sixth Street South Kirkland WA 98033 p 425.822.5242 www.watershedco.com Science & Design

للله نك للله  $\neg \times$ X

찔띰

ORIGINAL PLAN IS 22" x 34".

PROJECT MANAGER: SP DESIGNED: RH DRAFTED: CHECKED: AMC, AP

190343 SHEET NUMBER:

# MITIGATION PLAN NOTES

# MITIGATION PLAN

THIS PLAN HAS BEEN PREPARED AS MITIGATION FOR IMPACTS TO ON-SITE CRITICAL AREA BUFFERS. THE PROPERTY IS ENTIRELY ENCUMBERED BY STREAM AND WETLAND BUFFERS. PERMANENT AND TEMPORARY BUFFER IMPACTS WILL OCCUR WITH THE CONSTRUCTION OF A SINGLE FAMILY RESIDENCE, TO BE PERMITTED THROUGH THE REASONABLE USE EXCEPTION PROCESS. THE MITIGATION PLAN SEEKS TO ENHANCE A SUBSTANTIAL PORTION OF ON-SITE STREAM AND WETLAND BUFFERS. AREAS SUBJECT TO THE PROVISIONS OF THIS MITIGATION PLAN ARE VEGETATED WITH A YOUNG STAND OF RED ALDER AND AN UNDERSTORY OF WEEDY NATIVE AND INVASIVE SPECIES INCLUDING HIMALAYAN BLACKBERRY AND GIANT HORSETAIL.

TO OFFSET PROJECT IMPACTS, THE PLAN CALLS FOR THE ENHANCEMENT OF 3,840 SQUARE FEET OF THE STREAM AND WETLAND BUFFER THROUGH THE PLANTING OF NATIVE TREES, SHRUBS AND GROUNDCOVER. TREE SPECIES PROPOSED INCLUDE SITKA SPRUCE, SHORE PINE, DOUGLAS-FIR, CASCARA, WESTERN RED CEDAR, AND WESTERN HEMLOCK. SHRUBS INCLUDE VINE MAPLE, RED-OSIER DOGWOOD, BEAKED HAZELNUT, BLACK TWINBERRY, PACIFIC NINEBARK, NOOTKA ROSE, THIMBLEBERRY, SALMONBERRY, AND SNOWBERRY. PROPOSED GROUNDCOVERS INCLUDE LADY FERN, DEWEY'S SEDGE, TUFTED HAIRGRASS, BLEEDING HEART, FALSE LILY-OF-THE-VALLEY WESTERN SWORDFERN, AND FRINGECUP. A TOTAL OF 40 TREES, 135 SHRUBS, AND 910 GROUNDCOVER PLANTS COMPRISING THESE SPECIES WILL BE INSTALLED.

# MAINTENANCE AND MONITORING PLAN

THE SITE SHALL BE MAINTAINED AND MONITORED FOR FIVE YEARS FOLLOWING SUCCESSFUL INSTALLATION. COMPONENTS OF THE 5-YEAR MAINTENANCE AND MONITORING PLAN ARE DETAILED BELOW.

# GOALS

- 1. ESTABLISH DENSE NATIVE VEGETATION THAT IS APPROPRIATE TO THE ECO-REGION AND SITE.
- 2. LIMIT INVASIVE AND/OR NOXIOUS WEED COVER ON-SITE.
- 3. INCREASE HABITAT COVER AND REFUGE FOR URBAN WILDLIFE SPECIES. PROVIDE PERCHING, NESTING AND FORAGING HABITAT FOR NATIVE BIRDS.

# PERFORMANCE STANDARDS

THE STANDARDS LISTED BELOW WILL BE USED TO JUDGE THE SUCCESS OF THE INSTALLATION OVER TIME. IF PERFORMANCE STANDARDS ARE MET AT THE END OF YEAR 5, THE SITE WILL THEN BE DEEMED SUCCESSFUL AND THE PERFORMANCE SECURITY BOND WILL BE ELIGIBLE FOR RELEASE BY THE CITY OF BELLEVUE.

