

Soundview Consultants LLC

Environmental Assessment • Planning • Land Use Solutions

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Phone: (253) 514-8952 Fax: (253) 514-8954

Arborist Report

To: Peter Van Overbeek, Quarterra

File Number: 2783.0001

From: Kramer Canup, Soundview Consultants LLC
Shauna Willett, Soundview Consultants LLC

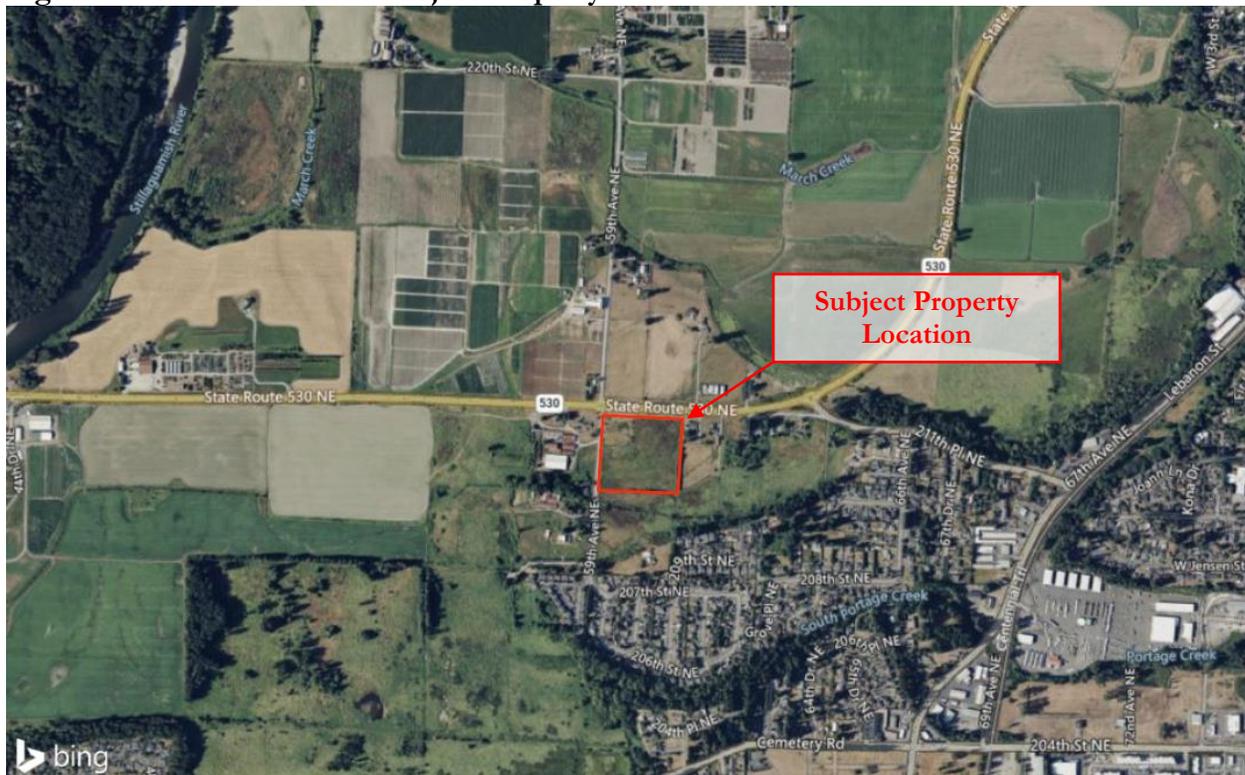
Date: October 18, 2024

Re: Arborist Report and Tree Retention Plan
SR 530 Mixed Use Development

Dear Mr. Van Overbeek,

Soundview Consultants LLC (SVC) is assisting Quarterra (Applicant) with an Arborist Report and Tree Retention Plan for the proposed mixed-use development of a 8.80-acre site located at 21117 59th Avenue Northeast in the City of Arlington, Washington. The subject property consists of one parcel situated in Southeast ¼ of Section 10, Township 31 North, Range 5 East, W.M (Snohomish County Tax Parcel Number 31051000402700). SVC investigated the site to identify and assess significant trees according to the standards of Arlington Municipal Code (AMC) 20.76 (Screening and Trees).

