CRITICAL AREAS REPORT & OREGON WHITE OAK MITIGATION PLAN

Project:

Monte Verde Subdivision

Applicant:

Pacific Lifestyle Homes 11815 NE 99th Street, Vancouver WA, 98682

Prepared By:



August 5, 2022

The information in this report was compiled to meet the requirements of the City of Camas Municipal Code (CMC) Sections 16.53 Wetlands and 16.61 Fish and Wildlife Habitat Conservation Areas. This report has been prepared under the supervision and direction of the undersigned, a qualified professional following CMC Section 16.61.020.A.

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SITE INFORMATION:

Parcel No(s): 173184000 Acreage: 8.84 acres

Local Jurisdiction: City of Camas, Washington Section/Township/Range: SE ¼, S21, T2N, R3E, W.M. Site Address: 22205 NE 28th Street,

Camas, WA 98607

Legal Landowner: Southern Dwight A ETAL

(Per Current GIS Parcel Info)

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INTRODUCTION

Project Description

AshEco Solutions, LLC (AES) was contracted by Pacific Lifestyle Homes (PLH) to assess the potential critical areas present within the subject parcel and develop a mitigation plan to offset project impacts. This Critical Areas Report and Oak Mitigation Plan follows the City of Camas Municipal Code (CMC) Sections 16.53 Wetlands and 16.61 Fish and Wildlife Habitat Conservation Areas. PLH proposes construction of 34-lot subdivision within the 8.84-acre parcel.

Project Location and Background Information

The subject site is under the jurisdiction of the City of Camas and is assigned Parcel Number 173184000. The site is located at 22205 NE 28th Street, Camas, Washington. The site is surrounded to the east and west by large lot residential and agricultural lots. North of the property is urban residential lots and south of the property is forest land owned by Clark County.

EXISTING CONDITIONS

A single-family residence, shop, and large barn are present within the northern section of the property. South of the barn the property is fenced and used as horse pasture. The subject site is generally open and has been used for agricultural purposes since at least the 1970s. Native and non-native trees are scattered throughout the property with most concentrated in the north and southwestern corner of the parcel. Little native understory exists within the property due to a history of horse grazing. A maintained overhead BPA powerline easement 100 feet wide crosses the subject property diagonally east/west, Figure 4.

CRITICAL AREAS MAP RESEARCH

Topography

The site generally consists of a southwest facing slope. Topography maps show that the site drops approximately forty-eight feet in elevation from NE 28th Street to the southwest corner of the parcel, Figure 2.

Soil Survey

Soils within the study area are mapped as non-hydric Lauren gravelly loam, 0 to 8 percent slopes (LgB) and non-hydric Lauren loam 0 to 8 percent slopes (LeB) by the NRCS USDA Soil Conservation Service, Soil Survey of Clark County (1972), Washington, Figure 3.

The Lauren series consists of deep, somewhat excessively drained, nearly level to gently sloping soils on terraces 50 to 300 feet above the Columbia River. In a few places, on terrace fronts, the soils are steep to very steep. These are very gravelly soils that formed in mixed Columbia River alluvium that contained some volcanic ash. Lauren soils are in the southwestern part of the county, in the vicinity of Mill Plain, Orchards, and Fourth Plain. The original vegetation was Douglas-fir, grand fir, bigleaf maple, vine maple, salal, and ferns. The average annual precipitation is about 48-inches.

Lauren gravelly loam, 0 to 8 percent slopes (LgB) occurs on terraces. The slopes are generally less than 4 percent and approach 8 percent only along the terrace breaks. In a typical profile the surface layer is very dark brown gravelly and very gravelly loam about 20-inches thick. Below the surface layer is friable, dark-brown very gravelly loam about 13-inches thick. The next layer is dark-brown very gravelly coarse sandy loam about 11-inches thick. The underlying material, to a depth of 70-inches, is dark-brown very gravelly Monte Verde Subdivision

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loamy coarse sand. Included in mapping were a few small areas where very gravelly loamy coarse sand is within 30-inches of the surface. Permeability generally is moderately rapid, but it is rapid in the substratum. The available water capacity is moderate. Surface runoff is slow, and the erosion hazard is slight. The LgB soil type is not listed on the Washington State Hydric Soils List for Clark County (NRCS 2022).

Lauren loam, 0 to 8 percent slopes (LeB) is similar to Lauren gravelly loam, 0 to 8 percent slopes, except that the surface layer is free of gravel. Surface runoff is slow, and the erosion hazard is slight. Included in mapping were a few small gravelly areas. The LeB soil type is not listed on the Washington State Hydric Soils List for Clark County (NRCS 2022).

Mapped hydric soils do not necessarily mean that the area is a wetland; hydrology and wetland vegetation must be present to classify an area as a wetland. The same is true for soils that are not mapped as hydric. Wetlands can be found in areas without mapped hydric soils. The onsite wetlands were identified within areas of the non-hydric mapped soil type LgB.

Wetlands

A wetland was mapped within the southwest corner of the parcel by the Clark County GIS MapsOnline software under the "potential wetland presence" layer. The National Wetland Inventory also maps a PFOA wetland within the same general location, Figure 3. Site reconnaissance by AshEco Solutions (AES) identified that the mapped wetland was actually located over 300-feet south of the subject parcel. No wetlands were identified within the subject parcel by AES.

WDFW Priority Habitat

The Washington Department of Fish and Wildlife (WDFW) maps "Cave or Cave-rich Areas" within the general area, though no evidence of caves or rock outcroppings were identified onsite by AES during site reconnaissance. AES did identify Oregon white oak habitat onsite. This oak habitat was not previously mapped by WDFW.

METHODOLOGY

Wetlands

The study area was evaluated for the presence of wetlands using the Routine Determination Method per the U.S. Army Corps of Engineers' (USACE's) *Wetland Delineation Manual* (1987), the *Washington State Wetlands Identification and Delineation Manual* (1997), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, Version 2.0* (USACE 2010). The Routine Determination Method examines three parameters to determine if wetlands exist in a given area: vegetation, hydrology, and soils. The presence of hydrology is critical in identifying wetlands; however, since hydrologic conditions can change periodically (hourly, daily, or seasonally), it is necessary to determine if hydrophytic vegetation and hydric soils are also present. By definition, wetlands are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are regulated as "Waters of the United States" by the USACE, "Waters of the State" by Washington State Department of Ecology (ECY), and locally by CMC section 16.53 Wetlands. No wetlands were identified onsite.

See Appendix B for formal test plot data collected onsite by AES. The data supports the findings of uplands located within the southwest corner of the property. The wetlands identified by GIS within the subject parcel were determined to be offsite, over 300 feet further south.

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WDFW Priority Habitat

The subject site was evaluated for the presence of Priority Habitats as defined by WDFW Priority Habitats and Species (PHS) List 2008. "Cave or Cave-rich Areas" were mapped onsite by the WDFW PHS online mapping system. Oregon white oak trees were identified within the subject parcel by AES.

WDFW defines Caves as, "A naturally occurring cavity, recess, void, or system of interconnected passages (including associated dendritic tubes, cracks, and fissures) which occurs under the earth in soils, rock, ice, or other geological formations, and is large enough to contain a human. Mine shafts (a human-made excavation in the earth usually used to extract minerals) may mimic caves and abandoned mine shafts with actual or suspected occurrences of priority species should be treated in a manner similar to caves."

WDFW defines Oregon White Oak Woodlands as, "stands of oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%; or where total canopy coverage of the stand is <25%, but oak accounts for at least 50% of the canopy coverage. The latter is often referred to as oak savanna. In non-urbanized areas west of the Cascades, priority oak habitat consists of stands > 0.4 ha (1.0 ac) in size. East of the Cascades, priority oak habitat consists of stands > 2 ha (5 ac) in size. In urban or urbanizing areas, single oaks or stands < 0.4 ha (1 ac) may also be considered a priority when found to be particularly valuable to fish and wildlife (i.e., they contain many cavities, have a large diameter at breast height [dbh] (generally 20-inches dbh and greater), are used by priority species, or have a large canopy). Oak woodlands in western Washington may contain understory plants indicative of Prairie."

No caves were identified onsite or immediately offsite near the subject parcel. Eleven individual Oregon white oak trees were identified within or immediately adjacent to the subject parcel. The subject site is within an incorporated city and is urban, therefore the onsite Oregon white oak trees are considered Priority Habitat by WDFW.

Habitats of Local Importance

Following CMC Chapter 16.61 - Fish And Wildlife Habitat Conservation Areas, Section: 16.61.010.A.3.a, individual Oregon white oak trees with a twenty-inch diameter at breast height (20-inches dbh), stands of Oregon white oak trees greater than one acre when they are found to be valuable to fish and wildlife (i.e., may include trees with cavities, large diameter breast height (twelve inches dbh), are used by priority species, or have a large canopy), and all Oregon white oak snags unless determined by an arborist to be a hazard, are considered Habitats of Local Importance and therefore are regulated by CMC.

DOCUMENTED VEGETATION

The vegetation onsite has been disturbed through years of grazing by horses. The majority of the site was dominated in heavily grazed pasture grasses and herbs. Scattered trees and shrubs present in the onsite included, Douglas-fir (*Pseudotsuga menzisii* FACU), big leaf maple (*Acer macrophyllum* FACU), Oregon white oak (*Quercus garryana* FACU) Oregon ash (*Fraxinus latifolia* FACW), black cottonwood (*Populus trichocarpa* FAC), grand fir (*Abies grandis* FAC), bitter cherry (*Prunus emarginata* FACU), Pacific crabapple(*Malus fusca* FACW), sword fern (*Polystichum munitum* FACU), trailing blackberry (*Rubus ursinus* FACU), vine maple (*Acer circinatum* FAC), Indian plum (*Oemleria cerasiformis* FACU), beaked hazelnut (*Corylus cornuta* FACU), piggy-back plant (*Tolmiea menzisii* FAC), lanceleaf spring beauty (*Claytonia lanceolata* FAC), dovefoot geranium (*Geranium mole* FACU), curly dock (*Rumex crispus* FAC), large leaf avens (*Geum macrophyllum* FACW), and snowberry (*Symphoricarpos albus* FACU). Non-native or invasive



plants observed onsite included Himalayan blackberry (*Rubus armeniacus* FAC) and English holly (*Ilex aquifolium* FACU).

South of the subject parcel is a forested area owned by Clark County. This area is much more biologically diverse. Vegetation identified in this area and the associated offsite wetland buffer included tall Oregon grape (*Mahonia aquifolium* FACU), Pacific ninebark (*Physocarpus capitatus* FACW), red osier dogwood (*Cornus sericea* FACW), California false hellebore (*Veratrum californicum* FAC), small bedstraw (*Galium trifidum* FACW), prickly currant (*Ribes lacustre* FAC), salmonberry (*Rubus spectabilis* FAC), slough sedge (*Carex obnupta* OBL), and ocean spray (*Holodiscus discolor* FACU).