- SURVIVAL: THIS STANDARD CAN BE MET THROUGH PLANT ESTABLISHMENT OR THROUGH REPLANTING IN THE FOLLOWING DORMANT SEASON AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS.
- A. ACHIEVE 100% SURVIVAL OF ALL INSTALLED PLANTS BY THE END OF YEAR 1 (FROM DATE OF PLANT INSTALLATION).
- B. ACHIEVE 90% SURVIVAL OF ALL INSTALLED PLANTS BY THE END OF YEAR 2 (FROM DATE OF PLANT INSTALLATION).
- C. ACHIEVE 85% SURVIVAL OF ALL INSTALLED PLANTS BY THE END OF YEAR 3, 4, AND 5 (FROM DATE OF PLANT INSTALLATION).
- 2. NATIVE PLANT COVER:
- A. ACHIEVE 40% UNDERSTORY COVER OF NATIVE SAPLING TREES, SHRUBS AND GROUNDCOVER BY YEAR 2. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
- B. ACHIEVE 60% UNDERSTORY COVER OF NATIVE SAPLING TREES, SHRUBS AND GROUNDCOVER BY YEAR 3. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
- C. ACHIEVE 80% UNDERSTORY COVER OF NATIVE SAPLING TREES, SHRUBS AND GROUNDCOVER BY YEAR 5. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
- 3. SPECIES DIVERSITY: ESTABLISH AT LEAST TWO NATIVE TREE, SIX NATIVE SHRUB, AND TWO NATIVE GROUNDCOVER SPECIES BY YEAR 3 AND MAINTAIN THIS DIVERSITY THROUGH YEAR 5. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS STANDARD.
- 4. INVASIVE COVER: AREAL COVER FOR ALL NON-NATIVE, INVASIVE AND NOXIOUS WEEDS WILL NOT EXCEED 10% AT ANY YEAR DURING THE MONITORING PERIOD. INVASIVE PLANTS INCLUDE BUT ARE NOT LIMITED TO HIMALAYAN BLACKBERRY (RUBUS ARMENIACUS), CUT LEAF BLACKBERRY (RUBUS LACINIATUS), KNOTWEEDS (POLYGONUM CUSPIDATUM AND OTHERS), REED CANARYGRASS (PHALARIS ARUNDINACEA), CHERRY LAUREL (PRUNUS LAUROCERASUS), ENGLISH HOLLY (ILEX AQUIFOLIUM), AND IVY SPECIES (HEDERA SPP.).

# MONITORING METHODS

THIS MONITORING PROGRAM IS DESIGNED TO TRACK THE SUCCESS OF THE MITIGATION SITE OVER TIME AND TO MEASURE THE DEGREE TO WHICH THE SITE IS MEETING THE PERFORMANCE STANDARDS OUTLINED IN THE PRECEDING SECTION.

AN AS-BUILT PLAN WILL BE PREPARED BY THE RESTORATION PROFESSIONAL PRIOR TO THE BEGINNING OF THE MONITORING PERIOD. THE AS-BUILT PLAN WILL BE A MARK-UP OF THE PLANTING PLANS INCLUDED IN THIS PLAN SET. THE AS-BUILT PLAN WILL DOCUMENT ANY DEPARTURES IN PLANT PLACEMENT OR OTHER COMPONENTS FROM THE PROPOSED PLAN.

MONITORING WILL TAKE PLACE ONCE ANNUALLY IN THE FALL FOR FIVE YEARS. YEAR-1 MONITORING WILL COMMENCE IN THE FIRST FALL SUBSEQUENT TO INSTALLATION.

THE FORMAL MONITORING VISIT SHALL RECORD AND REPORT THE FOLLOWING IN AN ANNUAL REPORT SUBMITTED TO THE CITY OF BELLEVUE:

- 1. VISUAL ASSESSMENT OF THE OVERALL MITIGATION AREA.
- 2. YEAR-1 COUNTS OF LIVE AND DEAD PLANTS BY SPECIES. YEAR-2 THROUGH YEAR-5 COUNTS OF ESTABLISHED NATIVE TREES AND SHRUBS BY SPECIES, TO THE EXTENT FEASIBLE.
- 3. COUNTS OF DEAD PLANTS WHERE MORTALITY IS SIGNIFICANT IN ANY MONITORING YEAR.
- 4. ESTIMATE OF NATIVE COVER IN THE MITIGATION AREA.
- 5. ESTIMATE OF NON-NATIVE, INVASIVE WEED COVER IN THE MITIGATION AREA.
- 6. TABULATION OF ESTABLISHED NATIVE SPECIES, INCLUDING BOTH PLANTED AND VOLUNTEER SPECIES
- 7. PHOTOGRAPHIC DOCUMENTATION FROM AT LEAST THREE FIXED REFERENCE POINTS.
- 8. ANY INTRUSIONS INTO OR CLEARING OF THE PLANTING AREAS, VANDALISM, OR OTHER ACTIONS THAT IMPAIR THE INTENDED FUNCTIONS OF THE MITIGATION AREA.
- 9. RECOMMENDATIONS FOR MAINTENANCE OR REPAIR OF ANY PORTION OF THE MITIGATION AREA

# MAINTENANCE

THE SITE WILL BE MAINTAINED IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS FOR AT LEAST FIVE YEARS FOLLOWING COMPLETION OF CONSTRUCTION:

- 1. FOLLOW THE RECOMMENDATIONS NOTED IN THE PREVIOUS MONITORING SITE VISIT.
- 2. GENERAL WEEDING FOR ALL PLANTED AREAS:
  - A. AT LEAST TWICE YEARLY, REMOVE ALL COMPETING WEEDS AND WEED ROOTS FROM BENEATH EACH INSTALLED PLANT AND ANY DESIRABLE VOLUNTEER VEGETATION TO A DISTANCE OF 18 INCHES FROM THE MAIN PLANT STEM. WEEDING SHOULD OCCUR AT LEAST TWICE DURING THE SPRING AND SUMMER. FREQUENT WEEDING WILL RESULT IN LOWER MORTALITY, LOWER PLANT REPLACEMENT COSTS, AND INCREASED LIKELIHOOD THAT THE PLAN MEETS PERFORMANCE STANDARDS BY YEAR 5.
  - B. MORE FREQUENT WEEDING MAY BE NECESSARY DEPENDING ON WEED CONDITIONS THAT DEVELOP AFTER PLAN INSTALLATION.
  - C. DO NOT WEED THE AREA NEAR THE PLANT BASES WITH STRING TRIMMER (WEED WHACKER/WEED EATER). NATIVE PLANTS ARE EASILY DAMAGED OR KILLED, AND WEEDS EASILY RECOVER AFTER TRIMMING.
  - D. SELECTIVE APPLICATIONS OF HERBICIDE MAY BE NEEDED TO CONTROL INVASIVE WEEDS, ESPECIALLY WHEN INTERMIXED WITH NATIVE SPECIES. HERBICIDE APPLICATION, WHEN NECESSARY, SHALL BE CONDUCTED ONLY BY A STATE-LICENSED APPLICATOR.
- 3. APPLY SLOW-RELEASE, GRANULAR FERTILIZER TO EACH INSTALLED PLANT ANNUALLY IN THE SPRING (BY JUNE 1) OF YEARS 2 THROUGH 5.
- 4. REPLACE MULCH AS NECESSARY TO MAINTAIN A 4-INCH-THICK LAYER, RETAIN SOIL MOISTURE, AND LIMIT WEEDS.
- 5. REPLACE EACH PLANT FOUND DEAD IN THE SUMMER MONITORING VISITS DURING THE UPCOMING DORMANT SEASON (OCTOBER 15 TO MARCH 1), FOR BEST SURVIVAL.
- 6. THE PROPERTY OWNER WILL ENSURE THAT WATER IS PROVIDED FOR THE ENTIRE PLANTED AREA WITH A MINIMUM OF 1 INCH OF WATER PER WEEK FROM JUNE 1 THROUGH SEPTEMBER 30 FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION, THROUGH THE OPERATION OF A TEMPORARY IRRIGATION SYSTEM. LESS WATER IS NEEDED DURING MARCH, APRIL, MAY AND OCTOBER.