Figure 1. Aerial View of the Subject Property.



Proposed Project

The Applicant proposes to develop the subject property with a mixed-use development to include nine apartment buildings, seven retail buildings, two mini-parks, additional open space areas, and associated infrastructure to include stormwater facilities and utilities.

Purpose

The purpose of this Arborist Report and Tree Retention Plan is to evaluate the proposed project according to the significant tree retention and protection standard of AMC 20.76.120. A tree assessment was conducted to survey significant trees present along the eastern and southern perimeters of the 8.80-acre subject property. An analysis of trees present onsite was made using walk-through surveys to determine the number of significant trees onsite.

Methods

The investigation consisted of a walk-through survey of the subject property on September 24, 2024 to 1) determine the location, size, tree species, and health (good, fair, poor, dead/dying) for all of the significant trees on the 8.80-acre subject property per AMC 20.76.120, and 2) determine the critical root zone (CRZ) and proximity of trees to be retained relative to the proposed development and associated infrastructure. Per AMC 20.76.120(a), significant trees include deciduous trees with a diameter at breast height (DBH) measurement of at least 8 inches, and evergreen trees with a DBH measurement of at least 12 inches.

Each significant tree was located using a high-accuracy Bad Elf GNSS receiver unit and assigned a unique identification number. SVC's Certified Arborist and qualified biologist recorded species identification, DBH, and observations of health and structural condition. Tree health assessments were made using current methodology in accordance with the standards and practices of the International Society of Arboriculture (ISA) and American National Standards Institute (ANSI) A300 standards.

To calculate a single DBH for multi-stemmed trees, vector magnitude was applied, whereby the square root of the sum of the squares of the diameters of the stems is used. For example, a multi-stemmed tree with diameter measurements of 12-, 15-, and 28-inches results in the square root of 1,153 which is 34 inches in diameter. The critical root zone is calculated as one foot radius per one inch of trunk diameter.

Tree condition ratings are based on the following criteria. Further details and definitions are provided in Attachment A.

Good = Tree has no significant defects and is expected to survive without disturbance to its normal life expectancy.

Fair = Tree has either a minor or more substantial defect, either fungal decay or mechanical, that render it not likely to survive to normal life expectancy, depending on the species.

Poor = Tree has significant defects or mechanical issues that render it not likely to survive five years, depending on the species.

Dying = Tree is dying and lacks vigor.

Tree Assessment Results

The 8.80-acre subject property is located in mixed residential/agricultural interface in the City of Arlington. The vast majority of the site consists of open fields. Trees are limited to a few scattered individuals along the eastern and southern perimeters of the site. Observed species included nine (9) white bark birch (*Betula papyrifera*) with a DBH of 8 inches or greater, and one Hooker's willow (*Salix hookeriana*) with a DBH of 12 inches. A Tree Assessment Spreadsheet summarizing the observed trees is provided in Attachment B.

All ten trees are in fair condition. Two birch trees contained individual stems and the other eight were multi-stemmed trees, where the sum of the square root of the combined stems resulted in a final diameter calculation equal to or greater than 8 inches. The multi-stemmed birch and willow tree's trunks originate at ground level, yet contain connective tissue at the base, identified as trees with "basally joined" stems. This growth pattern is common for birch and willow tree species, naturally or intentionally curated for the multi-stem effect. Both species are fast-growing tree species with relatively short life spans and prone to have stems split-out or fail at the point of origin as they age or in high winds or if covered in ice. However, the unions of the assessed significant trees were sufficiently rooted and would not be considered "hazardous"

Tree Retention and Replanting Narrative

Per AMC 20.76.120(a), every development shall retain all significant trees and significant stands of trees, unless the retention of such trees would unreasonably burden the development, or, in the opinion of the permit-issuing authority, cause a significant safety concern. Per AMC 20.76.120(b), no excavation or other subsurface disturbance may be undertaken within the CRZ where feasible, and no impervious surface may be located within 12.5 feet (measured from the center of the trunk) of any tree 18 inches in diameter or more.