The indicator categories following the common and scientific name of each vegetation species indicate the likelihood of the species to be found in wetlands. Listed from most-likely to least-likely to be found in wetlands, the indicator categories are:

- OBL (obligate wetland) Occur almost always under natural conditions in wetlands.
- FACW (facultative wetland) Usually occur in wetlands but occasionally found in non-wetlands.
- FAC (facultative) Equally likely to occur in wetlands or non-wetlands.
- FACU (facultative upland) Usually occur in non-wetlands but occasionally found in wetlands.
- UPL (obligate upland) Occur almost always under natural conditions in non-wetlands.
- NI (no indicator) Insufficient data to assign to an indicator category.

CRITICAL AREA CONCLUSIONS

WDFW Priority Habitat

Eleven individual Oregon white oak trees were identified onsite or immediately offsite and numbered by the tree survey, Appendix C.. Three oaks with over 20-inch dbhs were documented onsite north of the existing barn (Oak #s 14, 15, and 16). Two non-jurisdictional oaks are located centrally onsite (Oak #s 27 and 32). Three oaks are located along parcel boundaries with partial canopies encroaching into the subject parcel (Oak #s 76, 79, and 126). The remaining three oaks identified were determined to be entirely offsite (Oak #s 31, 38, and 127). See Figure 4 and Appendix C. Six of the oak trees inventoried by the tree survey are jurisdictional and meet the WDFW criteria for "individual oak" Priority Habitats as they are have dbh measurements of 20-inches or larger. Oregon white oak Priority Habitat is protected by WDFW and also jurisdictional under the local CMC habitat code. The understory and herbaceous layer associated with the onsite oak habitat is highly disturbed due to grazing or dominated by Himalayan blackberry.

Habitats of Local Importance

Six Oregon white oak trees identified as onsite or immediately offsite (Oak #s 14, 15, 16, 31, 38, and 76) are over 20-inches dbh and therefore meet the criteria listed under CMC 16.61.010.A.3.a that defines Oregon white oak habitat of local importance:

- i. Individual Oregon White Oak trees with a twenty-inch diameter at breast height (twenty inches dbh).
- ii. Stands of Oregon White Oak trees greater than one acre, when they are found to be valuable to fish and wildlife (i.e., may include trees with cavities, large diameter breast height (twelve inches dbh), are used by priority species, or have a large canopy.
- iii. All Oregon White Oak snags unless determined by an arborist to be a hazard.

However, only four of the above six trees are located onsite or have driplines that extend onsite, Figure 4. The project proposes the removal of three of these jurisdictional Oregon white oak trees (Oaks #14, 15,



and 16). Therefore, mitigation to offset the removal of these jurisdictional trees under CMC is required. The following mitigation plan section details the mitigation measures proposed.

Table 1. Oregon White Oak Summary.

Oak Tree #	DBH	On-Site	Jurisdictional per WDFW PHS &/or CMC Local Habitatsof Importance Criteria (Individual oak tree >20" dbh)	Proposed for Removal	Requires Mitigation
14	20"	YES	YES	YES	YES
15	36"	YES	YES	YES	YES
16	30"	YES	YES	YES	YES
27	10" (dead)	YES	NO¹ (hazard tree)	YES	NO
31	21"	NO	YES	NO	NO
32	10"	YES	N/A² (see note)	NO	NO
38	30"	NO	YES	NO	NO
76	20"	YES (dripline)	YES	NO	NO
79	19"	YES (dripline)	NO	NO	NO
126	14"	YES (partial)	NO	NO	NO
127	14"	NO	NO	NO	NO
Tree #					
39	20'	YES	NO ³	YES	NO

¹This oak was noted by the arborist to have >90% dieback, is leaning, and has a poor taper. Due to proposed construction, grading requirements where it is located, and the condition of the tree, it meets hazard tree criteria. According to CMC 16.61.010.A.3.a.iii. Hazard oak snags are not jurisdictional or considered oak habitat of local importance.

³Tree #39 is an on-site snag determined to be an apple tree species by the arborist/tree survey. This snag is 20 inches in DBH and does not meet the WDFW definition for Priority Habitat (which requires it to be > 20-inches dbh). The snag is non-jurisdictional and does not require mitigation for its removal.

MITIGATION PLAN

The below mitigation plan was developed following Camas Municipal Code (CMC) Section 16.61 Fish and Wildlife Habitat Conservation Areas. The project will offset the impacts proposed to allow for no net loss of habitat functions onsite.

The proposed subdivision will retain and protect three Oregon white oak trees present along western, southern, and eastern parcel boundaries. The three jurisdictional Oregon white oak located within the northern portion of the subject site will be removed (Oak #s 14, 15, and 16).

Avoidance and Minimization

The project has been designed to avoid direct impacts to three Oregon white oak trees with driplines present onsite (Oak #s 126, 76, and 79). These three trees are located along the property lines and have critical root zones that extend into the subject parcel. The dripline of each tree will be located, staked, and fenced prior to construction to protect them during grading and site construction.

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² This oak "tree" consists of a trunk cut just above the ground surface with suckered "co-dominant growth, and was noted to be in poor condition with cracks, visible decay" by the arborist report. The trunk is located directly on the southern boundary of the BPA utility easement onsite. Therefore, it is assumed that the tree canopy historically extended into the overhead powerline easement and it has been historically cut under standard maintenance activities implemented by BPA.

Oak #32 consists of a trunk cut just above the ground surface with suckered "co-dominant growth, and was noted to be in poor condition with cracks, visible decay" by the arborist report, Appendix C. The trunk is located directly on the southern boundary of the BPA utility easement onsite. Therefore, it is assumed that the tree canopy historically extended into the overhead powerline easement and it has been cut under standard maintenance activities implemented by BPA. The largest stem of the new growth is 10-inches. This oak is considered non-jurisdictional and does not require mitigation.

Oak # 27 was noted by the arborist to have >90% dieback, is leaning, and has a poor taper. Due to proposed construction, grading requirements where it is located, and the condition of the tree, it meets hazard tree criteria, Appendix C. According to CMC 16.61.010.A.3.a.iii. Hazard oak snags are not jurisdictional or considered oak habitat of local importance. It is proposed for removal and does not require mitigation.

Jurisdictional Oak #s 15, and 16 are located within the proposed site access road and sidewalk. Alternate access road options into the subdivision were proposed by the applicant, but the City has required that the proposed access be located directly south of the existing North Hargrave Street and NE 28th Street intersection. Oak # 14 is within the construction limits of the northwestern lots making avoidance infeasible. Three feet of fill is required within this area by the grading plan. This amount of fill would be detrimental to the health of the tree, with mortality in the near future imminent. Therefore, removal of Oak #14 is also proposed. These three oaks are individual trees (not part of a larger oak grove/woodland) and are located within the northern section of the subject parcel, just north of the existing barn.

The majority of the subject parcel is historically disturbed due to horse grazing. Little native habitat in good health exists onsite. There is no native understory present within the area of the three oaks proposed for removal. The project will take advantage of these disturbed areas within the subject site, and no significant habitat outside of Oaks #14, 15, and 16 will be impacted.

Oregon White Oak Impacts and Mitigation

Three jurisdictional Oregon white oaks (Oak #s 14, 15, and 16, over 20-inch dbh) will be removed by the proposed project. According to CMC Section 16.51.125(B) jurisdictional Oregon white oak trees removed are to be mitigated for at a ratio of 2:1 with the mitigation tree stock 2-inches in caliper size. The project proposes to mitigate for the removal of the three (3) oaks by installing six (6) Oregon white oak trees of 2-inch caliper size within project limits, see Figure 5. These spaces are open and will offer plenty of sunlight and adequate area for future canopy growth post project completion. Protection will be put in place around the perimeter of the oak planting area during site grading and construction activities and after.

Oak #s 126, 76 and 79 within the south section of the property will be retained. The project will not impact the root system or damage these trees. The dripline of all three oaks will be located, staked, and fenced prior to site grading and construction activities. Compensatory measures will need to be implemented if during construction the critical root mass of the trees are impacted.

The mitigation proposed will offset the Oregon white oak Priority Habitat impacts onsite for no net loss of priority function or area following the CMC guidelines.



Table 2. Oak Impacts & Mitigation Summary.

Oak Label	Impact	Mitigation
Oak #s 14, 15, and 26	Oregon White Oak (over 20-inch dbh)	Oregon white oak installed onsite at a 2:1 Ratio (Two, 2-inch Caliper Oaks)

PLANTING PLAN

Site Preparation

- 1. Demarcate the on-site "Protected Oak Habitat" (Oregon white oak retention and mitigation area boundaries) and install tree protection fencing along the proposed planting areas and the perimeter of the existing oak canopy dripline, See Figure 4.
- 2. Maintain this tree protective fencing for the full duration of the project construction.
- 3. Mow grasses, herbaceous vegetation and invasive species present within mitigation areas prior to tree installation.

Note: Excavation, fill or compaction of the native soils is not to take place within the protected oak habitat. No lawn or ornamental landscaping is to be located within the protected oak habitat.

Planting Methods

Plant in fall through early spring (October-April) at specified spacing following the planting plan. Container/Ball and Burlap Stock

- Dig hole using a tree shovel/auger/mini-excavator or comparable tool 16-inches wide and 4-inches deeper than the root system, scarify sides of hole to 4-inches. Remove plant from container and loosen roots with hand or score vertically on sides and bottom with knife. Set plant upright and plumb in hole so the crown is just above the finish grade. Ensure that roots are extended down entirely and do not bend upward.
- 2. Replace loose soil around plant and firmly compact the soil around the plant to eliminate air spaces. Do not use frozen soil for backfilling.
- 3. Firmly compact the soil around the planted species to eliminate air spaces.
- 4. Install woody mulch around the base of planted and retained Oregon white oak trees to insulate plantings, maintain moisture content of soil and reduce invasive plant competition.
- 5. Irrigate according to performance standards for the first three summers after planting or as site and weather conditions warrant.

Planting Specifications

Planting will begin in Winter/Spring of 2023 while onsite soils are more saturated (and stock is dormant). The following tables summarize the native plant selection, spacing, size, and quantity for the on-site mitigation area:

Table 3. Mitigation Planting Plan.

	Common Name	Scientific Name	Spacing	Quantity	
(Oregon White Oak, FACU	Quercus garryana	2-inch caliper	20 ft.	6



Protective Signage

Post construction, install permanent signs along the boundary of a "Protected Oak Habitat" meeting city standards or conditions outlined under the permit. See Objective 3, Performance Standard 3b below.

Maintenance Plan

Maintenance at the on-site mitigation area covers a minimum of 5-years and will involve removing persisting invasive plant species in addition to watering and re-installing failed species as necessary. The maintenance will include the following activities when necessary:

- 1. Remove and control non-native/noxious vegetation around all newly installed plants. During years 1 through 5 invasive species will be removed and suppressed as often as necessary to meet a performance standard of no greater than 20 percent cover by invasive species, measured by monitoring plots.
- 2. Irrigate planted species as necessary during the dry season, approximately July 1 through October 15. Irrigation is recommended to occur on a two-week cycle (minimum) during the dry season for the first three years. Water will be provided by a temporary above-ground irrigation system or a water truck.
- 3. Replace dead or failed plants as described for the original installation to meet the minimum annual performance standard of 100% survival over the 5-year monitoring period.