# CONSTRUCTION NOTES AND SPECIFICATIONS

# THE RESTORATION PROFESSIONAL WILL MONITOR:

- 1. ALL SITE PREPARATION.
- A. COIR LOG/STRAW WATTLE INSTALLATION.
- B. WEED REMOVAL.
- C. SOIL PREPARATION.
- D. MULCH PLACEMENT.
- 2. MITIGATION PLANTING ACTIVITES.
- A. PLANT MATERIAL DELIVERY INSPECTION.
- B. 100% PLANT INSTALLATION INSPECTION.

# GENERAL WORK SEQUENCE

# SITE PREPARATION

- 1. INSTALL COIR LOG OR STRAW WATTLE PER PLANS.
- 2. MANUALLY CLEAR INVASIVE AND ORNAMENTAL VEGETATION FROM MITIGATION AREA DURING SPRING AND/OR SUMMER MONTHS (I.E., AVOID CREATING EXPOSED SOIL CONDITIONS DURING THE WINTER STORM SEASON).
- A. REMOVE INVASIVE SPECIES (I.E., HIMALAYAN BLACKBERRY, ENGLISH IVY), IN ACCORDANCE WITH KING COUNTY NOXIOUS WEED BEST MANAGEMENT PRACTICES. FOR MORE INFORMATION:

  HTTPS://WWW.KINGCOUNTY.GOV/SERVICES/ENVIRONMENT/ANIMALS-AND-PLANTS/
- NOXIOUS-WEEDS.ASPX.

  B. CUT UNDESIRABLE VEGETATION. LEAVE ROOTS INTACT TO MINIMIZE POTENTIAL IMPACTS
- TO SLOPES ON ADJACENT PROPERTIES.

  C. FLUSH-CUT ORNAMENTAL WOODY VEGETATION (E.G. ENGLISH HOLLY, NON-NATIVE APPLE OR PLUM) THROUGHOUT MITIGATION AREA AND IMMEDIATELY TREAT STEM (DAUBING OR

PAINTING) WITH APPROPRIATE HERBICIDE. PERSON APPLYING HERBICIDE SHALL BE

- STATE-LICENSED. DO NOT REMOVE SUBSURFACE ROOTS.
- D. AVOID AND MINIMIZE DISTURBANCE AND/OR COMPACTION TO ROOTS OF ESTABLISHED NATIVE TREES TO BE RETAINED WHEN REMOVING VEGETATION FROM WITHIN TREE DRIPLINES.
- 3. BLANKET-MULCH CLEARED AREAS WITH WOOD MULCH, FOUR INCHES THICK.
- A. ENSURE MULCH DOES NOT TOUCH STEMS OF EXISTING (OR INSTALLED) VEGETATION. SEE PLANTING DETAIL ON SHEET W5.

# MITIGATION PLANTING AND IRRIGATION

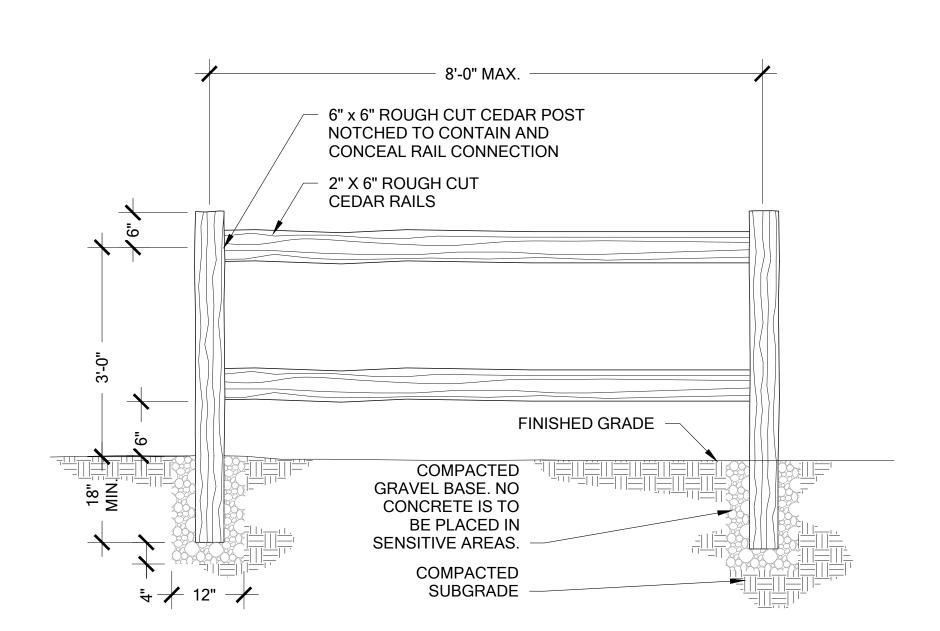
- 1. INSTALL MITIGATION PLANTS DURING THE DORMANT SEASON (OCTOBER 15 MARCH 1).
- A. PREPARE A PLANTING PIT FOR EACH PLANT THROUGH BLANKET WOOD MULCH AND INSTALL PER THE PLANTING DETAILS.
- 2. INSTALL A TEMPORARY, ABOVE GROUND IRRIGATION SYSTEM TO PROVIDE FULL COVERAGE TO ALL INSTALLED PLANTS WITHIN THE RESTORATION AREA