Per AMC 20.76.120(c), the retention of significant trees and significant stands of trees unreasonably burdens a development, if, to accomplish such retention or protection, the desired location of improvements on a lot or the proposed activities on a lot would have to be substantially altered, and such alteration would cause an unreasonable hardship upon the developer.

The proposed project requires the removal of eight (8) significant trees (T-4658, T-4659, T-4660, T-4661, T-4662, T-4663, T-4666, and T-4667). T-4662 and T-4663 are located within the footprint of proposed parking and site access. T-4658, T-4659, T-4660, T-4661, T-4666, and T-4667 are situated adjacent to the proposed parking and site access such that associated grading would substantially impact the CRZ and be detrimental to the trees. The proposed parking and site access are the minimum necessary to provide adequate and safe access and parking for the proposed mixed-use development. The six (6) remaining trees and CRZs are located entirely outside of the footprint of the proposed development. A Tree Retention Plan is provided in Attachment C.

All of the assessed trees are located in dense thickets or stands. If all non-significant trees are removed from the two perimeter stands leaving only the significant trees, the remaining significant trees may need to be reassessed by an arborist or landscape professional to determine if they are windfirm. Environmental forces, such as strong winds may affect newly isolated individual trees. If some insignificant trees can be thinned but retained within the proximity of significant trees to be retained, the failure potential will likely decrease.

Per AMC 20.76.120(d), any significant trees removed shall be replaced with five-gallon sized native species at a ratio of 3:1. If the replacement trees are to be planted on building lots, the developer shall provide adequate protection from damage during construction, or planting shall occur after construction, in which case a planting plan and security shall be provided to ensure their planting.

Given the ratio of 3:1 replacement trees for the removal of every significant tree, the proposed project requires planting 24 five-gallon native trees onsite. These may be planted in critical area buffers, open space tracts, or park spaces to be retained/provided onsite. These trees should be specified in future landscaping plans. Per AMC 20.97.120(e), if it is physically impossible to replant all replacement trees onsite, then the Applicant may mitigate the loss of significant trees by either planting trees on public property within the City as approved by the community development director, and/or paying a mitigation fee to the City's tree mitigation in-lieu fee (ILF) fund.

In addition to requirements for significant tree retention and replacement, per AMC 20.76.120(d), CRZs shall be fenced prior to construction with orange plastic mesh fencing or an approved equivalent to prevent encroachment.

Closure

The purpose of this Arborist Report is to evaluate the proposed project according to the significant tree retention and protection requirements of AMC 20.76.120. Construction impacts to trees should be avoided where feasible and assessed by a certified arborist to determine tree protection areas when grading near a tree's critical root zone.

All observations regarding trees in this report were made by a certified arborist based on education and professional experience. All determinations of health condition, structural condition, or hazard potential of a tree or trees at issue are based on current methodology and best available science. All health and hazard determinations are limited by the visual nature of the assessment. Defects may be obscured by soil, brush, vines, aerial foliage, branches, multiple trunks, or other trees. Even structurally sound, healthy trees are wind thrown during severe storms or fail due to other weather conditions. As such a determination is not a guarantee of sound health, or lack of risk.

The findings and conclusions documented in this arborist report have been prepared for specific application to the SR 530 mixed use development site. These findings and conclusions have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. The conclusions and recommendations presented in this report are professional opinions based on an interpretation of information currently available to us and are made within the operation scope, budget, and schedule of this project. No warranty, expressed or implied, is made. In addition, changes in government codes, regulations, or laws may occur. Due to such changes, our observations and conclusions applicable to this assessment may need to be revised wholly or in part in the future.