Monitoring Plan

The mitigation site will be monitored for a 5-year period following project construction; monitoring will take place in years 1, 2, 3 and 5. Monitoring reports will be submitted to the City of Camas by the end of each monitored year. The goal of monitoring is to determine if the previously stated performance standards are being met. The mitigation area will be monitored once during the growing season, preferably during the same two-week period each year to better compare the data.

During the first annual monitoring and maintenance event, two representative photo plots will be selected in the mitigation area permanently marked with metal posts. Monitoring photo plot locations will be placed on an as-built drawing and included in the annual monitoring reports.

Monitoring Report Contents

The annual monitoring reports will contain at least the following:

- Location map and as-built drawing of Oregon white oak mitigation and retention areas.
- Photographs from permanent photo points (x2 minimum).
- Historic description of project, including dates of Oregon white oak tree installation, current year of monitoring, and restatement of mitigation goal.
- Documentation of plant survival, cover, and overall development of the plant community.
- Assessment of non-native, invasive plant species and recommendations for management.
- Summary of maintenance and contingency measures proposed for the next season and completed for the past season.

Contingency Plan

If the performance standards are not met by the fifth year following project completion, or at an earlier time if specified above, a contingency plan will be developed and implemented. All contingency actions will be undertaken only after consulting and gaining approval from the City of Camas. The applicant will be required to complete a contingency plan that describes (1) the causes of failure, (2) proposed corrective

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actions, (3) a schedule for completing corrective actions, and (4) whether additional maintenance and monitoring are necessary.

Site Protection

The on-site mitigation area will be owned and managed by the applicant or assignee. AshEco Solutions, LLC or similar entity will be responsible for supervising the maintenance and conducting the monitoring of the on-site mitigation area for the 5-year period at expense of the applicant. The applicant will establish and record a permanent and irrevocable conservation covenant on the mitigation property.

MITIGATION GOALS, OBJECTIVES AND PERFORMANCE STANDARDS

The mitigation goal of protecting the onsite Oregon white oak habitat for no net loss of functional habitat onsite will be met when the below objectives and performance standards are met.

Objective 1: Replace the loss of three jurisdictional Oregon white oak trees with six large stock (2-inch caliper) Oregon white oak trees onsite.

Performance Standard 1a. Document the installation of the native Oregon white oak trees as specified by Table 3. Submit As-built documenting planting locations, plant species, and plant quantities.

Performance Standard 1b. In Years 1-5, planted species are to achieve 100 percent (100%) survival after the site is planted. (If dead plants are replaced to achieve the 100 percent survival rate, this performance standard will be met).

Performance Standard 1c. In All Years, non-native/invasive plant species will not exceed 20-percent (20%) aerial cover across the onsite mitigation area.

Objective 2: Retain and provide long-term protection for Oak #s 126, 76, and 79.

Performance Standard 2a. Document the installation of tree protection fencing around Oak #s 126, 76, and 79 before construction begins onsite.

Performance Standard 2b. Document the installation of mulch and other soil amendments/BMPs post construction activities.

Objective 3: Provide long-term protection for the onsite mitigation area.

Performance Standard 3a. Record a conservation covenant with the City of Camas. This performance standard will be met when the Year 1 monitoring report is submitted that includes a copy of the conservation covenant.

Performance Standard 3b. Post permanent signage along the outer boundaries of the "Protected Oak Habitat" (oak mitigation and retention areas) or as otherwise determined by the City of Camas permit conditions. Signs are to read:

"Critical Area- Please Retain in a Natural State"

Signage will remain in legible condition; if they are missing or illegible, they will be replaced. This performance standard will be met when signs are reported to be in place in the final monitoring report.



CONCLUSIONS

The above sections outline how the proposed project will meet the Habitat Conservation Areas requirements of the CMC. All but three of the Oregon White Oaks trees will be retained. The oaks proposed for removal (Oak #s 14, 15, and 16) will be mitigated for onsite for no net loss of Oregon white oak habitat following CMC guidance and criteria. With issuance of the approved critical areas permits, the proposed Oregon white oak mitigation plantings will be implemented, and a conservation covenant recorded to protect the onsite critical areas under the applicant's ownership in perpetuity.

DISCLAIMER

This report documents the investigation, best professional judgment, and conclusions of the investigator. It is correct and complete to the best of our knowledge. It should be considered a preliminary mitigation plan and used at your own risk until it has been reviewed and approved in writing by the local agency with jurisdiction over the site. AES personnel base the above listed conclusions on standard scientific methodology and best professional judgment.



REFERENCES

City of Camas Municipal Code. 2008 (Amended). Sections 16.61 Fish and Wildlife Habitat Conservation Areas

Clark County Geographic Information Systems. Available at: http://gis.clark.wa.gov/mapsonline/[Accessed August 2022].

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. Online edition. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station.

Olson, P. & Stockdale, E. 2010. Washington State Department of Ecology: Determining the Ordinary High Water Mark on Streams in Washington State. Second Review Draft. Ecology Publication #08-06-001.

U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS). 1974. Soil Survey of Clark County Area. Online document. Available at: http://websoilsurvey.nrcs.usda.gov/app/. [Accessed August 2022]

U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS). 2022. Washington State Hydric Soils List. Available at: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. [Accessed August 2022].

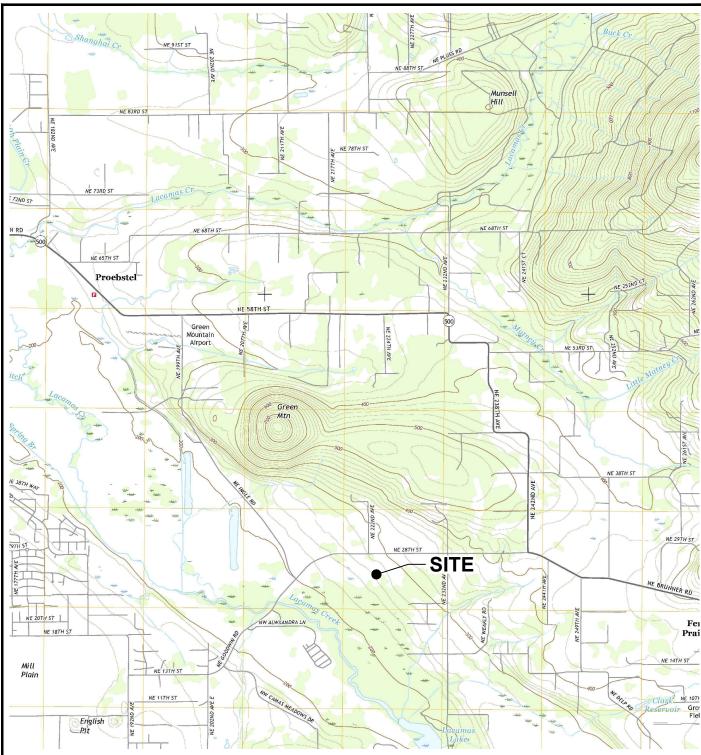
U. S. Fish & Wildlife Service. 2022. National Wetlands Inventory. Online document. Available at: http://www.wetlandsfws.er.usgs.gov/NWI/index.html. [Accessed August 2022].

Wakeley, J.S.; R.W. Lichvar; and C.V. Noble, eds. U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Washington State Department of Ecology (WDOE). 1997. Washington State Wetlands Identification and Delineation Manual. Publication #96-94. Olympia, Washington.

Washington State Department of Fish and Wildlife (WDFW). Management Recommendations for Washington's Priority Habitats – Oregon White Oak Woodlands (Larsen, 1998).





NOTE(S):
USGS, LACAMAS CREEK QUADRANGLE
WASHINGTON-CLARK CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



PURPOSE: XX

Line 1 Line 2

DATUM: NAVD 88

ADJACENT PROPERTY OWNERS:

Adj 1 Adj 2 VICINITY MAP

APPLICANT: Pacific Lifestyle Homes

PROJECT NAME: Critical Areas Feasibility Map

PARCEL #: 173184000 SITE LOCATION ADDRESS:

22205 NE 28th St.

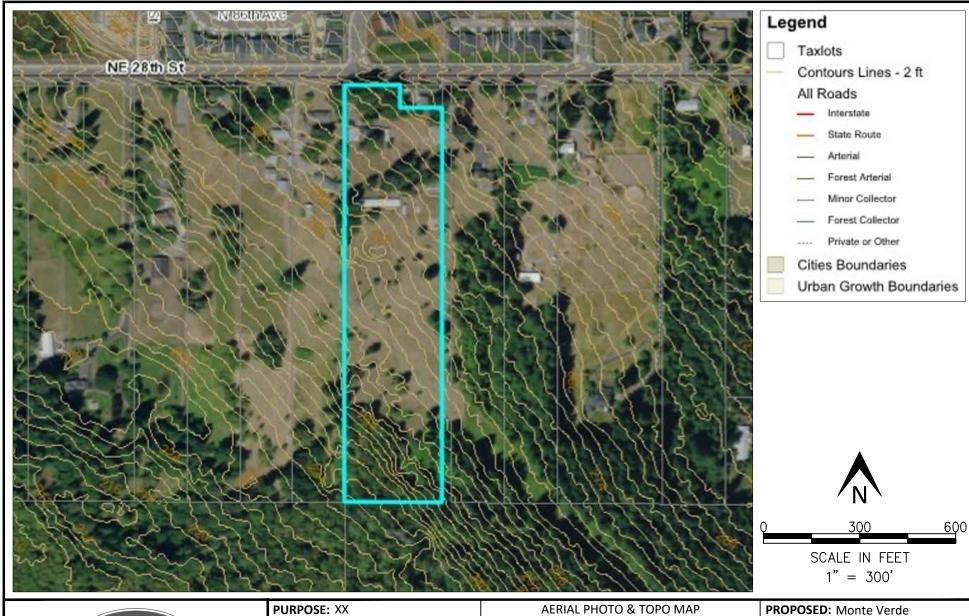
PROPOSED: Monte Verde Subdivision

IN: Camas

NEAR: Lacamas Creek

COUNTY: Clark STATE: WA

FIGURE: 1 **DATE:** 7-8-22





Line 1 Line 2

DATUM: NAVD 88

ADJACENT PROPERTY OWNERS:

Adj 1 Adj 2 **APPLICANT:** Pacific Lifestyle Homes

PROJECT NAME: Critical Areas Feasibility Map

PARCEL #: 173184000 SITE LOCATION ADDRESS:

22205 NE 28th St.

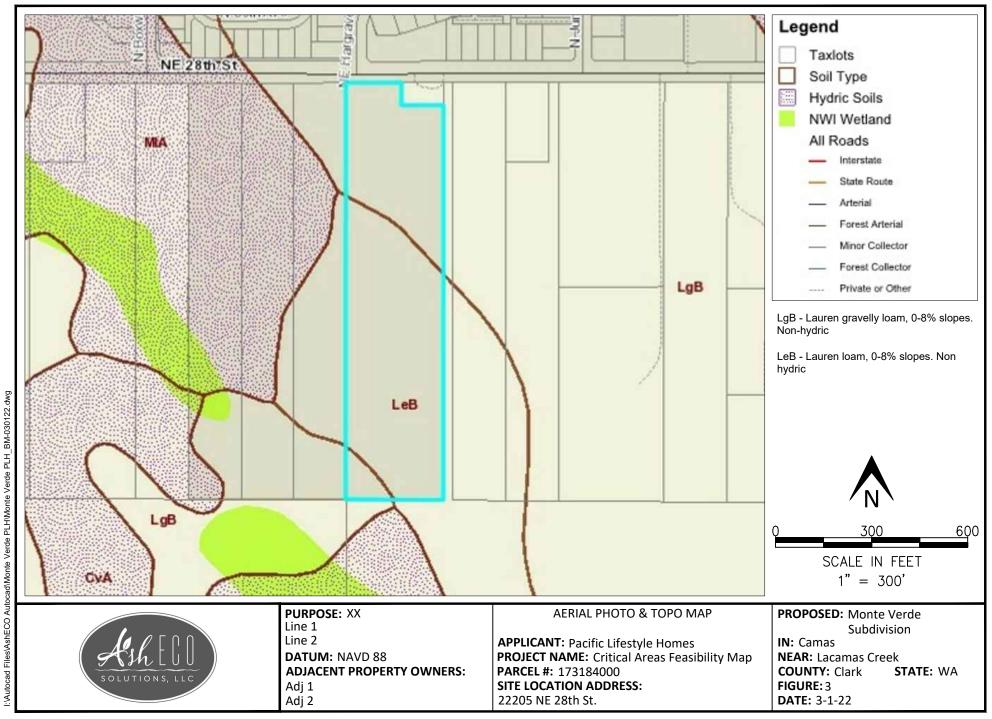
Subdivision

IN: Camas

NEAR: Lacamas Creek

COUNTY: Clark STATE: WA

FIGURE: 2 **DATE:** 3-1-22



Files\AshECO Autocad\Monte Verde PLH\Monte Verde PLH_BM-080322.dwg

Line 1 Line 2

DATUM: NAVD 88

ADJACENT PROPERTY OWNERS: Adj 1

Adj 2

APPLICANT: Pacific Lifestyle Homes PROJECT NAME: Critical Areas Feasibility Map **PARCEL #:** 173184000

SITE LOCATION ADDRESS: 22205 NE 28th St.

Subdivision IN: Camas

NEAR: XX **COUNTY:** Clark FIGURE: 4

DATE: 6-28-22

STATE: WA

Appendix A

Site Photos



Monte Verde CAR & Oregon White Oak Mitigation Plan- Site Photos

Parcel: 173184000



Photo 1.

February 22, 2022 – View of the northwest corner of the subject site and the proposed site access from NE 28th Street. The three oaks (#s 14, 15, and 16) which will be removed are located just north of the white shed visible in this photo.



Photo 2.

February 22, 2022 – View south across the subject site. The site is highly impacted from years of animal grazing. Few native trees are present within the central portion of the property and it is dominated by grazed herbaceous cover.



Photo 3.

February 22, 2022 – View north across the central area of the subject site. Few native trees are present within the central portion of the property and there is no understory due to grazing. An overhead powerline tower located within the powerline easement onsite is visible at far right in this photo.



Monte Verde CAR & Oregon White Oak Mitigation Plan-Site Photos

Parcel: 173184000



Photo 4.

February 22, 2022 – View north from the southwest corner of the property. The area is forested, but with little native understory or herbaceous layer due to grazing. Oak #76 is visible in this photo along the western parcel boundary. This tree will be retained and protected.



Photo 5.

February 22, 2022 – View east from the southwest corner of the property. The area is highly disturbed due to animal grazing. Test plot #1 was within this location. The area was determined to be an upland with non-hydric soils and no hydrology indicators.



Photo 6.

February 22, 2022 – Photo of the offsite wetland over 300-feet south of the subject parcel. The county owned property located south of the subject property is more biologically diverse and dominated in native vegetation.



Monte Verde CAR & Oregon White Oak Mitigation Plan- Site Photos

Parcel: 173184000



Photo 7.
February 22, 2022 – View of Oak #127 along the eastern parcel boundary. The 3-trunk Oregon white oak is just offsite and will be retained.



Photo 8.
February 22, 2022 – View of Oak #126 along the eastern parcel boundary. The 3-trunk Oregon white oak will be retained and protected.

Appendix B

Test Plot Datasheets



WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys and Coast Region

Project/Site: Monte Verde Subdivision Applicant/Owner: Pacific Lifestyle Homes Investigator(s): Andrea Aberle Landform (hillslope, terrace, etc.): terrace Subregion (LRR): LRR A Lat: 45 Soil Map Unit Name: Hydric / CvA, Non-Hydric / LeB, Nor Are climatic / hydrologic conditions on the site typical for t Are Vegetation M, Soil M, or Hydrology significantly Are Vegetation M, Soil M, or Hydrology naturally pro SUMMARY OF FINDINGS – Attach site map sl Hydrophytic Vegetation Present? Yes No M Hydric Soils Present? Yes No M Wetland Hydrology Present? Yes No M Remarks:	Section Local relief: C 640939 n-Hydric / LgB his time of year? disturbed? blematic? nowing sampl	oncave Long: 122.4 N Yes⊠ Nol Are "N (If r	Nange: SW 1/4, S21, T2N, R3E Slope (%):2% 444567 Datum: NAD 83 WI classification: PFOA - South of subject site (If no, explain Remarks.) Iormal Circumstances" present? Yes⊠ No□ needed, explain any answers in Remarks.)	<u> </u>
Investigator(s): Andrea Aberle Landform (hillslope, terrace, etc.): terrace Subregion (LRR): LRR A Lat: 45 Soil Map Unit Name: Hydric / CvA, Non-Hydric / LeB, Nor Are climatic / hydrologic conditions on the site typical for t Are Vegetation S, Soil, or Hydrology significantly Are Vegetation , Soil, or Hydrology naturally pro SUMMARY OF FINDINGS – Attach site map sl Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No Wetland Hydrology Present? Yes No Remarks:	Local relief: C .640939 n-Hydric / LgB his time of year? disturbed? blematic? nowing sampl Is the Sa	on, Township oncave Long: 122.4 N Yes⊠ No Are "N (If r ing point to	SW 1/4, S21, T2N, R3E Slope (%): 2% 444567 Datum: NAD 83 WI classification: PFOA - South of subject site (If no, explain Remarks.) lormal Circumstances" present? Yes No needed, explain any answers in Remarks.) ocations, transects, important features, etc.	
Landform (hillslope, terrace, etc.): terrace Subregion (LRR): LRR A Lat: 45 Soil Map Unit Name: Hydric / CvA, Non-Hydric / LeB, Nor Are climatic / hydrologic conditions on the site typical for take Vegetation , Soil , or Hydrology significantly Are Vegetation , Soil , or Hydrology naturally pro SUMMARY OF FINDINGS – Attach site map sl Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No Wetland Hydrology Present? Yes No Remarks:	Local relief: C .640939 n-Hydric / LgB his time of year? disturbed? blematic? nowing sampl Is the Sa	oncave Long: 122.4 No Yes No Are "N (If r ing point lo	Slope (%): 2% 444567 Datum: NAD 83 WI classification: PFOA - South of subject site (If no, explain Remarks.) lormal Circumstances" present? Yes No needed, explain any answers in Remarks.) ocations, transects, important features, etc	
Subregion (LRR):LRR A Lat: 45 Soil Map Unit Name: Hydric / CvA, Non-Hydric / LeB, Nor Are climatic / hydrologic conditions on the site typical for t Are Vegetation , Soil , or Hydrology significantly Are Vegetation , Soil , or Hydrology naturally pro SUMMARY OF FINDINGS – Attach site map sl Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No Wetland Hydrology Present? Yes No Remarks:	n-Hydric / LgB his time of year? disturbed? blematic? nowing sampl	Long: 122.4 No Yes⊠ No Are "N (If r ing point lo mpled Area	Datum: NAD 83 WI classification: PFOA - South of subject site (If no, explain Remarks.) Identify the control of the contro	<u>.</u>
Soil Map Unit Name: Hydric / CvA, Non-Hydric / LeB, Nor Are climatic / hydrologic conditions on the site typical for the Are Vegetation , Soil , or Hydrology significantly Are Vegetation , Soil , or Hydrology naturally prosummer summer significantly are Vegetation , Soil , or Hydrology naturally prosummer significantly are Vegetation , Soil , or Hydrology naturally prosummer significantly are Vegetation Present? Yes No Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No Wetland Hydrology Present? Yes No Remarks:	n-Hydric / LgB his time of year? disturbed? blematic? nowing sampl	No Yes⊠ No Are "N (If r ing point lo mpled Area	WI classification: PFOA - South of subject site ☐ (If no, explain Remarks.) lormal Circumstances" present? Yes ☐ No☐ needed, explain any answers in Remarks.) ocations, transects, important features, etc	; <u>.</u>
Are climatic / hydrologic conditions on the site typical for the Are Vegetation , Soil , or Hydrology significantly are Vegetation , Soil , or Hydrology naturally prosumed summary of FINDINGS – Attach site map significantly and site map significantly are vegetation . Attach site map significantly and significantly are vegetation and significantly and significantly are vegetation. The significant is significantly and significantly are vegetation and significantly and significantly are vegetation. The significant is significantly and significantly are vegetation. The significant is significantly and significantly are vegetation. The significant is significantly are ve	his time of year? disturbed? blematic? nowing sampl	Yes⊠ No[Are "N (If r ing point lo mpled Area	☐ (If no, explain Remarks.) lormal Circumstances" present? Yes⊠ No☐ needed, explain any answers in Remarks.) ocations, transects, important features, etc	<u>.</u>
Are Vegetation , Soil , or Hydrology significantly Are Vegetation , Soil , or Hydrology naturally pro SUMMARY OF FINDINGS – Attach site map sl Hydrophytic Vegetation Present? Yes No Hydric Soils Present? Yes No Wetland Hydrology Present? Yes No Remarks:	disturbed? blematic? nowing sampl	Are "N (If r ing point lo mpled Area	lormal Circumstances" present? Yes⊠ No□ needed, explain any answers in Remarks.) ocations, transects, important features, etc) - -
Are Vegetation _, Soil _, or Hydrology _ naturally pro SUMMARY OF FINDINGS - Attach site map sl Hydrophytic Vegetation Present? Yes _ No _ Hydric Soils Present? Yes _ No _ Wetland Hydrology Present? Yes _ No _ Remarks:	blematic? nowing sampl Is the Sa	(If r ing point lo mpled Area	needed, explain any answers in Remarks.) ocations, transects, important features, etc	-
SUMMARY OF FINDINGS – Attach site map sl Hydrophytic Vegetation Present? Yes □ No ☑ Hydric Soils Present? Yes □ No ☑ Wetland Hydrology Present? Yes □ No ☑ Remarks:	nowing sampl	ing point lo	ocations, transects, important features, etc	· -
Hydric Soils Present? Yes □ No ☑ Wetland Hydrology Present? Yes □ No ☑ Remarks:		-	Yes⊡ No⊠	
Hydric Soils Present? Yes ☐ No ☐ Wetland Hydrology Present? Yes ☐ No ☐ Remarks:	within a	Wetland?	Yes⊡ No⊠	
Wetland Hydrology Present? Yes ☐ No ☐ Remarks:	within a	vveuand?	Tes NO	
Remarks:				
VEGETATION				
Absolute		Indicator	Dominance Test Worksheet	
Tree Stratum (Use scientific names.) % Cove		Status	Number of Deminent Species	
1. Fraxinus latifolia 50%	yes	FACW	Number of Dominant Species 3 (A) That Are OBL, FACW, or FAC:	A)
2. Acer macrophyllum 10%	no	FACU	That Are Obl., FACW, or FAC.	
3. Quercus garryana 5%	no	FACU	Total Number of Deminerat	
4	<u> </u>			В)
Total Cover: 65%			Species Across All Strata:	
Sapling/Shrub Stratum			Percent of Dominant Species 50% (ATT That Are OBL, FACW, or FAC	A/B)
1. Symphoricarpos albus 25%	ves	FACU	Prevalence Index worksheet	
2. Corylus cornuta 10%	yes	FACU	Total % Cover of: Multiply by:	
3. Acer circinatum 5%	yes	FAC	OBL species x 1=	
4. %		1710	FACW species 50 x 2= 100	
5. %			FAC species 20 x 3= 60	
Total Cover: 40%	<u> </u>	· -	FACU species 55 x 4= 220	
Herb Stratum			UPL species x 5=	
1. Tolmiea menziesii 15%	yes	FAC	Column Totals: 125 (A) 380	(B)
2. Rubus ursinus 5%	yes	FACU	Prevalence Index = B/A= 3.04	(-)
3. %			Hydrophytic Vegetation Indicators:	
4. %			Dominance Test is >50%	
5. %			☐ Prevalence Index is ≤3.0¹	
- 0,			☐ Morphological Adaptations¹ (Providing suppor	tina
7. %			data In Remarks or on a separate sheet)	9
8. %		· -	☐ Wetland Non-Vascular Plants¹	
Total Cover: 20%	<u> </u>	· -	☐ Problematic Hydrophytic Vegetation¹ (Explain	1)
Woody Vine Stratum				,
0.	, n		Indicators of hydric soil and wetland hydrology	
	, ,	· -	must be present.	
		· ·	·	
Total Cover:			Hydrophytic Vegetation	
% Bare Ground in Herb Stratum <u>80%</u> Remarks:			Present? Yes No⊠	