# MATERIAL SPECIFICATIONS AND DEFINITIONS

- FERTILIZER (FOR NEAR AQUATIC ENVIRONMENTS): SLOW-RELEASE, PHOSPHOROUS-FREE GRANULAR FERTILIZER. LABEL MUST INDICATE THAT PRODUCT IS SAFE FOR AQUATIC ENVIRONMENTS. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR USE. KEEP FERTILIZER IN WEATHER-TIGHT CONTAINER WHILE ON-SITE. FERTILIZER IS ONLY TO BE APPLIED IN YEARS 2 AND 3, NOT IN YEAR ONE.
- 2. IRRIGATION SYSTEM: AUTOMATED SYSTEM CAPABLE OF DELIVERING AT LEAST ONE INCH OF WATER PER WEEK FROM JUNE 1 THROUGH SEPTEMBER 30 FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION.
- 3. RESTORATION PROFESSIONAL: WATERSHED COMPANY [(425) 822-5242] PERSONNEL, OR OTHER PERSONS QUALIFIED TO EVALUATE ENVIRONMENTAL RESTORATION PROJECTS.
- 4. WOODCHIP MULCH: "ARBORIST CHIPS" (CHIPPED WOODY MATERIAL) APPROXIMATELY ONE TO THREE INCHES IN MAXIMUM DIMENSION (NOT SAWDUST). THIS MATERIAL IS COMMONLY AVAILABLE IN LARGE QUANTITIES FROM ARBORISTS OR TREE-PRUNING COMPANIES. MULCH SHALL NOT CONTAIN APPRECIABLE QUANTITIES OF GARBAGE, PLASTIC, METAL, SOIL, AND DIMENSIONAL LUMBER OR CONSTRUCTION/DEMOLITION DEBRIS.
- COMPOST: COMPOST SHALL MEET WSDOT STANDARDS SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, 9-14.4(8) FOR FINE COMPOST.

# CONTINGENCIES

IF THERE IS A SIGNIFICANT PROBLEM WITH THE RESTORATION AREAS MEETING PERFORMANCE STANDARDS, A CONTINGENCY PLAN WILL BE DEVELOPED AND IMPLEMENTED. CONTINGENCY PLANS CAN INCLUDE, BUT ARE NOT LIMITED TO: SOIL AMENDMENT, ADDITIONAL PLANT INSTALLATION, AND PLANT SUBSTITUTIONS OF TYPE, SIZE, QUANTITY, AND LOCATION.



SPLIT RAIL FENCE

Scale: NTS

Science & Design

750 Sixth Street South

Kirkland WA 98033

p 425.822.5242

TEO REASONABLE USE EXCE

MITIGATION PLAN

JERRY FILOTEO

46XX 125TH AVENUE SE

PARCEL # 1624059318

NOT FOR CONSTRUCT

SUBMITTALS & REVISIONS

NO. DATE DESCRIPTION

ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: SHET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: RH DRAFTED: RH DRAFTED: RH DRAFTED: RH DRAFTED: RH DRAFTED: AMC, AP JOB NUMBER:

JOB NUMBER:

190343

OF 7

SHEET NUMBER:

MITIGATION PLAN DETAILS AND NOTES

© 2020 The Watershed Company