Any trees to be retained shall be in good health and free from damage and defects. During and following site clearing and construction activities, trees designated for retention that are determined to be unhealthy or damaged and pose a hazard shall be reevaluated by a Certified arborist or tree care professional and removed and replaced at a 3:1 ratio. Due to the inherent risk of failure from severe weather, undetectable and hidden disease, defect, and damage of the trees to be retained, Soundview Consultants LLC assumes no liability of bodily injury, death, or property damage resulting from failure of the trees to be retained. This plan is preliminary and based on preliminary site layout and design. The final tree retention plan is subject to change based on approved construction plans.

Sincerely,



International Society
of Arboriculture

A handwritten signature in blue ink that reads "Shauna Willett".

Shauna Willett
Certified Arborist #
WE-7452A

A handwritten signature in black ink that reads "Kramer Canup".

Kramer Canup
Project Manager and Environmental Scientist

References

- Arlington Municipal Code. 2024. Arlington Municipal Code Section 20.76: Screening and Trees. <https://www.arlingtonwa.gov/DocumentCenter/View/8103/Chapter-2076-Screening-and-Trees>
- Dunster, Julian. 2017. *Tree Risk Assessment Manual Second Edition*. International Society of Arboriculture. Champaign, Illinois.
- Hitchcock, C.L. & A. Cronquist, Ed. by D. Gibling, B. Ledger, P. Zika, and R. Olmstead. 2018. *Flora of the Pacific Northwest, 2nd Edition*. U.W. Press and Burke Museum. Seattle, Washington.
- International Society of Arboriculture (ISA). 2006. *Best Management Practices: Tree Inventories*, edited by Sharon Lilly and Peggy Currid. International Society of Arboriculture, 2006.
- Miller, Robert. Hauer, Richard. Werner, Les. 2015. *Urban Forestry: Planning and Managing Urban Greenspaces, Third Edition*. Waveland Press Incorporated. Long Grove, Illinois.
- Pojar and MacKinnon. 1994. *Revised Plants of the Pacific Northwest Coast: Washington Oregon, British Columbia & Alaska*. Lone Pine. Vancouver, British Columbia, Canada.

Attachment A – Tree Health and Condition Definitions

Condition	Symbol	Definition
Excellent	E	Nearly ideal specimen with excellent form and vigor
		Well-balanced and nearly symmetric crown
		Normal to excellent shoot elongation on new growth
		Little to no twig dieback or discoloration of leaves
		No apparent pest or disease problems
		Sound, solid trunk free of defects and mechanical damage Tree should live to full life expectancy for species
Good	G	Vigor is normal for the species
		Full or nearly full canopy
		Well-balanced or partially asymmetric crown
		No dieback to branches > 2" in diameter
		Twig dieback and leaf discoloration are minor
		Minor pest or disease problems are manageable
		Tree is reacting appropriately to damage
Sound, solid trunk free of defects and mechanical damage Tree should live to full life expectancy for species		
Fair	F	Reduced vigor, new growth may be stunted
		Thinning canopy, asymmetric or inconsistent form
		Suckering or secondary growth may be present
		Twig and branch dieback may comprise up to 50% of canopy
		Minor pest or disease problems are visible but not fatal
		Tree is reacting appropriately to damage Single or multiple defects (codominant stem, uncorrected lean, forked leader) are not practical to correct Life expectancy shortened to 10-40 years depending on species
Poor	P	Tree is declining and appears unhealthy
		Thinning canopy, asymmetric or inconsistent form
		Suckering or secondary growth may be present
		Twig and branch dieback may comprise more than 50% of crown
		Pest or disease problems are uncontrollable and likely fatal
		Extensive decay or cavities present in trunk and/or branches Single or multiple defects (codominant stem, forked leader, uncorrected lean) are not practical to correct Life expectancy shortened to 1-5 years depending on species
Dying	DY	Tree is dying and lacks vigor
		Little live foliage
		Suckering or secondary growth is dominant growth
		Twig and branch dieback may comprise more than 80% of crown Life expectancy shortened to 1-3 years depending on species
Dead	D	Tree is dead