SOIL

Sampling Point: TP-1

Profile De	scription: (Describ	e to the depth	needed to docu	ment the indicat	or or confirm	the ab	sence of indicators.)	Sampling Point: <u>TP-1</u>			
Depth		Matrix		Redox Fea							
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-12	10YR 3/1	100%	40VD 4/C			DI	<u>L</u>				
12-16	10YR 4/2	98%	10YR 4/6	2%	C	PL	<u></u>				
		<u>%</u> %		<u>%</u> %							
				<u> </u>							
		<u> </u>		<u> </u>							
											
-											
		=Depletion, RM		² Location: PL=	Pore Lining, R	RC=Roo	t Channel, M=Matrix	-			
	oil Indicators: (App	licable to all L					_	blematic Hydric Soils			
Histos			Sandy Redox				☐ 2 cm Muck (A10)				
	Epipedon (A2)		Stripped Mat		raamt MI DA 4	4.	Red Parent Mate				
☐ Black I	` '			y Mineral (F1) (e)	ccept MLRA	1)	Other (Explain in	Remarks)			
	gen Sulfide (A4) ed Below Dark Surf	200 (411)	☐ Loamy Gleye☐ Depleted Mat								
	ed Below Dark Sun Dark Surface (A12)	ace (ATT)									
	Mucky Minerals (S	1)	☐ Redox Dark \$ ☐ Depleted Dar				31 11 1 1				
•	Gleyed Matrix (S4)	1)	☐ Redox Depre	` '				ohytic vegetation and			
•	e Layer (if present	۸.	☐ Kedox Depre	:5510115 (F6)		ı	wetland hydrolo	gy must be present			
Type:	e Layer (II present	.,.									
Depth (inc	hes):						lydric Soil Present	? Yes⊟ No⊠			
Remarks:							iyano con i recent	. 100 110 2			
HYDROL	_OGY										
	Hydrology Indicato ndicators (any one in		ciont)				Secondary Indicators Water Stained Lea	(2 or more required)			
	e Water (A1)	idicator is sum		d Leaves (B9) (e	vcent NW co	ast)		ed Concave Surface (B8)			
	Vater Table (A2)		☐ Salt Crust (B	` , `	Acept IIII co	ast)	☐ Drainage Patterns	` '			
☐ Satura	, ,		☐ Aquatic Inver				☐ Dry-Season Wate				
	Marks (B1)		☐ Hydrogen Su	, ,			☐ Saturation Visible on Aerial Imagery (C9)				
	ent Deposits (B2)			zoshperes along	Livina Roots ((C3)	☐ Geomorphic Posit	3 , (,			
	eposits (B3)			Reduced Iron (C4	-	()	☐ Shallow Aquitard				
	/lat or crust (B4)			Reduction in Tille			☐ Frost-Heave Hum				
-	eposits (B5)			ressed Plants (D	, ,		☐ FAC-Neutral Test	, ,			
☐ Surfac	e Soil Cracks (B6)		Other (Explai	in in Remarks)	, ,		☐ Raised Ant Mound				
	ition Visible on Aeria	al Imagery (B7)	_ , ,	,							
Field Obs	servations:		.	•				•			
Surface W	/ater Present?	Yes 🗌	No 🛛 🛚 🖸	Depth (Inches):							
	ole Present?	Yes 🗌		Depth (Inches):							
	Present?	Yes	No ⊠ □	Depth (Inches):		l w	etland Hydrology Pre	esent? Yes 🗌 No 🛛			
	capillary fringe) Recorded Data (Stre	eam gauge, mo	onitoring well, aeria	al photos, previou	s inspections), if avai	ilable:				
200020		oam gaago, ma	, g, a	a. p.10100, p.01101		,,					
Remarks:											
The three	e wetland criteria	have NOT be	en met.								

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys and Coast Region

Button/Otto Monto Vendo O L Pitti		0:1 /0	or Olevi	0	0/00/0000			
Project/Site: Monte Verde Subdivision Applicant/Owner: Pacific Lifestyle Homes		City/Co	unty:Clark	Sampling Date: 2/22/2022				
		Soction	State: WA Sampling Point: TP-					
Investigator(s): Andrea Aberle Landform (hillslope, terrace, etc.): terrace	on, rownsnip, oncave							
Subregion (LRR):LRR A	Long: 122.4	Slope (%):2% 2.444567 Datum: NAD 83						
Soil Map Unit Name: Hydric / CvA, Non-Hydric /	Lat: 45.640			WI classification: PFOA - South of				
Are climatic / hydrologic conditions on the site ty	rpical for this t	time of year?			subject site			
Are Vegetation \boxtimes , Soil \square , or Hydrology \square signals.				ormal Circumstances" present? Y	os⊠ No□			
Are Vegetation □, Soil□, or Hydrology□ na				needed, explain any answers in R				
					·			
SUMMARY OF FINDINGS – Attach site	map show	ıng samplı	ng point ic	ocations, transects, import	ant features, etc.			
Hydrophytic Vegetation Present? Yes ⊠	No 🗌	Is the Sai	mpled Area					
Hydric Soils Present? Yes ☐	_	within a \	Wetland?	Yes⊟ No⊠				
Wetland Hydrology Present? Yes □	No ⊠			100 1102				
Remarks:		•						
VEGETATION								
	Absolute	Dominant	Indicator	Dominance Test Worksheet				
Tree Stratum (Use scientific names.)	% Cover	Species?	Status					
1. Fraxinus latifolia	50%	yes	FACW	Number of Dominant Species	5 (A)			
2.	%			That Are OBL, FACW, or FAC:	` ` '			
3.	%							
4.	%			Total Number of Dominant	7 (B)			
Total Cover:	50%			Species Across All Strata:				
				Percent of Dominant Species	71% (A/B)			
Sapling/Shrub Stratum				That Are OBL, FACW, or FAC				
1. Symphoricarpos albus	20%	yes	FACU	Prevalence Index worksheet				
2. Malus fusca	15%	yes	FACW	Total % Cover of:	Multiply by:			
3. Corylus cornuta	5%	yes	FACU	OBL species	_ x 1=			
4. Salix sitchensis	5%	yes	FACW	FACW species	_ x 2=			
5	%			FAC species	_ x 3=			
Total Cover:	45%			FACU species	_ x 4=			
Herb Stratum	400/		E40	UPL species	x 5=			
1. Tolmiea menziesii 2.	10%	yes	FAC	Column Totals:	(A) (B)			
	<u>%</u>			Prevalence Index = B/				
3.	% %			Hydrophytic Vegetation Indic Dominance Test is >50%				
4								
5.	<u>%</u> %			☐ Prevalence Index is ≤3.0¹				
6. 7.	%			☐ Morphological Adaptation data In Remarks or on				
8.	%		-	☐ Wetland Non-Vascular P				
Total Cover:	10%			Problematic Hydrophytic				
Woody Vine Stratum	10 /0				vegetation (Explain)			
1. Rubus armeniacus	20%	yes	FAC	Indicators of hydric soil and wet	land hydrology			
2.	%	<u>ycs</u>	1710	must be present.	lana nyarology			
	20%		-					
Total Cover:				Hydrophytic Vegetation				
% Bare Ground in Herb Stratum 70%				Present?	Yes⊠ No□			
Remarks:				i resent:	1632 110			