Attachment B – Tree Assessment Spreadsheet

TREE RETENTION DATA

TREE NUMBER	SPECIES	DBH	CONDITION	RETAIN/REMOVE	NOTES
4658	White bark birch	9	Fair	REMOVE	Double leader at 12 feet, slight lean to east
4659	White bark birch	10	Fair	REMOVE	Basally joined multicam at 6 inches, 6+5+6, two eastern stems lean east
4660	White bark birch	8	Fair	REMOVE	Basally joined stems at 6 inches, 6+6
4661	White bark birch	9	Fair	REMOVE	Basally joined stems at 6 inches, 6+7
4662	White bark birch	9	Fair	REMOVE	Basally joined stems at 6 inches, 6+ 5+4
4663	White bark birch	9	Fair	REMOVE	Basally joined stems at 6 inches, 5+5+5
4664	White bark birch	9	Fair	RETAIN	Slight lean to east, kink at 15 feet
4665	Hooker's Willow	12	Fair	RETAIN	Multi stem willow, 6+6+4+4+4+3+3
4666	White bark birch	9	Fair	REMOVE	Multi stem at 2 inches, 6+3+3+3+3+4
4667	White bark birch	11	Fair	REMOVE	Basally joined, 8+7, swept base on south stem



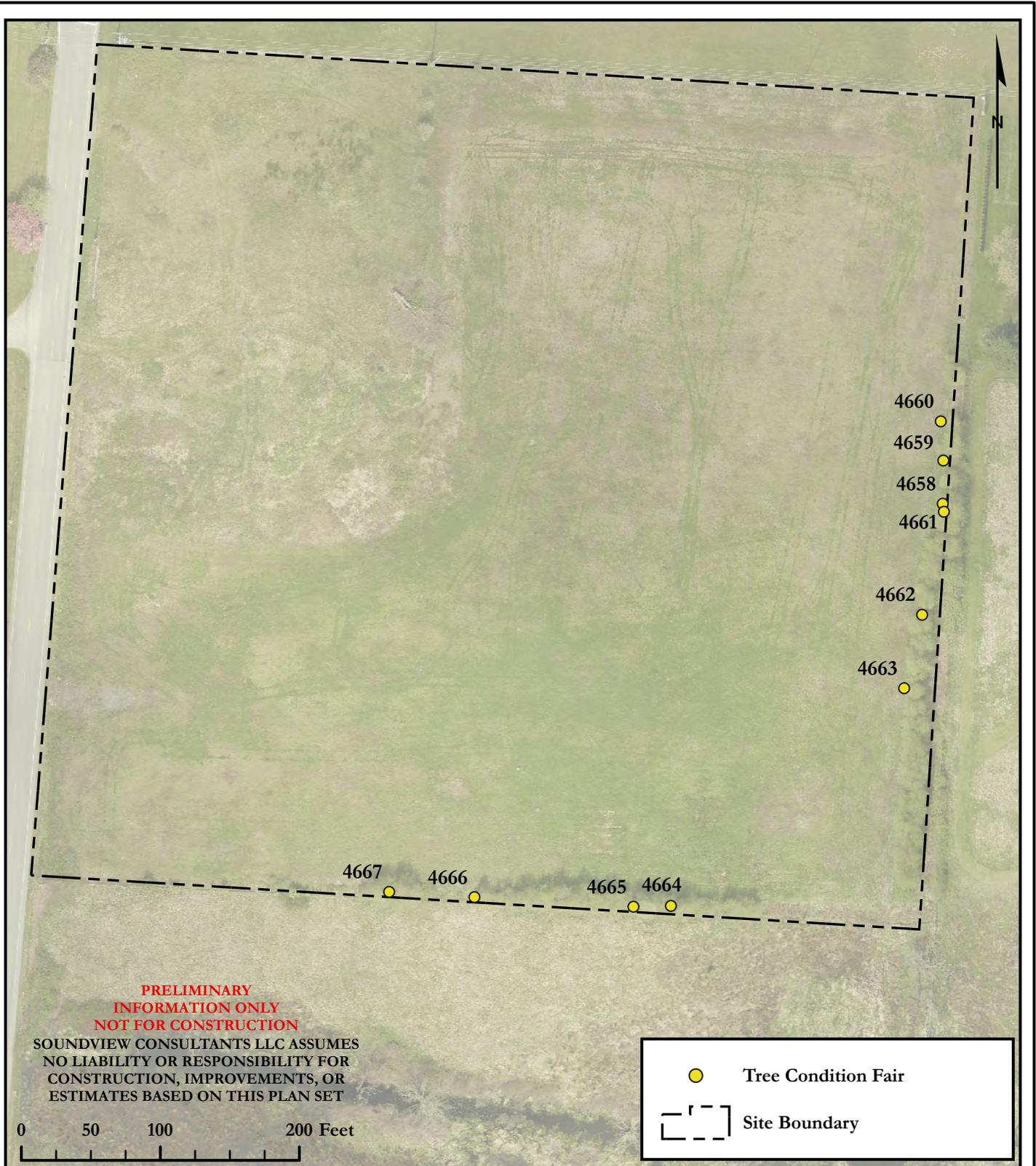
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SR 530
 21117 59TH AVE NE
 ARLINGTON, WA 98223
 SNOHOMISH COUNTY PARCEL NUMBER:
 31051000402700

DATE: 10/18/2024
 JOB: 2783.0001
 BY: DDS
 SCALE: NONE
 FIGURE NO. 2 of 2

Attachment C – Tree Retention Plan

TREE ASSESSMENT

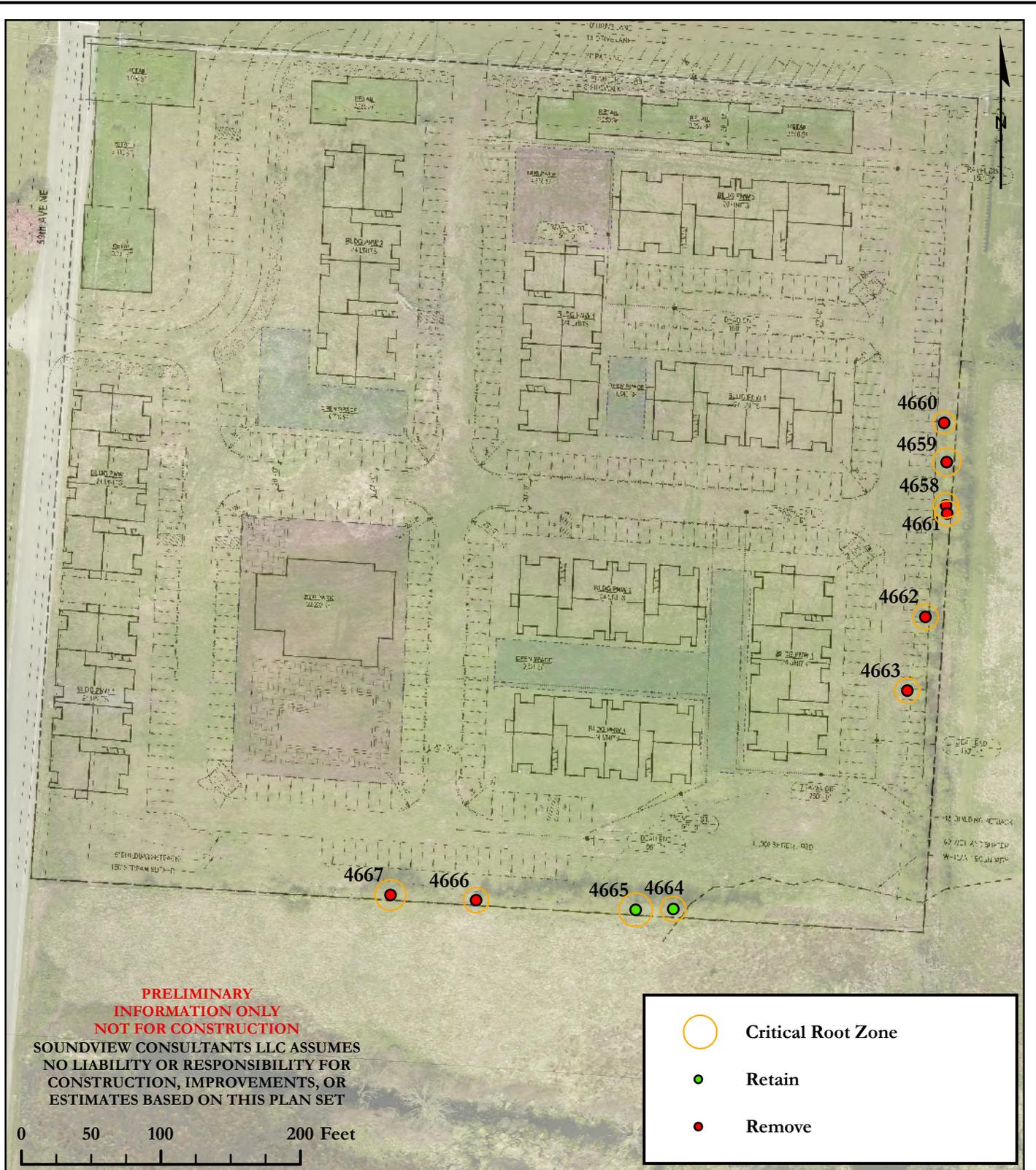


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SR 530
21117 59TH AVE NE
ARLINGTON, WA 98223
SNOHOMISH COUNTY PARCEL NUMBER:
31051000402700

DATE: 10/9/2024
JOB: 2783.0001
BY: DDS
SCALE: 1" = 100'
FIGURE NO. 1

TREE RETENTION EXHIBIT



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 SCALE: 1" = 100'
 FIGURE NO. 1 of 2

Appendix D- Site Photos

Density of Alder and Birch Perimeter Stand, Facing Northeast



Eastern and Southern Perimeter Tree Stands, Facing East



Attachment E – Qualifications

Project Manager: Kramer Canup
Field Scientist(s): Shauna Willett
Report Preparation By: Chloe Beck
Map Preparation By: Dave Schoenfeld
Document Quality Assurance By: Morgan Kentch

Kramer Canup is a Project Manager and Environmental Scientist with 10 years of professional experience. Kramer has a professional background in project management, ecological restoration, vegetation monitoring, invasive plant management, monitoring protocol development, grant writing, tropical ecology, wildlife monitoring and environmental education. He currently manages residential and commercial projects, performs wetland and ordinary high-water delineations and shoreline assessments; conducts environmental code analysis and prepares environmental assessment and mitigation reports, biological evaluations, and permit applications to support clients through the planning and permitting processes. His noteworthy experiences include supporting clients with navigating environmental regulations related to land use and development, managing wetland and riparian restoration projects, leading wetland and ordinary high water delineations throughout the Puget Sound region, and instructing study abroad courses in the Peruvian Amazon for the University of Washington.

Education: Bachelor of Arts in Environmental Studies with a minor in Ecological Restoration from the University of Washington. *Professional Trainings:* Basic Wetland Delineator Training with the Wetland Training Institute 40-hour USACE wetland delineation training. Kramer has been formally trained through the Washington State Department of Ecology, Coastal Training Program, How to Determine the Ordinary High Water Mark, Using the Washington State Wetland Rating System (2014), and Using the Credit-Debit Method for Estimating Mitigation Needs.