SOIL

Profile Des	scription: (Descrii	o to the dopti	i needed to doc	anneni ine muicai	01 01 001111111111111111111111111111111	ne absence of indicato	· 3.)
Depth		Matrix		Redox Feat	ures		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ² Texture	Remarks
0-10	10YR 2/2	100%		%		<u>L</u>	
10-16	10YR 3/2	100%		%		L	
		%		<u></u> <u>%</u>			
		%		%			
		%		%			
<u> </u>		%		%			
		<u>%</u>		<u></u> <u>%</u>			
		%		%			
					Pore Lining, RC=	Root Channel, M=Matr	
Hydric So ☐ Histosa	il Indicators: (App	olicable to all I	RRS, uniess oti Sandy Redo			□ 2 cm Muck (A	Problematic Hydric Soils
. —	pipedon (A2)		☐ Stripped Ma			☐ Red Parent N	·
☐ Black F				ky Mineral (F1) (e)	cent MI PA 1)	☐ Other (Expla	
. —	en Sulfide (A4)		Loamy Gley		cept wilka i)	☐ Other (Expla	II III Kelilaiks)
	ed Below Dark Sur	faco (A11)	☐ Depleted Ma				
B.	Park Surface (A12)	ace (ATT)	☐ Redox Dark				
Į.	Mucky Minerals (S	1)		ark Surface (F7)		31 11 4 61	
	Gleyed Matrix (S4)	•	☐ Redox Depr				drophytic vegetation and
	e Layer (if presen		☐ Kedox Depi	essions (F0)		wetland hyd	ology must be present
Type:	e Layer (II presen	·γ.					
						Hydria Sail Dras	nt2 Voo□ No⊠
Depth (incl Remarks:	nes):					nyaric Soli Prese	ent? Yes□ No⊠
Remarks.							
HYDROL	OGY						
						0	((0))
	lydrology Indicate dicators (any one i		cient)			Secondary Indica	tors (2 or more required) I eaves
	Water (A1)	indicator is sum		ed Leaves (B9) (e	rcent NW coast	_	etated Concave Surface (B8)
1	ater Table (A2)		☐ Salt Crust (F	, , ,	keept itti coasi	☐ Drainage Patte	* *
☐ Saturat				ertebrates (B13)		☐ Dry-Season W	
☐ Water N				ulfide Odor (C1)			ible on Aerial Imagery (C9)
l	ent Deposits (B2)			izoshperes along	iving Poots (C3		• • • •
l	eposits (B3)			Reduced Iron (C4	-	Shallow Aquita	, ,
l	. , ,			Reduction in Tilled			, ,
_	lat or crust (B4) posits (B5)			Stressed Plants (D	` '	☐ Frost-Heave H☐ FAC-Neutral T	
1				oliesseu Flanis (D	I) (LKK A)		ESI (D3)
Surface			Other (Eval	oin in Domarka)		□ Paicad Ant Ma	ounds (D6) (LPD A)
	e Soil Cracks (B6)	al Imagary (R7)	, ,	ain in Remarks)		Raised Ant Mo	ounds (D6) (LRR A)
	tion Visible on Aeri	al Imagery (B7)	, ,	ain in Remarks)		Raised Ant Mo	ounds (D6) (LRR A)
Field Obs	tion Visible on Aeri ervations:		· · · · ·	·		Raised Ant Mo	ounds (D6) (LRR A)
Field Obse	tion Visible on Aeri ervations: ater Present?	Yes 🗌	No ⊠	Depth (Inches):		Raised Ant Mo	ounds (D6) (LRR A)
Field Obse Surface W Water Tab	tion Visible on Aeri ervations: ater Present? le Present?	Yes Yes	No ⊠ No ⊠	Depth (Inches):			
Field Obset Surface W Water Tab Saturation (Includes ca	tion Visible on Aeri ervations: ater Present? le Present? Present? apillary fringe)	Yes Yes Yes Yes	No 🛭 No 🗷 No 🗷	Depth (Inches): Depth (Inches): Depth (Inches):		Wetland Hydrology	Present? Yes □ No ⊠
Field Obset Surface W Water Tab Saturation (Includes ca	tion Visible on Aeri ervations: ater Present? le Present? Present?	Yes Yes Yes Yes	No 🛭 No 🗷 No 🗷	Depth (Inches): Depth (Inches): Depth (Inches):	s inspections), if	Wetland Hydrology	
Field Obset Surface W Water Tab Saturation (Includes ca	tion Visible on Aeri ervations: ater Present? le Present? Present? apillary fringe)	Yes Yes Yes Yes	No 🛭 No 🗷 No 🗷	Depth (Inches): Depth (Inches): Depth (Inches):	s inspections), if	Wetland Hydrology	
Field Obset Surface W Water Tab Saturation (Includes condition Describe F	tion Visible on Aeri ervations: ater Present? le Present? Present? apillary fringe)	Yes Yes Yes Yes	No 🛭 No 🗷 No 🗷	Depth (Inches): Depth (Inches): Depth (Inches):	s inspections), if	Wetland Hydrology	
Field Obsets Surface W Water Tab Saturation (Includes can Describe F	ervations: ater Present? le Present? Present? apillary fringe) Recorded Data (Str	Yes ☐ Yes ☐ Yes ☐ eam gauge, mo	No ⊠ No ⊠ No ⊠ onitoring well, ael	Depth (Inches): Depth (Inches): Depth (Inches):	s inspections), if	Wetland Hydrology	
Field Obsets Surface W Water Tab Saturation (Includes can Describe F	tion Visible on Aeri ervations: ater Present? le Present? Present? apillary fringe)	Yes ☐ Yes ☐ Yes ☐ eam gauge, mo	No ⊠ No ⊠ No ⊠ onitoring well, ael	Depth (Inches): Depth (Inches): Depth (Inches):	s inspections), if	Wetland Hydrology	
Field Obsets Surface W Water Tab Saturation (Includes can Describe F	ervations: ater Present? le Present? Present? apillary fringe) Recorded Data (Str	Yes ☐ Yes ☐ Yes ☐ eam gauge, mo	No ⊠ No ⊠ No ⊠ onitoring well, ael	Depth (Inches): Depth (Inches): Depth (Inches):	s inspections), if	Wetland Hydrology	
Field Obsets Surface W Water Tab Saturation (Includes can Describe F	ervations: ater Present? le Present? Present? apillary fringe) Recorded Data (Str	Yes ☐ Yes ☐ Yes ☐ eam gauge, mo	No ⊠ No ⊠ No ⊠ onitoring well, ael	Depth (Inches): Depth (Inches): Depth (Inches):	s inspections), if	Wetland Hydrology	
Field Obsets Surface W Water Tab Saturation (Includes can Describe F	ervations: ater Present? le Present? Present? apillary fringe) Recorded Data (Str	Yes ☐ Yes ☐ Yes ☐ eam gauge, mo	No ⊠ No ⊠ No ⊠ onitoring well, ael	Depth (Inches): Depth (Inches): Depth (Inches):	s inspections), if	Wetland Hydrology	

Appendix C

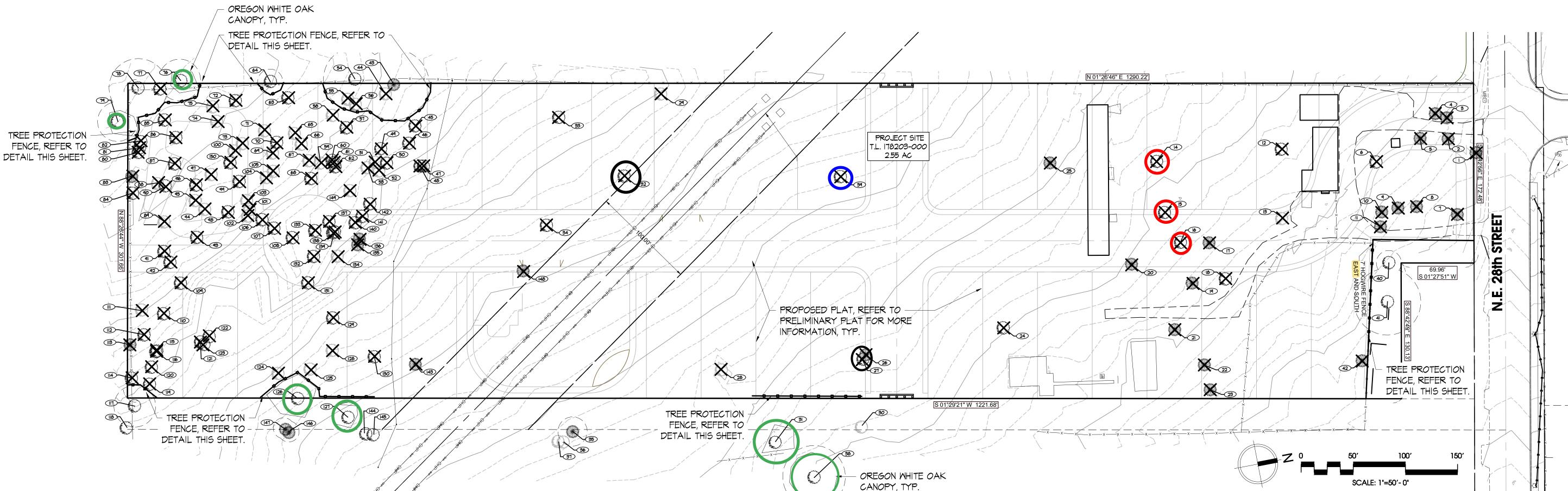
Tree Survey



ISSUED FOR: PLR REVISIONS:

EXISTING TREE

STANDARDS INSTITUTE'S AS WELL AS OTHER APPLICABLE FEDERAL, STATE AND SHEET #:



					Tree Data								Tree Data		
		l	1		1	Units					Ι	1		Units	
Tree No.	Species	DBH	RPZ	Tree Condition	Retain (R) Remove (X)	(retained only)	Condition Notes	Tree No.	Species	DBH	RPZ	Tree Condition	Retain (R) Remove (X)	(retained only)	Condition Notes
1	Pseudotsuga menziesii (Douglas-Fir)	11"	11'	poor	Х		Branches Suppressed	104	Fraxinus latifolia (Oregon Ash)	8"	8′	poor	Х		Branches Suppressed, Co-dominant
2	Pseudotsuga menziesii (Douglas-Fir)	43"	43'	fair	Х			105	Fraxinus latifolia (Oregon Ash)	8"	8′	poor	Х		Branch Failures, Branches Suppressed, Co-dominant, Diebac
3	Pseudotsuga menziesii (Douglas-Fir)	42"	42'	fair	Х			106	Acer macrophyllum (Bigleaf Maple)	12"	12'	poor	Х		Branches Suppressed, Dieback 30% - 60%
4	Pseudotsuga menziesii (Douglas-Fir)	36"	36'	fair	Х			107	Acer macrophyllum (Bigleaf Maple)	12"	12'	fair	Х		
5	Pseudotsuga menziesii (Douglas-Fir)	44"	44'	fair	Х			108	Fraxinus latifolia (Oregon Ash)	14"	14'	poor	Х		Branch Failures, Co-dominant, Dieback 30% - 60%
6	Acer saccharinum (Silver Maple)	22"	22'	fair	Х			109	Acer macrophyllum (Bigleaf Maple)	14"	14'	poor	Х		Branch Failures, Co-dominant, Leaning
7	Pseudotsuga menziesii (Douglas-Fir)	36"	36'	fair	Х			110	Fraxinus latifolia (Oregon Ash)	13"	13'	poor	Х		Branch Failures, Branches Suppressed, Dieback 30% - 60%
8	Pseudotsuga menziesii (Douglas-Fir)	44"	44'	fair	Х			111	Alnus rubra (Red Alder)	10"	10'	poor	Х		Co-dominant, Leaning
9	Pseudotsuga menziesii (Douglas-Fir)	29"	29'	fair	Х			112	Acer macrophyllum (Bigleaf Maple)	12"	12'	poor	Х		Branches Suppressed, Leaning
10	Pseudotsuga menziesii (Douglas-Fir)	26"	26'	fair	Х			113	Pseudotsuga menziesii (Douglas-Fir)	14"	14'	poor	Х		Branch Failures, Branches Suppressed, Dieback 30% - 60%
11	Pseudotsuga menziesii (Douglas-Fir)	36"	36'	fair	Х			114	Acer macrophyllum (Bigleaf Maple)	17"	17'	fair	Х		Branches Suppressed, Dieback 30% - 60%
12	Ailanthus altissima (Tree-Of-Heaven)	34"	34'	fair	Х			115	Acer macrophyllum (Bigleaf Maple)	15"	15'	fair	Х		Branches Suppressed, Dieback 30% - 60%
13	Crataegus douglasii (Douglas Hawthorn)	10"	10'	poor	Х		Co-dominant	116	Acer macrophyllum (Bigleaf Maple)	17"	17'	poor	Х		Branch Failures, Branches Suppressed, Dieback 30% - 60%
14	Quercus garryana (Oregon White Oak)	20"	20'	fair	Х			117	Acer macrophyllum (Bigleaf Maple)	20"	20'	fair	R	offsite	Dieback 30% - 60%
	Quercus garryana (Oregon White Oak)	36"	36'	fair	X			118	Acer macrophyllum (Bigleaf Maple)	12"	12'	poor	R	offsite	Co-dominant. Dieback 30% - 60%
16		30"	30'	fair	X			119	Acer macrophyllum (Bigleaf Maple)	12"	12'	fair	X		Branches Suppressed, Dieback 30% - 60%
	Pseudotsuga menziesii (Douglas-Fir)	38"	38'	fair	X			120	Acer macrophyllum (Bigleaf Maple)	12"	12'	poor	X		Branch Failures, Branches Suppressed, Dieback 30% - 60%
18	Alnus rubra (Red Alder)	25"	25'	poor	X		Dieback 30% - 60%, Leaning	121	Fraxinus latifolia (Oregon Ash)	12"	12'	poor	X		Branches Suppressed, Dieback 30% - 60%, Heavy Leaning (>
19	Pseudotsuga menziesii (Douglas-Fir)	42"	42'	fair	X		Dieback 30 % SO %, Ecaning	122	Fraxinus latifolia (Oregon Ash)	14"	14'	poor	X		Branch Failures, Co-dominant, Dieback 30% - 60%
20	Pseudotsuga menziesii (Douglas-Fir)	36"	36'	fair	X			123	Fraxinus latifolia (Oregon Ash)	12"	12'	poor	X		Branches Suppressed, Co-dominant, Dieback 30% - 60%, Mi
21	Pseudotsuga menziesii (Douglas-Fir)	34"	34'	fair	X			124	Acer macrophyllum (Bigleaf Maple)	10"	10'	fair	X		Dieback 30% - 60%
22	Pseudotsuga menziesii (Douglas-Fir)	36"	36'	fair	X			125	Acer macrophyllum (Bigleaf Maple)	10"	10'	fair	X		Dieback 30% - 60%
23	Pseudotsuga menziesii (Douglas-Fir)	30"	30'	fair	X			126	Quercus garryana (Oregon White Oak)	14"	14'	fair	R	3	Branch Failures, Co-dominant
24	Pyrus spp. (Apple)	18"	18'	fair	X			127	Quercus garryana (Oregon White Oak)	14"	14'	fair	R	offsite	Co-dominant
25		20"	20'	fair	X			128	Acer macrophyllum (Bigleaf Maple)	10"	10'	poor	Х	Offsite	Co-dominant, Dieback 30% - 60%
	Pseudotsuga menziesii (Douglas-Fir) Pseudotsuga menziesii (Douglas-Fir)	16"	16'	fair	X		Co-dominant	129	Acer macrophyllum (Bigleaf Maple)	12"	12'	fair	X		Co-dominant, Dieback 30% - 60%, Multi-Stemmed
26	3 1 3 1							130	Acer saccharum (Sugar Maple)	20"	20'	poor	X		Branch Failures, Dieback 60%-90%, Missing Bark
27	Quercus garryana (Oregon White Oak)	14" 10"	14' 10'	dead	X		Dieback >90%, Leaning, Poor Taper	131	Acer macrophyllum (Bigleaf Maple)	14"	14'	fair	x		Dieback 30% - 60%
	Pyrus spp. (Apple)			fair	X		Co-dominant	132	Acer macrophyllum (Bigleaf Maple)	12"	12'	fair	X		Dieback 30 % - 00 %
	Pyrus spp. (Apple)	10"	10'	fair	X		Branch Failures, Co-dominant, Cracks, Leaning	133	Acer macrophyllum (Bigleaf Maple)	12"	12'	fair	X		Branches Suppressed
30		10"	10'	poor	X	- ((- : (-	Co-dominant, Dieback 30% - 60%	134	Alnus rubra (Red Alder)	8"	8'	fair	X		Co-dominant
31	Quercus garryana (Oregon White Oak)	21"	21'	fair	R	offsite		135	Pseudotsuga menziesii (Douglas-Fir)	16"	16'	fair	X		Branches Suppressed
32	3 ,			poor	X		Co-dominant, Cracks, Visible Decay	136	Pseudotsuga menziesii (Douglas-Fir)	12"	12'	fair	X		Branches Suppressed
33	Alnus rhombifolia (White Alder)	14"	14'	fair	X		Missing Bark, Poor Taper	137	Acer macrophyllum (Bigleaf Maple)	12"	12'	fair	X		
34	Pyrus spp. (Apple)	25"	25'	poor	X	66.1	<u> </u>	138	Acer macrophyllum (Bigleaf Maple)	12"	12'	fair	X		Branches Suppressed
35	Pseudotsuga menziesii (Douglas-Fir)	14"	14'	fair	R	offsite		202.20			12'	fair	77		Branches Suppressed
36	Acer macrophyllum (Bigleaf Maple)	10"	10'	dead	R	offsite	<u> </u>	139	Acer macrophyllum (Bigleaf Maple)	12" 12"	12'	fair fair	X		Branches Suppressed, Dieback 30% - 60%
37	Acer macrophyllum (Bigleaf Maple)	10"	10'	dead	R	offsite		140	Acer macrophyllum (Bigleaf Maple)	2000	1,000	1,000	505		Branches Suppressed
38	Quercus garryana (Oregon White Oak)	30"	30′	fair	R	offsite		141	Alnus rubra (Red Alder)	12"	12'	poor fair	X		Co-dominant, Dieback 30% - 60%
39	Pyrus spp. (Apple)	20"	20'	dead	Х			142	Alnus rubra (Red Alder)	12"	12'		Х		Branches Suppressed
40	Acer rubrum (Red Maple)	12"	12'	fair	R	offsite	Co-dominant	143	Pseudotsuga menziesii (Douglas-Fir)	15"	15'	good	Х	***	
41	Acer rubrum (Red Maple)	32"	32'	fair	R	offsite		144	Salix scouleriana (Scouler'S Willow)	13"	13'	poor	R	offsite	Branch Failures, Branches Suppressed, Dieback 30% - 60%
42	Pseudotsuga menziesii (Douglas-Fir)	30"	30'	fair	Х			145	Salix scouleriana (Scouler'S Willow)	13"	13'	poor	R	offsite	Co-dominant, Missing Bark, Multi-Stemmed
43	Pseudotsuga menziesii (Douglas-Fir)	34"	34'	fair	R	13	Dieback 30% - 60%	146	Pseudotsuga menziesii (Douglas-Fir)	10"	10'	fair	R	offsite	
44	Fraxinus latifolia (Oregon Ash)	10"	10'	poor	Х		Co-dominant	147	Pseudotsuga menziesii (Douglas-Fir)	10"	10'	fair	R	offsite	
45	Acer macrophyllum (Bigleaf Maple)	17"	17'	fair	Х			148	Pseudotsuga menziesii (Douglas-Fir)	17"	17'	dead	Х		Co-dominant Co-dominant
46	Acer macrophyllum (Bigleaf Maple)	17"	17'	poor	Х		Dieback 30% - 60%, Leaning	149	Fraxinus latifolia (Oregon Ash)	10"	10'	poor	Х		Dieback 30% - 60%
47	Frangula purshiana (Cascara)	12"	12'	poor	Х			150	Acer macrophyllum (Bigleaf Maple)	17"	17′	poor	Х		Dieback 30% - 60%
48	Acer macrophyllum (Bigleaf Maple)	20"	20'	fair	Х		Dieback 30% - 60%								
49	Acer macrophyllum (Bigleaf Maple)	17"	17'	poor	Х		Leaning		15 6 1						
	I di anno in a	45"	1 457		I v		1	- 4		\sim			A / I - "	_	

Poor Taper

Co-dominant, Dieback 30% - 60

Co-dominant, Dieback 30% - 60%

Co-dominant, Dieback 30% - 6

offsite Dieback 30% - 60%, Multi-Stemmed

Co-dominant, Dieback 60%-90%

Co-dominant, Dieback 60%-90%

Co-dominant, Dieback 30% - 60%

Dieback 30% - 60%, Poor Taper

Branches Suppressed, Dieback 30% - 60%

Branches Suppressed, Dieback 30%

Branches Suppressed, Co-dominar

Branches Suppressed, Dieback 30% - 6

Branches Suppressed, Dieback 30% - 60°

Branches Suppressed, Dieback 30% - 60'

Co-dominant, Dieback 30% - 60%

Co-dominant, Dieback 30% - 60%

Dieback 30% - 60%, Leaning

Co-dominant, Dieback 30% - 609

Branches Suppressed

Dieback 30% - 60%

Branches Suppressed, Dieback 30% - 60%, Leaning

Dieback 60%-90%

Dieback 60%-90%

Dieback 60%-90%

Co-dominant, Dieback 30% - 60%, Overextended Branches

Dieback 30% - 60%, Multi-Stemmed, Overextended Branches

poor

Alnus rubra (Red Alder) Alnus rubra (Red Alder)

Alnus rubra (Red Alder)
Alnus rubra (Red Alder)

Salix scouleriana (Scouler's Willow) Fraxinus latifolia (Oregon Ash)

Acer macrophyllum (Bigleaf Maple) B Acer macrophyllum (Bigleaf Maple)

Salix scouleriana (Scouler's Willow) Fraxinus latifolia (Oregon Ash)

Acer macrophyllum (Bigleaf Maple)

Acer macrophyllum (Bigleaf Maple)

Fraxinus latifolia (Oregon Ash)

Acer macrophyllum (Bigleaf Maple)

Fraxinus latifolia (Oregon Ash)