Shauna Willett is an Environmental Scientist and ISA Certified Arborist with 19 years of professional experience. She has performed individual tree assessments, tree inventories and environmental assessments of many habitats including oak woodlands, forests, riparian corridors, and wetlands of the Puget Sound region and throughout California. She has worked as a consulting arborist in the residential, commercial, and utility sectors of arboriculture where she conducted preventative maintenance inspections of distribution and high voltage transmission lines for Puget Sound Energy. Her assessment work has involved field identification of tree and plant species, pest and disease diagnosis, data collection and analysis in public and private sectors. Her research background is highly varied, spanning the fields of agriculture, horticulture, nutrition - domestically and internationally, aquatic toxicology and urban forestry. Her graduate research focused on the validity of tree inventory data collected by volunteers using the iTree forestry analysis and benefits assessment tools developed by USDA Forest Service. She has extensive knowledge of local plant taxonomy and ecological vegetative indicators. Shauna currently performs tree assessments, wetland and stream delineations, fish, and wildlife habitat assessments; conducts environmental code analysis; creates and modifies maps and tree surveys using AutoCAD, prepares environmental assessment and mitigation reports, biological evaluations, and permit applications to support clients through the regulatory and planning process for various land use projects.

Education: Bachelor of Science degree in Landscape Architecture from the University of California, Davis, with a focus on the relationship between communities and their urban forest ecosystems. Master's degree in geography with a dual emphasis in urban forestry and landscape architecture at the

University of California, Davis. *Professional Certifications*: ISA Certified Arborist, ISA Tree Risk Assessment Qualified Arborist. *Professional Trainings*: Using the Revised Washington State Wetland Rating System (2014) in Western Washington from Washington State Department of Ecology

Chloe Beck is a Staff Scientist with 5 years of professional experience. Chloe has a professional background in research, vegetation monitoring, grant writing, bird and wildlife surveying, volunteer coordination, and environmental education. She currently performs wetland and ordinary highwater delineations, conducts environmental code analysis and prepares environmental assessments. Her noteworthy experiences include managing large biological datasets, performing ecological surveys in Puget Sound region, and experience conducting various ecological surveys while studying abroad in Patagonia, Chile.

Education: Bachelor of Arts in Zoology and Bachelor of Arts in International Studies with a focus on The Global Environment from Miami University in Oxford, OH. Master of Science in Environmental Science from Western Washington University. Thesis title: Biodiversity of Snow Algae in the North Cascades: Comparing Distinct Microhabitats at Mount Watson. *Certificates*: Data Science for Environmental Applications from Western Washington University.

Morgan Kentch is an Environmental Scientist with 5 years of professional experience. She has a background in marine and freshwater ecology, wildlife and natural resource assessments, and monitoring wetland and riparian habitat restoration sites in the Pacific Northwest. She currently assists with performing wetland, stream, and shoreline delineations and fish and wildlife habitat assessments, conducting environmental code analysis, and preparing and/or providing final quality assurance/control for various types of scientific reports and permits for agency submittal. Her noteworthy experiences include analyzing datasets for wetland hydrology monitoring, collecting eDNA samples from streams for analysis, providing document quality assurance on critical area reports, mitigation plans, and permitting documents prior to submittal, and assisting with Endangered Species Act documentation for federal permit submittals.

Education: Bachelor of Science degree in Biology with Marine Emphasis from Western Washington University, Bellingham. *Professional Training*: 40-hour wetland delineation training (Western Mountains, Valleys, and Coast and Arid West Regional Supplements), Using the 2014 Wetland Rating System, and How to Determine the Ordinary High Water Mark. *Qualified Author and Scientists Lists*: Pierce County Wetland Specialist.