Acer macrophyllum (Bigleaf Maple)

Acer macrophyllum (Bigleaf Maple) Acer macrophyllum (Bigleaf Maple)

Acer macrophyllum (Bigleaf Maple)

Acer macrophyllum (Bigleaf Maple)

Acer macrophyllum (Bigleaf Maple)

Acer macrophyllum (Bigleaf Maple)

4 Acer macrophyllum (Bigleaf Maple)

Fraxinus latifolia (Oregon Ash)

Fraxinus latifolia (Oregon Ash)

Fraxinus latifolia (Oregon Ash) Acer macrophyllum (Bigleaf Maple) Acer macrophyllum (Bigleaf Maple)

Fraxinus latifolia (Oregon Ash)

Fraxinus latifolia (Oregon Ash)

Acer macrophyllum (Bigleaf Maple) 10" 10' poor

Quercus garryana (Oregon White Oak) 20" 20' fair

9 Quercus garryana (Oregon White Oak) 19" 19' fair

Fraxinus latifolia (Oregon Ash)

Acer macrophyllum (Bigleaf Maple)

SITE STATISTICS									
8.84± AC	SITE AREA								
177	TREE UNITS REQUIRED (20 / ACRE)								
26	TREE UNITS RETAINED								
SYMBOL LEGEND									
SYMBOL	DESCRIPTION								
	- EXISTING SIGNIFICANT DECIDUOUS TREE (12" CAL. OR GREATER) - EXISTING SIGNIFICANT EVERGREEN TREE (8" CAL. OR GREATER)								
	EXISTING SIGNII TO ANY EVENORED TINCE (8 OAE, OR OREATER)								
1 1 2	- EXISTING DECIDUOUS (LESS THAN 12" CAL.) TO BE REMOVED								

EXISTING SIGNIFICANT TREE TO BE REMOVED ROOT PROTECTION ZONE AREA (RPZ) TREE PROTECTION FENCE LOCATION (4' CHAIN LINK, ORANGE PVC FENCE OR SILT FENCE) (ALSO DENOTES AREA WHERE NO IMPACTS TO THE ROOT PROTECTION ZONE SHALL OCCUR). SEE DETAIL THIS

shEco Solut	ions Oreao	n White Oa	k Summary:
TILLO SOIGE	ons orego	I VVIIICE OG	n sammary.

AshEco So	lutions Oregon	White Oak Summary:			
Tree #	DBH	Jurisdictional (20" DBH)	On-site	Proposed for Removal	Requires Mitigation
14	20"	YES	YES	YES	YES
15	36"	YES	YES	YES	YES
16	30 "	YES	YES	YES	YES
27	10" (dead)	NO (hazard tree)	YES	YES	NO
31	21"	YES	NO	NO	NO
32	10"	N/A* (see note)	YES	NO	NO
38	30"	YES	NO	NO	NO
76	20"	YES	YES (driplin	ie) NO	NO
79	19"	NO	YES (driplin	ne) NO	NO
126	14"	NO	YES (partia	I) NO	NO
127	14"	NO	NO	NO	NO

, Missing Bark

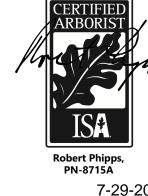
Note: Oak #32 consists of a trunk cut just above the ground surface with suckered "co-dominant growth, and was noted to be in poor condition with cracks, visible decay" by the arborist report. The trunk is located directly on the southern boundary of the BPA utility easement onsite. Therefore, it is assumed that the tree canopy historically extended into the overhead powerline easement and it has been cut under standard maintenance activities implemented by BPA.

Note: Oak #27 was noted by the arborist to have >90% dieback, is leaning, and has a poor taper. Due to proposed construction, grading requirements where it is located, and the condition of the tree, it meets hazard tree criteria. According to CMC 16.61.010.A.3.a.iii. Hazard oak snags are not jurisdictional or considered oak habitat of local

Note: Tree #39 is considered a "snag", and was recorded as an apple tree species. This snag is 20 inches in DBH and does not meet the WDFW definition for Priority Habitat., as it needs to be > 20 inches The snag is non-jurisdictional and does not require mitigation for its removal.



7-29-2022



LOCAL STANDARDS PERTAINING TO TREE CARE OPERATIONS.

• ANSI ZI33 ARBORICULTURAL OPERATIONS: SAFETY REQUIREMENTS ANSI A300 PART I PRUNING

TREE PROTECTION TIME LINE & NARRATIVE

29 EXISTING TREES WITHIN THE PROJECT BOUNDARIES ARE PROPOSED TO BE

TREE PROTECTION FENCING SHALL BE PLACED AS SHOWN TO PROTECT THE TREES

TREE PROTECTION / EROSION CONTROL FENCING SHALL BE ESTABLISHED PRIOR TO EXCAVATION. IT IS RECOMMENDED TO BE INSTALLED AT THE SAME TIME EROSION CONTROL MEASURES ARE INSTALLED. WHERE TREE FENCE AND EROSION CONTROL FENCE ARE LOCATED AT THE SAME LOCATION, EROSION FENCE THEN SERVES AS

TREES DETERMINED TO BE A SAFETY HAZARD AT THE TIME OF CONSTRUCTION MAY BE REMOVED. THE SITE WILL MAINTAIN A MINIMUM TREE UNIT COUNT OF 20 TREES PER ACRE IN ACCORDANCE WITH CITY OF CAMAS MUNICIPAL CODE CC 18.13.051.

TREE PROTECTION NOTES

NO PERSON MAY CONDUCT ANY OF THE FOLLOWING ACTIVITIES WITHIN THE DRIP LINE OF THE TREES DESIGNATED TO REMAIN INCLUDING, BUT NOT LIMITED TO: PARKING EQUIPMENT, FUELING, SERVICING EQUIPMENT, PLACING SOLVENTS, STORING BUILDING MATERIAL AND SOIL DEPOSITS, DUMPING CONCRETE WASHOUT AND LOCATING BURN

2) DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY OBJECT TO THE TREES

3) THE CONTRACTOR SHALL FOLLOW THE GRADING PLAN PROVIDED BY THE PROJECT

MINIMIZE THE IMPACTS TO THE TREES MARKED FOR PRESERVATION.

CIVIL ENGINEER. GRADING ACTIVITIES SHALL BE CONDUCTED IN A MANNER TO

4) THE EXCAVATOR SHALL KEEP A SHARP PAIR OF LOPPERS AND A SHARP 12" PRUNING SAW ACCESSIBLE ON-SITE DURING GRADING OPERATIONS. ANY ROOTS LARGER THAN

1/2" SHALL BE PRUNED TO THE FACE OF THE CUT (USING A SHARP PAIR OF LOPPERS

OR A SHARP 12" PRUNING SAW) AND SHALL NOT BE TORN FROM THE GROUND BY

5) SPECIAL CARE SHALL BE EXERCISED IN WORKING NEAR THE TREES TO BE RETAINED.

THIS INCLUDES HAND EXCAVATING THE ROOTS AT THE EDGE OF THE EXCAVATION

AND CUTTING ROOTS WITH A LOPPER OR PRUNING SAW. PRUNING THE ROOTS AT THE

EDGE OF EXCAVATION WILL MINIMIZE BREAKAGE OF HEALTHY ROOTS BEYOND THE

TREES NOTED TO BE RETAINED THE GRADE SHALL NOT BE ELEVATED OR REDUCED

7) IF THE GRADE ADJACENT TO A PRESERVED TREE IS RAISED SUCH THAT IT COULD

SLOUGH OR ERODE INTO THE TREE'S DRIP LINE, IT SHALL BE PERMANENTLY

8) THE TREES NOTED TO RETAINED SHALL BE PROTECTED FROM EROSION AND

TIME. REFER TO THE PROJECT'S EROSION CONTROL PLAN FOR MORE INFORMATION.

THE PROJECT SHALL NOT INSTALL AN IMPERVIOUS SURFACE OTHER THAN THOSE

SPECIFICALLY SHOWN ON THE PLANS WITHIN THE DRIP LINE OF THE TREES TO BE

10) UTILITY TRENCHES SHALL BE LOCATED OUTSIDE OF THE DRIP LINE OF THE TREES TO

ONGOING TREE MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE LAND OWNER.

TREES SHALL BE MAINTAINED IN ACCORDANCE WITH ANSI AMERICAN NATIONAL

SEDIMENTATION. CLEARING OPERATIONS SHALL BE CONDUCTED SO AS TO EXPOSE THE SMALLEST PRACTICAL AREA OF SOIL TO EROSION FOR THE LEAST POSSIBLE

6) EXCEPT FOR THE PROPOSED IMPROVEMENTS SHOWN WITHIN THE DRIP LINES OF THE

EXISTING ON-SITE AND OFF-SITE TREE LOCATIONS AND SIZES HAVE BEEN

OBTAINED VIA SURVEY INFORMATION AND SITE OBSERVATIONS.

REMOVED DUE TO CONFLICTS WITH THE PROPOSED SITE GRADING.

TREE PROTECTION FENCE. SEE DETAIL THIS SHEET.

DESIGNATED FOR PROTECTION.

MECHANICAL EXCAVATION.

FROM EXISTING GRADE.

STABILIZED.

RETAINED.

BE RETAINED.

EDGE OF THE PROPOSED EXCAVATION.

TO BE RETAINED.

DISCLAIMER AND LIMITATIONS: ANY WORK CONTAINED HEREIN INCLUDING BUT NOT LIMITED TO PLANS AND DOCUMENTS OF SERVICE SHALL BE CONSIDERED A WORK IN PROGRESS WHERE UNKNOWN FACTORS EXIST AND JURISDICTIONAL REQUIREMENTS OF SERVICE SHALL BE CONSIDERED A WORK SHALL BE CONSIDERED TO THIS PROJECT. ALL WORK SHALL BE CONSIDERED A WORK IN PROGRESS WHERE UNKNOWN FACTORS EXIST AND JURISDICTIONAL REQUIREMENTS OF SERVICE SHALL BE CONSIDERED TO THIS PROJECT. ALL WORK SHALL BE CONSIDERED TO THIS PROJECT. ALL WORK SHALL BE CONSIDERED A WORK ON THE HIGH DEGREE OF UNCEPTUAL AND SUBJECT TO THIS PROJECT. ALL WORK SHALL BE CONSIDERED TO THIS PROJECT. AND THIS PROJECT. ALL WORK SHALL BE CONSIDERED TO THIS PROJECT. AND THIS PROJECT. ALL WORK SHALL BE CONSIDERED TO THIS PROJECT. AND THIS PROJECT TO THIS PROJECT. AND THIS PROJECT. ALL WORK SHALL BE CONSIDERED TO THIS PROJECT. AND THIS PROJECT. ESTIMATING, NO ASSURANCES ARE OFFERED OR IMPLIED AS TO THE OVERALL FEASIBILITY OF THE PROJECT. ALL WORK SHALL BE SUBJECT TO REVIEW AND FINAL APPROVAL BY ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS.