NOTICE OF LAND USE DECISION

You may have received this because you are an adjacent property owner, and this notice is required to be provided pursuant to ORS 215.416. The proposal is identified in this decision and will be located on the subject property.

Coos County Planning
60 E. Second
Coquille, OR 97423
http://www.co.coos.or.us/
Phone: 541-396-7770
planning@co.coos.or.us

This decision notice is required to be sent to the property owner(s), applicant(s), adjacent property owners (distance of notice is determined by zone area – Urban 100 feet, Rural 250 feet, and Resource 750 feet), special taxing districts, agencies with interest, or person that has requested notice. Please read all information carefully as this decision. (See attached vicinity map for the location of the subject property).

Date of Notice:	**Wednesday, February 16, 2022**
File No:	ACU-21-063
Proposal:	Request for Single Family Dwelling in the Forest Zone.
Applicant(s):	Mike Mast 19678 Lower Smith River Rd Reedsport, OR 97467 Lisa Tarrach PO Box 1258 Danville, KY 40423-1258
Staff Planner:	Amy Dibble, Planner II

Decision: **Approved with Conditions.** All decisions are based on the record. This decision is final and effective at close of the appeal period unless a complete application with the fee is submitted by the Planning Department at 5 p.m. on **Thursday, March 03, 2022** . Appeals are based on the applicable land use criteria. *Coos County Zoning and Land Development Ordinance (CCZLDO) General Compliance with Sections 1.1.300 Compliance with Comprehensive Plan and Ordinance Provisions* and *Article 6.1 Lawfully Created Lots or Parcels. The Dwelling Review is subject to Article 4.6 Resource Zoning District, Section 4.6.100 Forest and Forest Mixed Use, Use Table 1in Section 4.6.110.63 Template Dwelling (Alternative forestland dwellings ORS 215.750) to Section 4.6.120 Review Standards (9)(B)(II), (9)(C). Development shall also comply with Section 4.6.140 Development and Siting Standards. All dwellings and structures are subject to the siting standards found in Section 4.6.130. Properties that are in a Special Development Consideration and/or overlays shall comply with the applicable review process identified by that Special Development Consideration and/or overlay located in Article 4.11.* **Civil matters including property disputes outside of the criteria listed in this notice will not be considered. For more information please contact the staff planner listed in this notice.**

Subject Property Information

Account Number:	99918693
Map Number:	23S131300-00207
Property Owner:	TARRACH, LISA M ET AL
Situs Address:	None
Acreage:	20.00 Acres
Zoning:	FOREST (F)
Special Development Considerations and Overlays:	ARCHAEOLOGICAL AREAS OF INTEREST (ARC) FOREST MIXED USE (MU) LAKESIDE AIRPORT CONICAL ZONE (ALC) NATURAL HAZARD - LANDSLIDE (NHLND)

The purpose of this notice is to inform you about the proposal and decision, where you may receive more information, and the requirements if you wish to appeal the decision by the Director to the Coos County

This notice shall be posted from February 16, 2022 to March 3, 2022

Hearings Body. Any person who is adversely affected or aggrieved or who is entitled to written notice may appeal the decision by filing a written appeal in the manner and within the time period as provided below pursuant to Coos County Zoning and Land Development Ordinance (CCZLDO) Article 5.8. If you are mailing any documents to the Coos County Planning Department the address is 225 N. Adams, Coquille OR 97423. Mailing of this notice to you precludes an appeal directly to the Land Use Board of Appeals.

Mailed notices to owners of real property required by ORS 215 shall be deemed given to those owners named in an affidavit of mailing executed by the person designated by the governing body of a county to mail the notices. The failure of the governing body of a county to cause a notice to be mailed to an owner of a lot or parcel of property created or that has changed ownership since the last complete tax assessment roll was prepared shall not invalidate an ordinance. **NOTICE TO MORTGAGEE, LIENHOLDER, VENDOR OR SELLER: ORS CHAPTER 215 (ORS 215.513) REQUIRES THAT IF YOU RECEIVE THIS NOTICE, IT MUST PROMPTLY BE FORWARDED TO THE PURCHASER.**

The application, staff report and any conditions can be found at the following link: https://www.co.coos.or.us/planning/page/applications-2021-2. The application and all documents and evidence contained in the record, including the staff report and the applicable criteria, are available for inspection, at no cost, in the Planning Department located at 60 E. Second, Coquille, Oregon. Copies may be purchased at a cost of 50 cents per page. The decision is based on the application submittal and information on record. The name of the Coos County Planning Department representative to contact is Chris MacWhorter, Contract Planning Staff and the telephone number where more information can be obtained is **(541) 396-7770**.

Failure of an issue to be raised in a hearing, in person or in writing, or failure to provide statements of evidence sufficient to afford the Approval Authority an opportunity to respond to the issue precludes raising the issue in an appeal to the Land Use Board of Appeals.

Reviewed by: Chris MacWhorter Digitally signed by Chris MacWhorter Date: 2022.02.15 15:52:10 -08'00' **Date: Tuesday, February 15, 2022** .
Chris MacWhorter, Contract Planning Staff

This decision is authorized by the Coos County Planning Director, Jill Rolfe based on the staff's analysis of the FINDINGs of Fact, Conclusions, Conditions of approval, application and all evidenced associated as listed in the exhibits.

EXHIBITS
Exhibit A: Conditions of Approval
Exhibit B: Vicinity Map & Template Map
The following exhibits are on file at the Coos County Planning Department and may be accessed by contacting the department. All noticeable decisions are posted on the website for viewing when possible.
Exhibit C: Staff Report -FINDINGs of Fact and Conclusions
Exhibit D: Application
Exhibit E: Comments Received

EXHIBIT "A"

The applicant shall comply with the following conditions of approval with the understanding that all costs associated with complying with the conditions are the responsibility of the applicant(s) and that the applicant(s) are not acting as an agent of the county. If the applicant fails to comply or maintain compliance with the conditions of approval the permit may be revoked as allowed by the Coos County Zoning and Land Development Ordinance. Please read the following conditions of approval and if you have any questions contact planning staff.

CONDITIONS OF APPROVAL

1. All applicable federal, state, and local permits shall be obtained prior to the commencement of any development activity. If there were comments from any other agency were provided as part of this review, it is the responsibility of the property owner to comply.
2. Pursuant to CCZLDO § 5.9.100, a Zoning Compliance Letter shall be required prior to the commencement of construction of the proposed dwelling. This authorization is based on conditions of approval and the conditions that are required to be completed prior obtaining the ZCL are defined in this section. Pursuant to CCZLDO § 4.6.110, § 4.6.130 and § 4.6.140. To show compliance with this section the applicant shall submit a letter with the following items to request that staff find the following conditions have been satisfied:
    a. The property owner is responsible for ensuring compliance, and land use authorization shall remain recorded in the chain of title. The statement needs to include language that the purchaser of the property has been provided a copy of the land use approval containing all conditions or restrictions understands the obligation and agrees to fulfill the conditions unless a modification is approved as provided in this ordinance. The property owner is responsible for ensuring compliance, and land use authorization. The recorded deed convent shall be recorded with the County Clerk and copy provided to the Planning Department.
    b. CCZLDO Section 4.6.130(3) The applicant shall provide evidence to the governing body that the domestic water supply is from a source authorized in accordance with the Water Resources Department's administrative rules for the appropriation of ground water or surface water and not from a Class II stream as defined in the Forest Practices rules (OAR chapter 629). For purposes of this section, evidence of a domestic water supply means: (a) Verification from a water purveyor that the use described in the application will be served by the purveyor under the purveyor's rights to appropriate water; (b) A water use permit issued by the Water Resources Department for the use described in the application; or (c) Verification from the Water Resources Department that a water use permit is not required for the use described in the application. If the proposed water supply is from a well and is exempt from permitting requirements under ORS 537.545, the applicant shall submit the well constructor's report to the county upon completion of the well.
    c. CCZLDO Section 4.6.130(4) As a condition of approval, if road access to the dwelling is by a road owned and maintained by a private party or by the Oregon Department of Forestry, the U.S. Bureau of Land Management, or the U.S. Forest Service, then the applicant shall provide proof of a long-term road access use permit or agreement. The road use permit may require the applicant to agree to accept responsibility for road maintenance
    d. CCZLDO Section 4.6.130(5) Approval of a dwelling shall be subject to the following requirements: (a) Approval of a dwelling requires the owner of the tract to plant a sufficient number of trees on the tract to demonstrate that the tract is reasonably expected to meet Department of Forestry stocking requirements at the time specified in department of Forestry administrative rules; (b) The planning department shall notify the county assessor of the above condition at the time the dwelling is approved; (c) If the lot or parcel is more than 10 acres in western Oregon or more than 30 acres in eastern Oregon, the property owner shall submit a stocking survey report to the county assessor and the assessor will verify that the minimum stocking requirements have been met by the time required by Department of Forestry rules; (d)

Upon notification by the assessor the Department of Forestry will determine whether the tract meets minimum stocking requirements of the Forest Practices Act. If that department determines that the tract does not meet those requirements, that department will notify the owner and the assessor that the land is not being managed as forest land. The assessor will then remove the forest land designation pursuant to ORS 321.359 and impose the additional tax; and (e) The county governing body or its designate shall require as a condition of approval of a single-family dwelling under ORS 215.213, 215.383 or 215.284 or otherwise in a farm or forest zone, that the landowner for the dwelling sign and record in the deed records for the county a document binding the landowner, and the landowner's successors in interest, prohibiting them from pursuing a claim for relief or cause of action alleging injury from farming or forest practices for which no action or claim is allowed under ORS 30.936 or 30.937. An email from the Assessor's Office that states you have complied is acceptable.

e. Section 4.6.140(2) Setbacks: All Development, with the exception of fences, shall be set back a minimum of thirty-five (35) feet from any road right-of-way centerline, or five (5) feet from any right-of-way line, whichever is greater. This should be shown on the plot plan.
f. Section 4.6.140(5) Minimizing Impacts: In order to minimize the impact of dwellings in forest lands, all applicants requesting a single family dwelling shall acknowledge and file in the deed record of Coos County, a Forest Management Covenant. The Forest Management Covenant shall be filed prior to any final County approval for a single family dwelling.
g. Section 4.6.140(6) Riparian Vegetation Protection. Riparian vegetation within 50 feet of a wetland, stream, lake or river, as identified on the Coastal Shoreland and Fish and Wildlife habitat inventory maps shall be maintained. If there are no wetlands, streams, lakes or rives then this is not applicable.
h. Section 4.6.140(7) All new dwellings and permanent structures and replacement dwellings and structures shall, at a minimum, meet the following standards. The dwelling shall be located within a fire protection district or shall be provided with residential fire protection by contract. If the dwelling is not within a fire protection district, the applicant shall provide evidence that the applicant has asked to be included within the nearest such district. If the applicant is outside the rural fire protection district, the applicant shall provide evidence that they have contacted the Coos Forest Protective Association of the proposed development. If it is not possible to be annexed into a fire district or contract for fire protection, then the Planning Director will allow the alternative forms to be used. This means that proof that the property owners (or representative) has install two (2) 2500-gallon water storage tanks for fire protection with a maintained road access to the tanks for fire-fighting equipment.
i. Section 4.6.140(9) Fire Siting Standards for New Dwellings: a. The property owner shall provide and maintain a water supply of at least 500 gallons with an operating water pressure of at least 50 PSI and sufficient ¾ inch garden hose to reach the perimeter of the primary fuel-free (30 feet) building setback. b. If another water supply (such as a swimming pool, pond, stream, or lake) is nearby, available, and suitable for fire protection, then road access to within 15 feet of the water's edge shall be provided for pumping units. The road access shall accommodate the turnaround of firefighting equipment during the fire season. Permanent signs shall be posted along the access route to indicate the location of the emergency water source.
j. Section 4.6.140(10) Firebreak: a. This firebreak will be a primary safety zone around all structures. Vegetation within this primary safety zone may include mowed grasses, low shrubs (less than ground floor window height), and trees that are spaced with more than 15 feet between the crowns and pruned to remove dead and low (less than 8 feet from the ground) branches. Accumulated needles, limbs and other dead vegetation should be removed from beneath trees. b. Sufficient Garden Hose to reach the perimeter of the primary safety zone (30 feet) shall be available at all times. c. The owners of the dwelling shall maintain a primary fuel-free break (30 feet) area surrounding all structures and clear and maintain a secondary fuel-free break on land

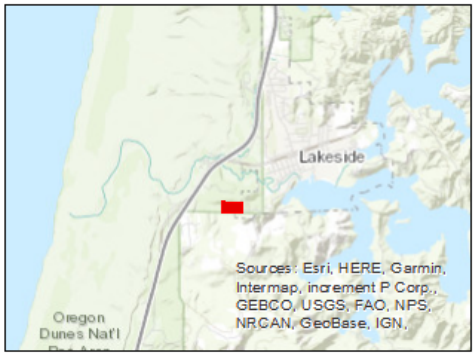
surrounding all structures and clear and maintain a secondary fuel-free break on land surrounding the dwelling that is owned or controlled by the owner in accordance with the provisions in "Recommended Fire Siting Standards for Dwellings and Structures and Fire Safety Design Standards for Roads" dated March 1, 1991, and published by Oregon Department of Forestry and shall demonstrate compliance with Table 1. Table one is addressed in the staff report based on down slope. This can be shown on a plot plan.

k. Section 4.6.140(11) All new and replacement structures shall use non-combustible or fire resistant roofing materials, as may be approved by the certified official responsible for the building permit. If they are not available yet then this will be a condition of approval on the ZCL.
l. Section 4.6.140(12) If a water supply exceeding 4,000 gallons is suitable and available (within 100 feet of the driveway or road) for fire suppression, then road access and turning space shall be provided for fire protection pumping units to the source during fire season. This includes water supplies such as a swimming pool, tank or natural water supply (e.g. pond).
m. Section 4.6.140(13) The dwelling shall not be sited on a slope of greater than 40 percent. This shall be shown on the plot plan.
n. Section 4.6.140(14) If the dwelling has a chimney or chimneys, each chimney shall have a spark arrester. A copy of the building plans shall be submitted. If they are not available, then this will be a condition of approval on the ZCL.
o. Section 4.6.140 (16) Except for private roads and bridges accessing only commercial forest uses, public roads, bridges, private roads and driveways shall be constructed so as to provide adequate access for firefighting equipment. If the property is within a fire protection district (Coos Forest Protective Agency or Rural Fire Department) a sign off from the fire department is required or proof that the road has been constructed to meet the requirements of the "Recommended Fire Siting Standards for Dwellings and Structures and Fire Safety Design Standards for Roads" dated March 1, 1991.
p. Section 4.6.140(17) Access to new dwellings shall meet road and driveway standards in Chapter VII. Driveway/ Access Parking/Access permit application shall be signed off by the Coos County Road Department prior to issuance of a Zoning Compliance Letter.
q. Section 5.2.700 Development Transferability - Unless otherwise provided in the approval, a land use approval that was obtained through a conditional use process shall be transferable provided the transferor files a statement with the Planning Director signed by the transferee. This document shall be recorded in the chain of title of the property, indicating that the transferee has been provided a copy of the land use approval containing all conditions or restrictions understands the obligation and agrees to fulfill the conditions, unless a modification is approved as provided in this ordinance. The property owner is responsible for ensuring compliance, and land use authorization shall remain recorded in the chain of title to alert a purchaser that development was approved subject to conditions and possible restrictions.
r. Shall comply with the recommendations set forth in the Geotechnical Site Assessment Report performed by Cascadia Geoservices, Inc. A follow up report is required that all recommendation have been complied with.

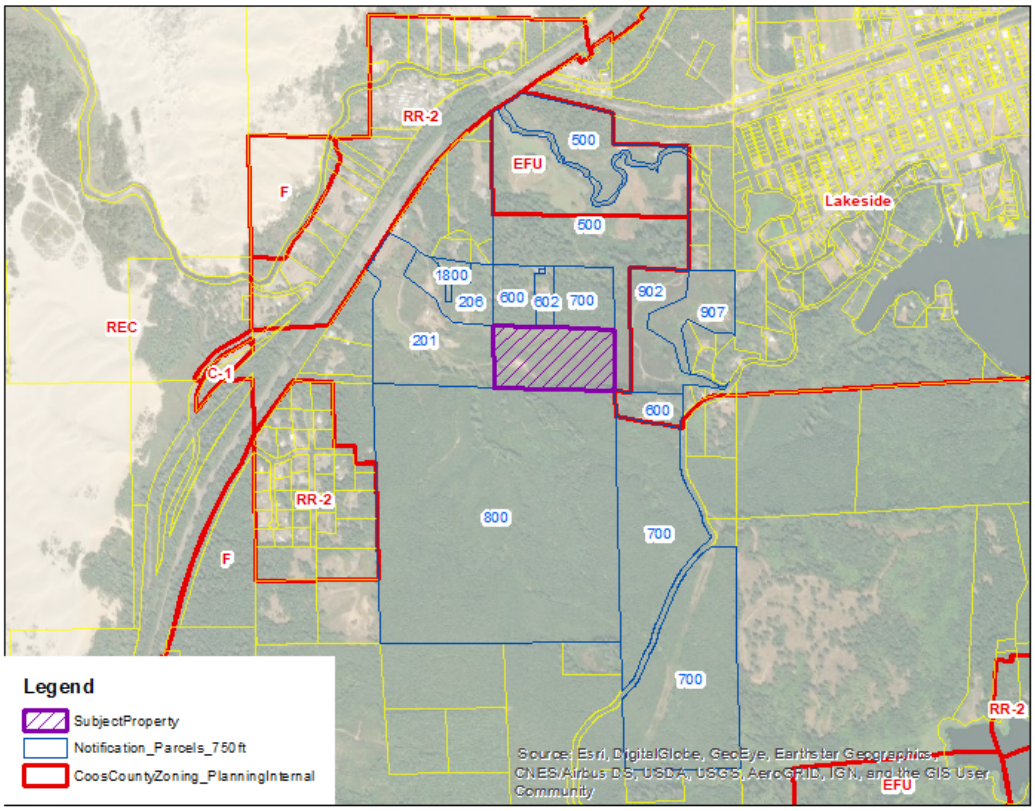
EXHIBIT "B"
Vicinity Map

COOS COUNTY PLANNING DEPARTMENT

Mailing Address: 225 N. Adams, Coquille, Oregon 97423
Physical Address: 60 E. Second, Coquille Oregon
Phone: (541) 396-7770
TDD (800) 735-2900



File:	ACU-21-063
Applicant/ Owner:	Mike Mast TARRACH, LISA M ET AL
Date:	February 8, 2022
Location:	Township 23S Range 13W Section 13 TL 207
Proposal:	Administrative Conditional Use



Template Map

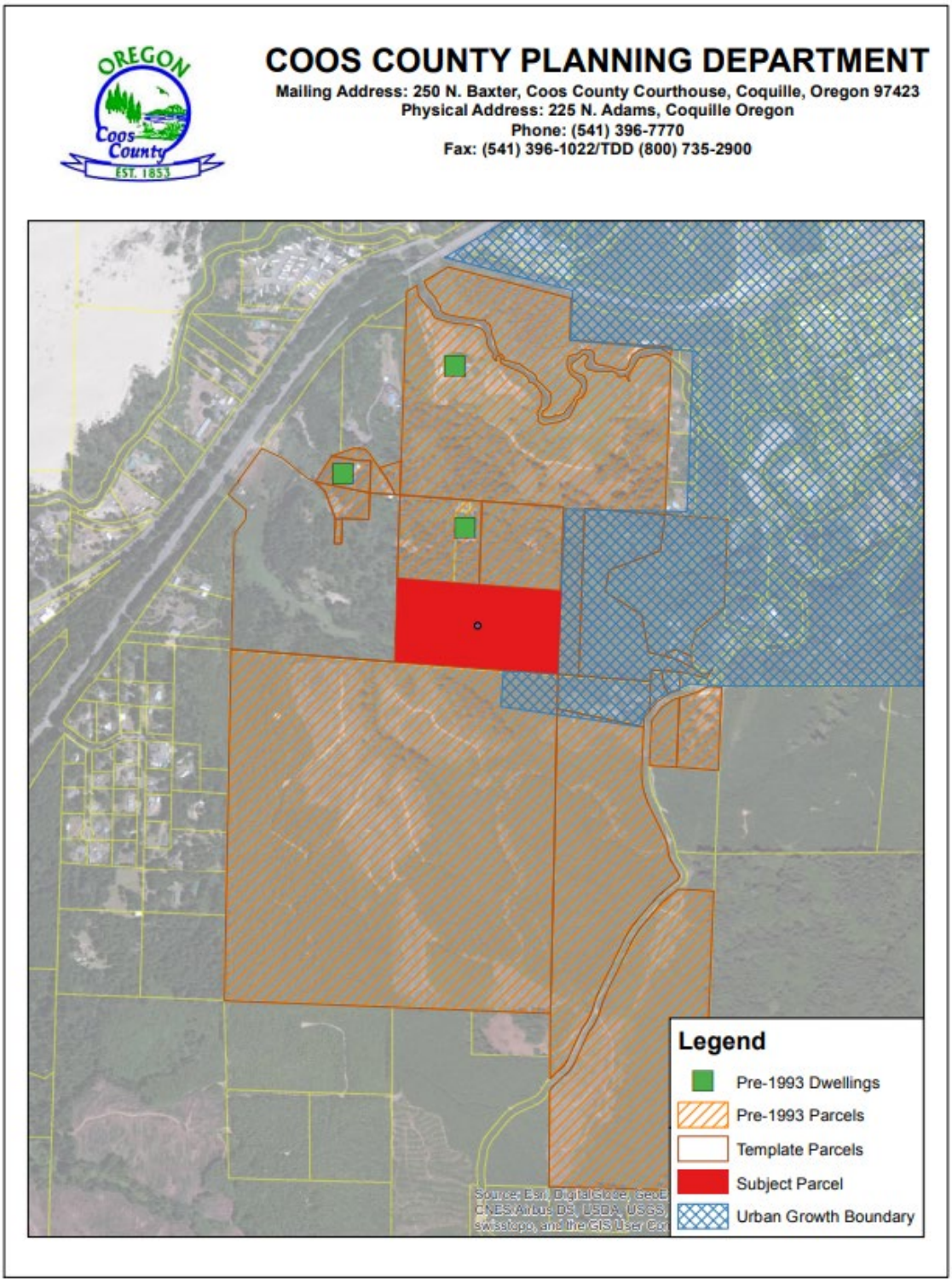


EXHIBIT "C"
STAFF REPORT
FINDINGS OF FACT AND CONCLUSIONS

I. PROPOSAL AND BACKGROUND/PROPERTY HISTORY INFORMATION AND PRIOR COMPLIANCE:

A. PROPOSAL: According to the application the property owner is seeking approval for a new Single Family Dwelling in the Forest Mixed Use Zone. There is no indication that any other development is proposed at this time.

B. BACKGROUND/PROPERTY HISTORY:

On February 27, 2014, a discrete parcel application (D-14-001) was issued verifying three discrete parcels exist. The subject parcel was discrete per deed #67-3-16657.

On April 21, 2014, a property line adjustment authorization (PLA-14-012) was issued moving a property line between the subject parcel and a discrete parcel reference to deed #67-3-16654.

On April 9, 2015, a research request (R-15-010) was submitted to have a template test performed on the property. On May 15, 2015, Staff sent out a response that the subject property did not meet template portion of the criteria. Additional information was submitted to the Planning Department. On May 27, 2015, Staff sent out a reconsideration letter that the property complied with the template portion of the criteria. This was not a final decision but allowed the GIS to be applied to find out if there would be enough parcels and dwelling to possibly qualify.

C. LOCATION: The subject property is located southwest the City of Lakeside, off a private road name Wind Song Lane.

D. ZONING: - This property is zoned Forest with a Mixed-Use Overlay.

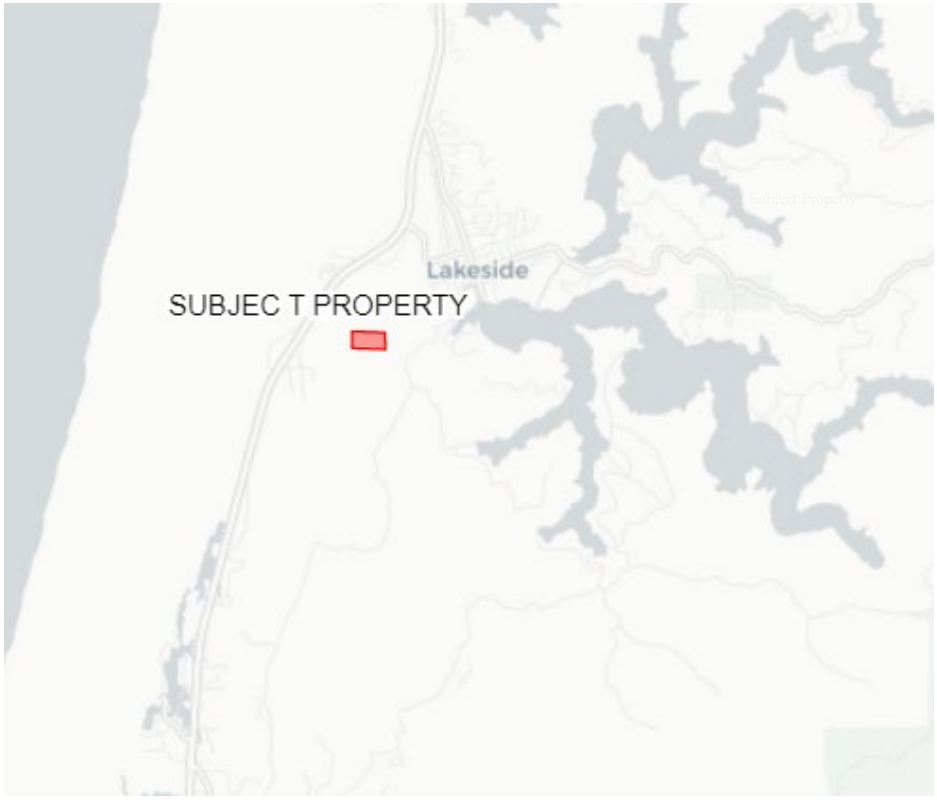
ARTICLE 4.2 – ZONING PURPOSE AND INTENT
SECTION 4.2.500 RESOURCE ZONES
Forest (F): The intent of the Forest District is to include all inventoried "forestlands" not otherwise found to be needed (excepted) for other uses.

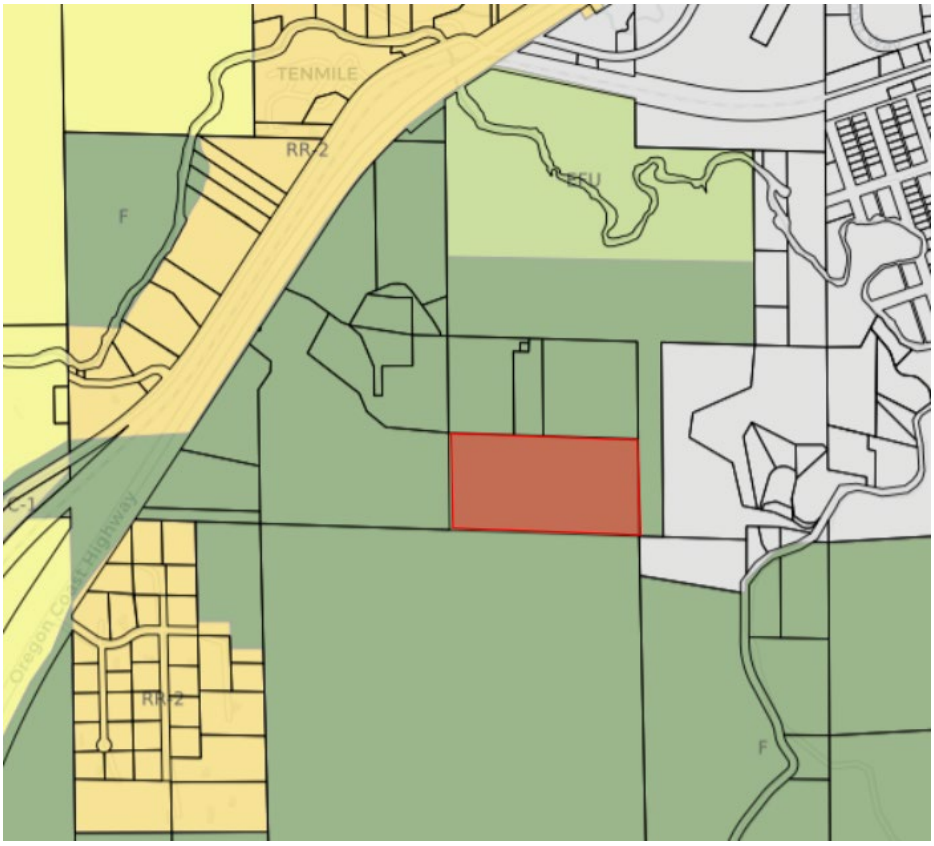
The purpose of the Forest zone is to conserve and protect forest land for forest uses. Some of the areas covered by the "F" zone are exclusive forest lands, while other areas include a combination of mixed farm and forest uses.

Forest Mixed Use (FMU): The purpose of the Forest Mixed Farm-Forest Areas ("MU" areas) is to include land which is currently or potentially in farm-forest use. Typically, such lands are those with soil, aspect, topographic features and present ground cover that are best suited to a combination of forest and grazing uses. The areas generally occupy land on the periphery of large corporate and agency holdings and tend to form a buffer between more remote uplands and populated valleys. In addition, these "mixed use" areas contain ownership of smaller size than in prime forest areas. Some are generally marginal in terms of forest productivity, such as areas close to the ocean.

E. SITE DESCRIPTION AND SURROUNDING USES:
The parcel is located west of the City of Lakeside. The parcel was created by deed or land sales contract, if there were no applicable planning, zoning or subdivision or partition ordinances or regulations that prohibited the creation. The parcel's access is off a private easement named Wind Song Lane. Wind Song Lane connects Highway 101. The parcel is mostly covered with forest vegetation.

The subject property directly touches Highway 101. Highway 101 is the major transportation coordinator that runs north to south on the Oregon coast. The City of Lakeside is located 200 feet to the east of the subject property. There is 160-acre forested parcel located south of the subject property. Based on Coos County Assessor records and aerial imagery, this parcel appears to be managed for industrial timber production. There is a residential developed Forest zoned properties located north of the subject property. The rest of the nearby properties and template test square appear to be developed with rural homesite or are vacant resource lands.

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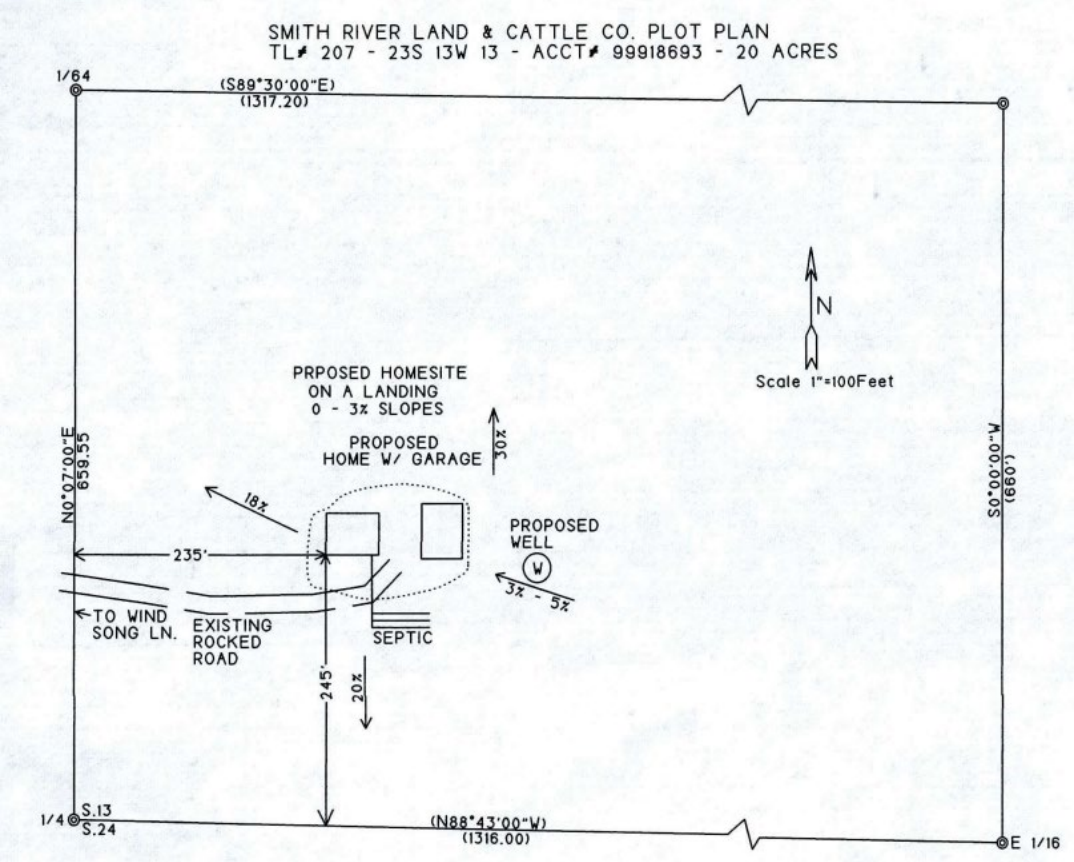


Maps are not to scale

F. COMMENTS:

a. PUBLIC AGENCY: This property required request for comments from the Oregon Department of Aviation prior to the release of the decision.

The Oregon Department of Aviation did not send response in regard to this application.

b. PUBLIC COMMENTS: This property did not require any request for comments prior to the release of the decision and none were received.

LOCAL TRIBE COMMENTS: This property required request for comments from the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians. No comments were reviewed at the time of the release of this decision.

II. GENERAL PROPERTY COMPLIANCE:

A. COMPLIANCE PURSUANT TO SECTION 1.1.300:

It shall be unlawful for any person, firm, or corporation to cause, develop, permit, erect, construct, alter or use any building, structure or parcel of land contrary to the provisions of the district in which it is located. No permit for construction or alteration of any structure shall be issued unless the plans, specifications, and intended use of any structure or land conform in all

respects with the provisions of this Ordinance, unless approval has been granted by the Hearings Body.

FINDING: Staff has reviewed the property history and the County finds at the time of this report this property is compliant. This does not mean that there is not additional information that was unavailable during this review that would make the properties non-complaint.

B. **SECTION 6.1.125 LAWFULLY CREATED LOTS OR PARCELS:**

"Lawfully established unit of land" means:

1. The unit of land was created:

a. Through an approved or pre-ordinance plat;

b. Through a prior land use decision including a final decision from a higher court. A higher court includes the Land Use Board of Appeals;

c. In compliance with all applicable planning, zoning and subdivision or partition ordinances and regulations at the time it was created.

d. By a public dedicated road that was held in fee simple creating an interviewing ownership prior to January 1, 1986;

e. By deed or land sales contract, if there were no applicable planning, zoning or subdivision or partition ordinances or regulations that prohibited the creation.

f. By the claim of intervening state or federal ownership of navigable streams, meandered lakes or tidewaters. "Navigable-for-title" or "title-navigable" means that ownership of the waterway, including its bed, was passed from the federal government to the state at statehood. If a waterway is navigable-for-title, then it also is generally open to public use for navigation, commerce, recreation, and fisheries.

FINDING: The unit of land was created pursuant to 6.1.125.1.e, by deed or land sales contract, if there were no applicable planning, zoning or subdivision or partition ordinances or regulations that prohibited the creation.

III. STAFF FINDINGS AND CONCLUSIONS:

A. SUMMARY OF PROPOSAL AND APPLICABLE REVIEW CRITERIA:

The proposal is for Planning Director's Approval of a Template Dwelling (*Single Family Dwelling* in the Forest Mixed Use Zone) and *Accessory Structure* in the Forest Mixed Use Zone.

The applicable review criteria are found in Coos County Zoning and Land Development (CCZLDO) 4.6.100 Table 1 identifies the uses and activities in the Forest (F) and Forest/Mixed Use (FMU) zone. The tables describe the use, type of review, and applicable review standards. Table 1 of CCZLDO Section 4.6.110.63 defines the relevant criteria for Template Dwellings (Alternative forestland dwellings ORS 215.750) subject to an ACU, Section 4.6.120 Review Standards (9)(B)(II), (9)(C). Development shall also comply with Section 4.6.140 Development and Siting Standards. All dwellings and structures are subject to the siting standards found in Section 4.6.130. Properties that are in a Special Development Consideration and/or overlays shall comply with the applicable review process identified by that Special Development Consideration and/or overlay located in Article 4.11.

B. KEY DEFINITIONS:

- *ACTIVITY: Any action taken either in conjunction with a use or to make a use possible. Activities do not in and of themselves result in a specific use. Several activities such as dredging, piling and*

fill may be undertaken for a single use such as a port facility. Most activities may take place in conjunction with a variety of uses.

- *DEVELOP: To bring about growth or availability; to construct or alter a structure, to conduct a mining operation, to make a physical change in the use or appearance of land, to divide land into parcels, or to create or terminate rights to access.*
- *DEVELOPMENT: The act, process or result of developing.*
- *USE: The end to which a land or water area is ultimately employed. A use often involves the placement of structures or facilities for industry, commerce, habitation, or recreation.*
- *ZONING DISTRICT: A zoning designation in this Ordinance text and delineated on the zoning maps, in which requirements for the use of land or buildings and development standards are prescribed.*
- *DWELLING: Any building that contains one or more dwelling units used, intended, or designed to be built, used, rented, leased, let or hired out to be occupied, or that are occupied for living purposes.*

C. TEMPLATE DWELLING CRITERIA AND FOREST SITING STANDARDS

Forest Template Dwelling Supplemental Application:
Coos County Zoning and Land Development Ordinance (CCZLDO)

SECTION 4.6.100 FOREST AND FOREST MIXED USE – USE TABLES Table 1 identifies the uses and activities in the Forest (F) and Forest/Mixed Use (FMU) zone. The tables describe the use, type of review, applicable review standards. Development shall also comply with Section 4.6.140 Development and Siting Standards. All dwellings and structures are subject to the siting standards found in Section 4.6.130. Exceptions to minimum lot and parcel sizes for the purpose of land division may apply as set out in Section 4.6.145 Land Division for Open Space and Special Assessment, and Section 4.6.145 Exceptions to Minimum Parcel Size. Properties that are located in a Special Development Consideration and/or overlays shall comply with the applicable review process identified by that Special Development Consideration and/or overlay located in Article 4.11.

If a use specifically states Forest Mixed Use only it is not permitted in the Forest Zone. If land is in a zone that allows both farm and forest uses, a dwelling may be sited based on the predominate use of the tract on January 1, 1993.

SECTION 4.6.110 (OAR 660-006-0025) Uses Authorized in Forest Zones (1) Goal 4 requires that forest land be conserved. Forest lands are conserved by adopting and applying comprehensive plan provisions and zoning regulations consistent with the goals and this rule. In addition to forest practices and operations and uses auxiliary to forest practices, as set forth in ORS 527.722, the Commission has determined that five general types of uses, as set forth in the goal, may be allowed in the forest environment, subject to the standards in the goal and in this rule. These general types of uses are: (a) Uses related to and in support of forest operations; (b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment; (c) Locationally dependent uses, such as communication towers, mineral and aggregate resources, etc.; (d) Dwellings authorized by ORS 215.705 to 215.755; and (e) Other dwellings under prescribed conditions.

Use		*TR*	*Subject to*
Dwellings authorized by ORS 215.705 to 215.755; and (e) Other dwellings under prescribed conditions.			
63.	*Template Dwelling (Alternative forestland dwellings ORS 215.750)*	*ACU*	*(9)(B)(II), (9)(C)*

- *SECTION 4.6.120 Review Standards (9)(B) DWELLING ON FOREST AND FOREST MIXED USE ZONES -(II) TEMPLATE DWELLING - 215.750 Alternative forestland dwellings; criteria.*

(1) In western Oregon, a governing body of a county or its designate may allow the establishment of a single-family dwelling on a lot or parcel located within a forest zone if the lot or parcel is predominantly composed of soils that are:

(a) Capable of producing 0 to 49 cubic feet per acre per year of wood fiber if:

(A) All or part of at least three other lots or parcels that existed on January 1, 1993, are within a 160-acre square centered on the center of the subject tract; and

(B) At least three dwellings existed on January 1, 1993, on the other lots or parcels continue to exist on the other lots or parcels;

(b) Capable of producing 50 to 85 cubic feet per acre per year of wood fiber if:

(A) All or part of at least seven other lots or parcels that existed on January 1, 1993, are within a 160-acre square centered on the center of the subject tract; and

(B) At least three dwellings existed on January 1, 1993, on the other lots or parcels; or

(c) Capable of producing more than 85 cubic feet per acre per year of wood fiber if:

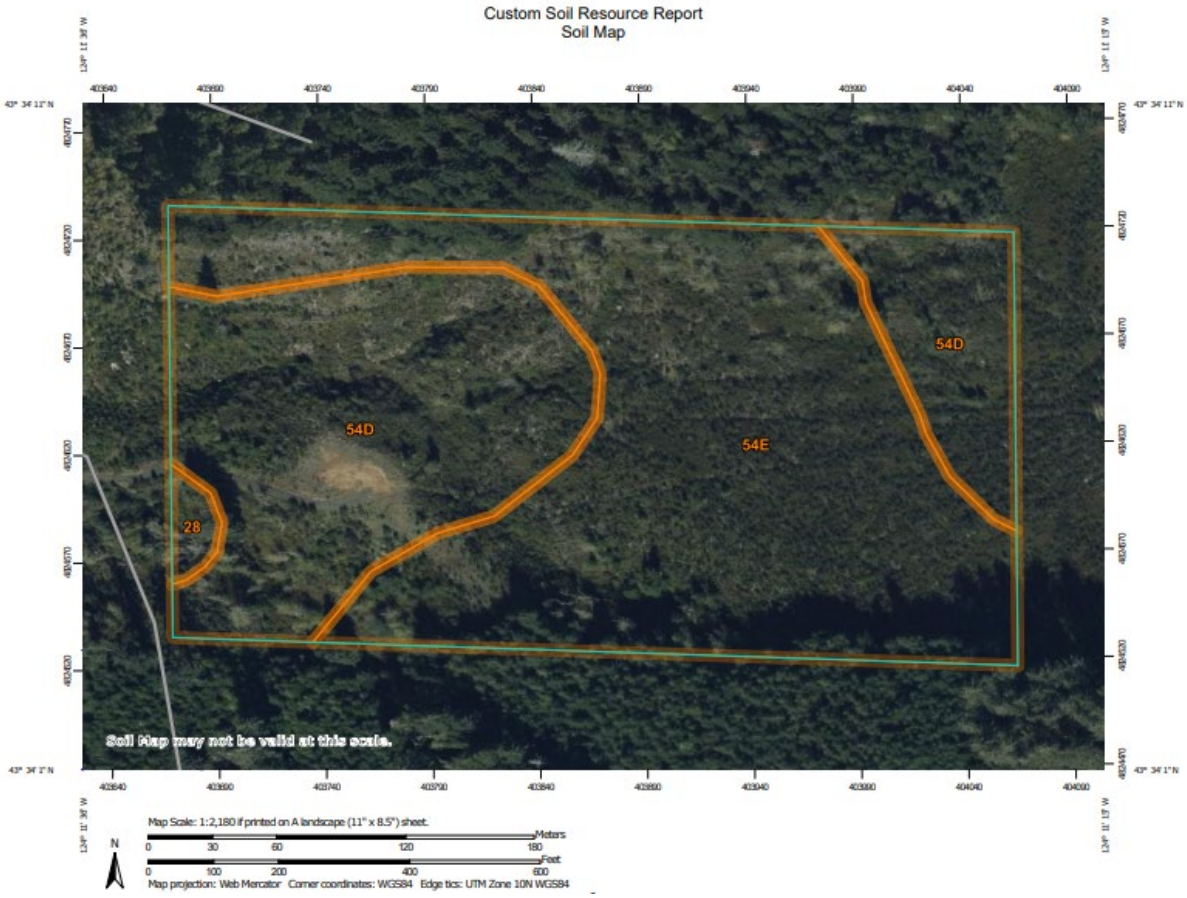
(A) All or part of at least 11 other lots or parcels that existed on January 1, 1993, are within a 160-acre square centered on the center of the subject tract; and

(B) At least three dwellings existed on January 1, 1993, on the other lots or parcels.

FINDING: Soil Information used to determine if the subject property is capable of producing 0-49, 50-85 or 85 cubic feet per year if wood fiber which determines the applicable criteria for the number of parcels.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
28	Heceta fine sand	0.2	1.2%
54D	Templeton silt loam, 7 to 30 percent slopes	8.0	40.7%
54E	Templeton silt loam, 30 to 50 percent slopes	11.4	58.1%
Totals for Area of Interest		**19.7**	**100.0%**



Report—Forestland Productivity

Forestland Productivity–Coos County, Oregon				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			Cu ft/ac/yr	
28—Heceta fine sand				
Heceta	—	—	—	—
54D—Templeton silt loam, 7 to 30 percent slopes				
Templeton	Douglas-fir	125	186.00	Douglas-fir, Sitka spruce, Western hemlock
	Red alder	94	114.00	
	Sitka spruce	169	257.00	
	Western hemlock	161	257.00	
	Western redcedar	—	—	
54E—Templeton silt loam, 30 to 50 percent slopes				
Templeton	Douglas-fir	125	186.00	Douglas-fir, Sitka spruce, Western hemlock
	Red alder	94	114.00	
	Sitka spruce	169	257.00	
	Western hemlock	161	257.00	
	Western redcedar	—	—	

28-Heceta fine sand.
This deep, poorly drained soil is in deflation basins and depressional areas between dunes. It formed in eolian material. Slopes are 0 to 3 percent. The native vegetation is mainly sedges, rushes, water-tolerant grasses, and shrubs. Elevation is 0 to 80 feet. The average annual precipitation is 50 to 70 inches, the average annual air temperature is 51 to 53 degrees F, and the average frost-free period is 200 to 240 days.

Typically, the surface layer is very dark grayish brown fine sand 4 inches thick. The substratum to a depth of 60 inches or more is mottled, grayish brown sand.
Included in this unit are small areas of Waldport and Netarts soils and Dune land, Included areas make up about 20 percent of the total acreage. The percentage varies from one area to another.

Permeability of this Heceta soil is rapid. Available water capacity is about 1 to 2 inches. Effective rooting depth is 60 inches for water-tolerant plants, but it is limited by the water table for non-water-tolerant plants. Runoff is ponded, and the hazard of water erosion is slight. The water table fluctuates from 12 inches above the surface to 6 inches below the surface from October to May.

This unit is used for recreation and wildlife habitat.

If this unit is used for recreational development, the main limitation is wetness. Use of paths and trails may be limited to 2 or 3 months in summer.

This map unit is in capability subclass IVw.

54D-Templeton silt loam, 7 to 30 percent slopes.
This deep, well drained soil is on side slopes of mountains. It formed in colluvium and residuum derived dominantly from sedimentary rock. The native vegetation is mainly conifers, shrubs, forbs, and hardwoods. Elevation is 50 to 800 feet. The average annual precipitation is 60 to 70 inches, the average annual air temperature is 51 to 53 degrees F, and the average frost-free period is 200 to 240 days.

Typically, the surface layer is very dark brown and dark brown silt loam 16 inches thick. The subsoil is reddish brown, yellowish red, and strong brown silty clay loam 26 inches thick. Soft, weathered and fractured siltstone is at a depth of 42 inches. In some areas the dark-colored surface layer is less than 10 inches thick.

Included in this unit are small areas of Salander soils. Included areas make up about 25 percent of the total acreage. The percentage varies from one area to another.

Permeability of this Templeton soil is moderate. Available water capacity is about 8.0 to 17.5 inches. Effective rooting depth is 40 to 60 inches. Runoff is medium, and the hazard of water erosion is moderate.

This unit is used mainly for timber production and wildlife habitat. It is also used for livestock grazing and homesite development.

This unit is well suited to the production of Douglas fir. Among the other species that grow on this unit are western hemlock, western redcedar, Sitka spruce, grand fir, and red alder. The understory vegetation is mainly vine maple, thimbleberry, creambush oceanspray, red huckleberry, western swordfern, and Pacific trillium.

On the basis of a 100-year site curve, the mean site index for Sitka spruce is 180. At the culmination of the mean annual increment (CMAI), the production of 50-year-old Sitka spruce trees 1.5 inches in diameter or more at breast height is 270 cubic feet per acre per year. On the basis of a 100-year site curve, the mean site index for Douglas fir is 170.

The main limitations for the management of timber on this unit are the susceptibility of the surface layer to compaction, the hazard of erosion, plant competition, and the hazard of windthrow. Using standard wheeled and tracked equipment when the soil is moist causes rutting and compaction. Displacement of the surface layer occurs most readily when the soil is dry. Puddling can occur when the soil is wet. Using low-pressure ground equipment reduces damage to the soil arid helps to maintain productivity.

Proper design of road drainage systems and care in the placement of culverts help to control erosion. Cuts and fills are subject to erosion unless treated. Seeding, mulching, benching, and compacting the soil can reduce erosion. Unsurfaced roads and skid trails are slippery when wet or moist, and they may be impassable during rainy periods. Logging roads require suitable surfacing for year-round use. Rock for road construction is not readily available in this unit. Steep yarding paths, skid trails, and firebreaks are subject to rilling and gullying unless they are provided with adequate water bars or are protected by plant cover, or both. Sitka spruce, a shallow rooted species, commonly is subject to windthrow.

When openings are made in the canopy, invading brushy plants can delay natural reforestation. Undesirable plants prevent adequate natural or artificial reforestation unless intensive site preparation and maintenance are provided. Reforestation can be accomplished by planting Sitka spruce, Douglas fir, and western hemlock seedlings.

This unit is well suited to livestock grazing. In summer, droughtiness limits the choice of forage plants and limits production. Irrigation generally is impractical because of an inadequate water supply.

Fertilizer is needed to ensure optimum growth of grasses and legumes. Grass-legume pastures respond to sulfur, phosphorus, and molybdenum. Using a good fertilization program increases the production of forage in winter. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help to keep the pasture in good condition.

If this unit is used for homesite development, the main limitations are slope and depth to bedrock. Absorption lines should either be placed in the more gently sloping areas of this unit or in adjoining areas of soils that are not so steep.

Extensive cutting and filling generally are required to provide nearly level construction sites. Building roads in the less sloping areas of this unit reduces the amount of cutting and filling required. Roads should be provided with surface drainage. Cuts and fills are susceptible to erosion. Revegetating disturbed areas around construction sites as soon as possible helps to control erosion. In summer, supplemental irrigation is needed for lawn grasses and vegetable gardens.

This map unit is in capability subclass Vle.

54E-Templeton silt loam, 30 to 50 percent slopes.
This deep, well drained soil is on side slopes of mountains. It formed in colluvium and residuum derived dominantly from sedimentary rock. The native vegetation is mainly conifers, shrubs, forbs, and hardwoods. Elevation is 50 to 800 feet. The average annual precipitation is 60 to 80 inches, the average annual air temperature is 51 to 53 degrees F, and the average frost-free period is 200 to 240 days.

Typically, the surface layer is very dark brown and dark brown silt loam 16 inches thick. The subsoil is reddish brown, yellowish red, and strong brown silty clay loam 26 inches thick. Soft, weathered and fractured siltstone is at a depth of 42 inches. In some areas the dark-colored surface layer is less than 10 inches thick.

Included in this unit are small areas of Geisel soils and deep gravelly loam. Included areas make up about 25 percent of the total acreage. The percentage varies from one area to another.

Permeability of this Templeton soil is moderate. Available water capacity is about 8.0 to 17.5 inches. Effective rooting depth is 40 to 60 inches. Runoff is rapid, and the hazard of water erosion is high.

This unit is used mainly for timber production and wildlife habitat.

This unit is suited to the production of Sitka spruce. Among the other species that grow on this unit are western hemlock, Douglas fir, Port Orford cedar, western redcedar, and red alder. The understory vegetation is mainly salal, evergreen huckleberry, Pacific rhododendron, western swordfern, and Oregon oxalis.

On the basis of a 100-year site curve, the mean site index for Sitka spruce is 180. At the culmination of the mean annual increment (CMAI), the production of 50-year-old Sitka spruce trees 1.5 inches in diameter or more at breast height is 270 cubic feet per acre per year. On the basis of a 100-year site curve, the mean site index for Douglas fir is 170. High winds from the Pacific Ocean may seriously limit the growth of trees unless they are in a protected area.

The main limitations for the management of timber on this unit are the susceptibility of the surface layer to compaction, steepness of slope, the hazard of erosion, plant competition, and the hazard of windthrow. The main limitation for the harvesting of timber is steepness of slope.

Using standard wheeled and tracked equipment when the soil is moist causes rutting and compaction. Displacement of topsoil occurs most readily when the soil is dry. Puddling can occur when the soil is wet. Cable yarding systems are safer, damage the soil less, and help to maintain productivity.

Proper design of road drainage systems and care in the placement of culverts help to control erosion. Cuts and fills are subject to erosion unless treated. Seeding, mulching, benching, and compacting the soil can reduce erosion. Unsurfaced roads and skid trails are slippery when wet or moist, and they may be impassable during rainy periods. Logging roads require suitable surfacing for year-round use. Rock for road construction is not readily available in this unit. Steep yarding paths, skid trails, and firebreaks are subject to rilling and gullying unless they are provided with adequate water bars or are protected by plant cover, or both. Road location and maintenance costs are greater in the more steeply sloping areas. Material cast to the side when building roads can damage vegetation. It is also a potential source of sedimentation. End hauling of waste material minimizes damage to the vegetation downslope and reduces the potential for sedimentation. Sitka spruce, a shallow rooted species, is subject to windthrow.

When openings are made in the canopy, invading brushy plants can delay natural reforestation. Undesirable plants prevent adequate natural or artificial reforestation unless intensive site preparation and maintenance are provided. Reforestation can be accomplished by planting Sitka spruce, western hemlock, and Douglas fir seedlings.

This map unit is in capability subclass Vle.

FINDING: According to the Soil Survey of Coos County, NRCS National Soil Information System, the property is made up of 28 – Heceta fine sand, 54D – Templeton silt loam, and 54E – Templeton silt loam soil types. The volume of wood fiber per year for 54D is 186 cubic feet per acre per year for Douglas-fir species.

Therefore, 4.6.120 Review Standards (9)(B)(II)(1)(c) applies to the template test.

- *SECTION 4.6.120 Review Standards (9)(B) DWELLING ON FOREST AND FOREST MIXED USE ZONES -(II) TEMPLATE DWELLING - 215.750 Alternative forestland dwellings; criteria. Subsections (3) though (7). Subsection (2) has been removed:*

  (3) Lots or parcels within urban growth boundaries shall not be used to satisfy the eligibility requirements under subsection (1) or (2) of this section.
  (4) A proposed dwelling under this section is not allowed:
  (a) If it is prohibited by or will not comply with the requirements of an acknowledged comprehensive plan and acknowledged land use regulations or other provisions of law.
  (b) Unless it complies with the requirements of ORS 215.730.
  (c) Unless no dwellings are allowed on other lots or parcels that make up the tract and deed restrictions established under ORS 215.740 (3) for the other lots or parcels that make up the tract are met.
  (d) If the tract on which the dwelling will be sited includes a dwelling.
  (5) Except as described in subsection (6) of this section, if the tract under subsection (1) or (2) of this section abuts a road that existed on January 1, 1993, the measurement may be made by

creating a 160-acre rectangle that is one mile long and one-fourth mile wide centered on the center of the subject tract and that is to the maximum extent possible, aligned with the road.

(6)(a) If a tract 60 acres or larger described under subsection (1) or (2) of this section abuts a road or perennial stream, the measurement shall be made in accordance with subsection (5) of this section. However, one of the three required dwellings shall be on the same side of the road or stream as the tract and:

(A) Be located within a 160-acre rectangle that is one mile long and one-fourth mile wide centered on the center of the subject tract and that is, to the maximum extent possible, aligned with the road or stream; or

(B) Be within one-quarter mile from the edge of the subject tract but not outside the length of the 160-acre rectangle, and on the same side of the road or stream as the tract.

(b) If a road crosses the tract on which the dwelling will be located, at least one of the three required dwellings shall be on the same side of the road as the proposed dwelling.

(7) Notwithstanding subsection (4)(a) of this section, if the acknowledged comprehensive plan and land use regulations of a county require that a dwelling be located in a 160-acre square or rectangle described in subsection (1), (2), (5) or (6) of this section, a dwelling is in the 160-acre square or rectangle if any part of the dwelling is in the 160-acre square or rectangle. [1993 c.792 §4(6),(7),(8); 1999 c.59 §58; 2005 c.289 §1]

FINDING: None of the lots or parcels are located within urban growth boundaries; therefore, no urban growth boundary lots or parcels are being used to satisfy the eligibility requirements under subsection (1) of this section. Subsection (2) is not applicable to this review.

The unit of land was created pursuant to 6.1.125.1.e by deed or land sales contract, if there were no applicable planning, zoning or subdivision or partition ordinances or regulations that prohibited the creation. There are no known restrictions or other dwellings on the parcel that would prevent a dwelling from being built. The parcel is less than 60 acres. The property does touch a road created before January 1, 1993. The applicant stated *"The template used is a 160-acre square. The centered on the center of the subject tract and meets or exceeds the required 11 units of land required and within those properties there are a minimum of three dwellings sited on or before January 1,1993. There are of 12 parcels within the 160-acre square ranging from 0.45 acres to 160.00 acres of which are zoned F and RR-2. Three of these parcels have pre-1993 dwellings. By allowing the siting of a dwelling on this site, the parcel would conform to what already exists within the area".* The applicant did not indicate which parcels or dwellings were created prior to 1993, nor did the applicant include a map indicating the direction of the template test rectangle. However, a template square was implemented with R-15-010. R-15-010 was a template test research request on the subject property. There will need to be 11 parcels with 3 dwellings that were created before January 1, 1993. During the review of this application, Staff found that 11 parcels with 3 dwellings were all or partly within the square. Therefore, staff is able to determine the application request complies with the requirement of this section.

9(C) Additional Criteria for all dwellings allowed in the forest and Forest Mixed Use Zones.

1. *A local government shall require as a condition of approval of a single-family dwelling allowed on lands zoned forestland:*
   - *(a) If the lot or parcel is more than 10 acres in western Oregon as defined in ORS 321.257, the property owner submits a stocking survey report to the assessor and the assessor verifies that the minimum stocking requirements adopted under ORS 527.610 to 527.770 have been met.*
   - *(b) the dwelling meets the following requirements:*

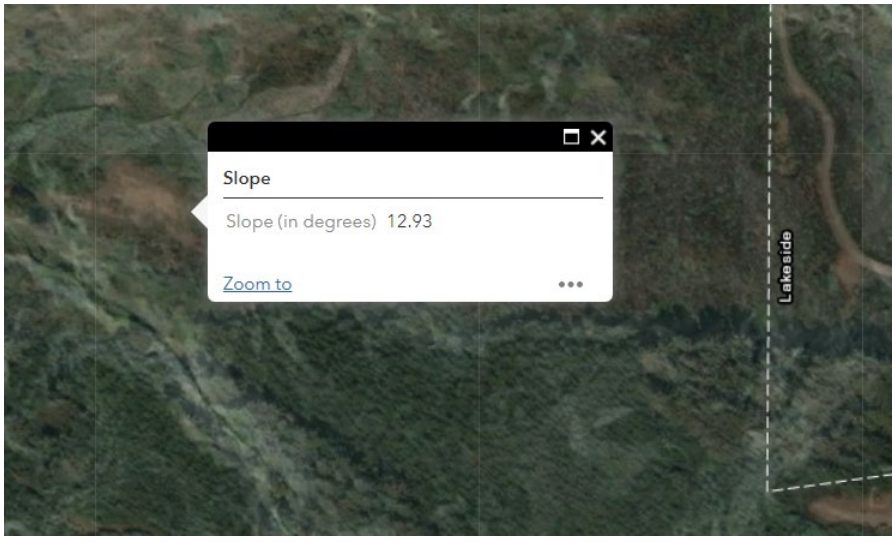
A. *The dwelling has a fire retardant roof.*
B. *The dwelling will not be sited on a slope of greater than 40 percent.*
C. *Evidence is provided that the domestic water supply is from a source authorized by the Water Resources Department and not from a Class II stream as designated by the State Board of Forestry.*
D. *The dwelling is located upon a parcel within a fire protection district or is provided with residential fire protection by contract.*
E. *If the dwelling is not within a fire protection district, the applicant provides evidence that the applicant has asked to be included in the nearest such district.*
F. *If the dwelling has a chimney or chimneys, each chimney has a spark arrester.*
G. *The owner provides and maintains primary fuel-free break and secondary break areas on land surrounding the dwelling that is owned or controlled by the owner.*

FINDING: Section 4.6.120(9)(C)(1)(a) requires that if a lot or parcel is more than 10 acres the property owner submits a stocking survey report to the assessor and the assessor verifies that the minimum stocking requirements have been met. The property is greater than 10 acres in size; therefore, the criteria does require a stocking survey. Planning Staff relies on the County Assessor's Office to confirm this has been complied with.

Section 4.6.120(9)(C)(1)(b)(A) requires the dwelling will have a fire-retardant roof. A copy of the building plans showing the type of roofing material will satisfy this criterion.

Section 4.6.110(9)(C)(1)(b)(B): requires that the dwelling will not be sited on a slope of greater than 40 percent. The applicants states that the dwelling site is relatively flat.

Staff utilized the Oregon DOGAMI LiDAR Viewer to get approximate slope of the site area including the fuel-free break zone. The LiDAR viewer estimated the slope as 12.93 degrees, which is 22.96% in slope.



Staff concurs with the topography map that the subject property is not greater than 40 percent. Therefore, this criterion has been addressed.

Section 4.6.110(9)(C)(1)(b)(C) The applicant stated that the water supply will be from a well and not a Class II stream. As a condition of approval, a water supply requirement form shall be submitted and signed off by the State Watermaster. Therefore, this has been addressed.

Section 4.6.110(9)(C)(1)(b)(D) requires that a dwelling is located upon a parcel within a fire protection district or is provided with residential fire protection contract. The property is located within the Lakeside RFPD. Therefore, this criterion has been addressed.

Section 4.6.110(9)(C)(1)(b)(E) is not applicable see prior FINDING.

Section 4.6.120(9)(C)(1)(b)(F) requires that any chimney constructed will have a spark arrester installed. The applicants have stated they will comply with this section. This will be a condition of approval. Therefore, the criterion has been addressed.

Section 4.6.110(9)(C)(1)(b)(G): The application states that the owner will provide and maintain the primary fuel-free break and secondary break areas on land surrounding the dwelling that is owned and or controlled by the owner consistent with the requirements of Section 4.6.140.9 and 4.6.140.10.10. The fuel-free break and secondary break will be addressed later in this staff report. This criterion has been addressed.

2. *(a) If a governing body determines that meeting the requirement of subsection (1)(b)(D) of this section would be impracticable, the governing body may provide an alternative means for protecting the dwelling from fire hazards. The means selected may include a fire sprinkling system, on-site equipment and water storage or other methods that are reasonable, given the site conditions. The applicant shall request and provide alternatives to be considered.*

   (b) If a water supply is required under this subsection, it shall be a swimming pool, pond, lake or similar body of water that at all times contains at least 4,000 gallons or a stream that has a minimum flow of at least one cubic foot per second. Road access shall be provided to within 15 feet of the water's edge for fire-fighting pumping units, and the road access shall accommodate a turnaround for fire-fighting equipment. [1993 c.792 §5; 1995 c.812 §6; 1997 c.293 §1; 2003 c.621 §103]

FINDING: Section 4.6.110(9)(C)(2)(a) & (b): No alternative forms of fire protection were requested. No water supply was shown to exists that would meet the criteria and require a road access. Therefore, this has been addressed.

SECTION 4.6.130 ADDITIONAL CRITERIA FOR ALL new and REPLACEMENT dwellings and structures in forest

The following siting criteria or their equivalent shall apply to all new dwellings and structures in forest and agriculture/forest zones. These criteria are designed to make such uses compatible with forest operations and agriculture, to minimize wildfire hazards and risks and to conserve values found on forest lands. A governing body shall consider the criteria in this rule together with the requirements OAR 660-0060-0035 to identify the building site:

1. *Dwellings and structures shall be sited on the parcel so that:*
   (a) They have the least impact on nearby[1] or adjoining forest or agricultural lands;
   (b) The siting ensures that adverse impacts on forest operations and accepted farming practices on the tract will be minimized;

[1]***For the purpose of this section "Nearby" is defined as within the decision notification area as defined in Section 5.0.900(2) for farm zoned property.***

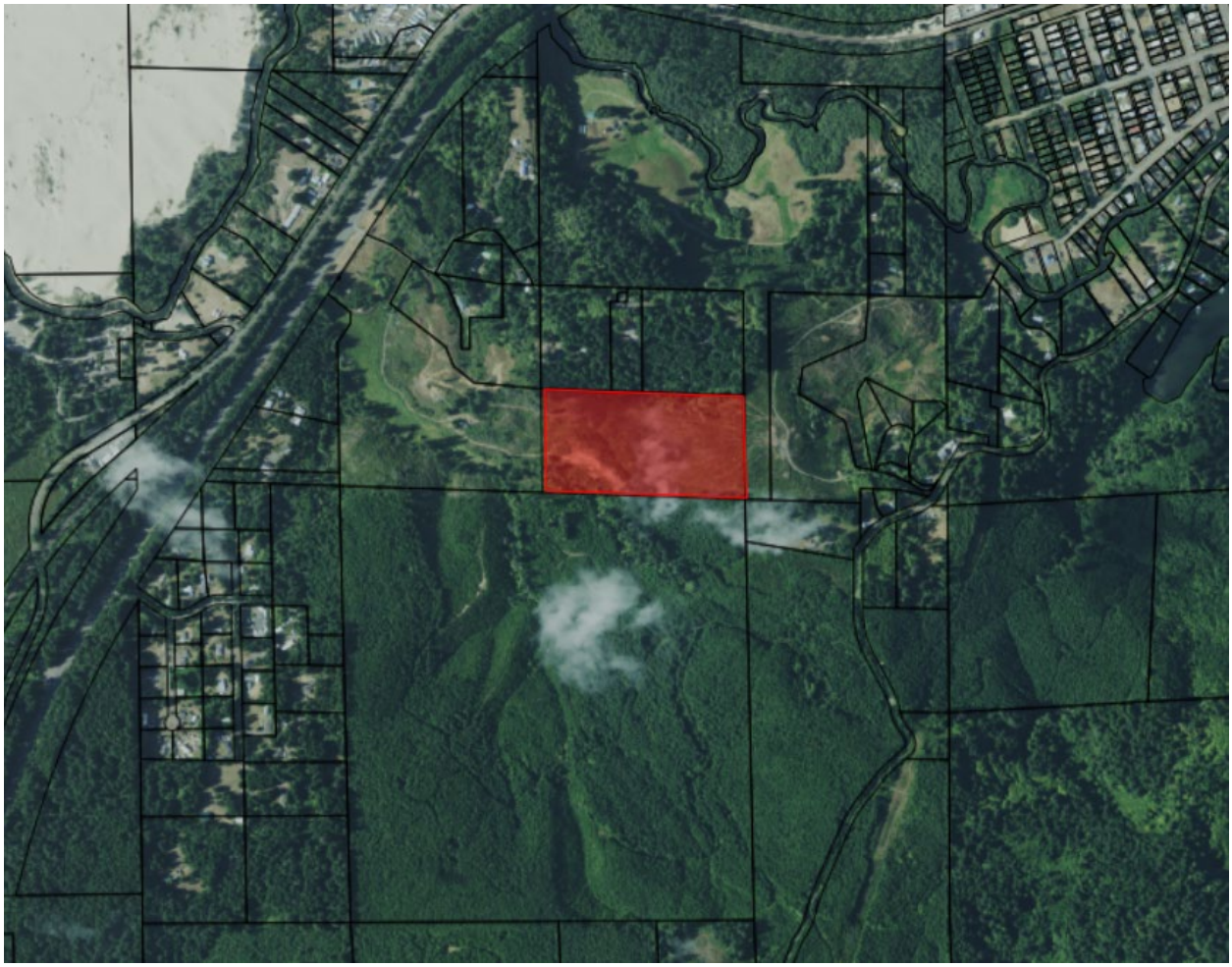
(c) The amount of forest lands used to site access roads, service corridors, the dwelling and structures is minimized; and

(d) The risks associated with wildfire are minimized.

2. *Siting criteria satisfying section (1) of this section may include setbacks from adjoining properties, clustering near or among existing structures, siting close to existing roads and siting on that portion of the parcel least suited for growing trees.*
3. *The applicant shall provide evidence to the governing body that the domestic water supply is from a source authorized in accordance with the Water Resources Department's administrative rules for the appropriation of ground water or surface water and not from a Class II stream as defined in the Forest Practices rules (OAR chapter 629). For purposes of this section, evidence of a domestic water supply means:*
   a) Verification from a water purveyor that the use described in the application will be served by the purveyor under the purveyor's rights to appropriate water;
   b) A water use permit issued by the Water Resources Department for the use described in the application; or
   c) Verification from the Water Resources Department that a water use permit is not required for the use described in the application. If the proposed water supply is from a well and is exempt from permitting requirements under ORS 537.545, the applicant shall submit the well constructor's report to the county upon completion of the well.
4. *As a condition of approval, if road access to the dwelling is by a road owned and maintained by a private party or by the Oregon Department of Forestry, the U.S. Bureau of Land Management, or the U.S. Forest Service, then the applicant shall provide proof of a long-term road access use permit or agreement. The road use permit may require the applicant to agree to accept responsibility for road maintenance.*
5. *Approval of a dwelling shall be subject to the following requirements:*
   (a) Approval of a dwelling requires the owner of the tract to plant a sufficient number of trees on the tract to demonstrate that the tract is reasonably expected to meet Department of Forestry stocking requirements at the time specified in department of Forestry administrative rules;
   (b) The planning department shall notify the county assessor of the above condition at the time the dwelling is approved;
   (c) If the lot or parcel is more than 10 acres in western Oregon or more than 30 acres in eastern Oregon, the property owner shall submit a stocking survey report to the county assessor and the assessor will verify that the minimum stocking requirements have been met by the time required by Department of Forestry rules;
   (d) Upon notification by the assessor the Department of Forestry will determine whether the tract meets minimum stocking requirements of the Forest Practices Act. If that department determines that the tract does not meet those requirements, that department will notify the owner and the assessor that the land is not being managed as forest land. The assessor will then remove the forest land designation pursuant to ORS 321.359 and impose the additional tax; and
   (e) The county governing body or its designate shall require as a condition of approval of a single-family dwelling under ORS 215.213, 215.383 or 215.284 or otherwise in a farm or forest zone, that the landowner for the dwelling sign and record in the deed records for the county a document binding the landowner, and the landowner's successors in interest, prohibiting them from pursuing a claim for relief or cause of action alleging injury from farming or forest practices for which no action or claim is allowed under ORS 30.936 or 30.937.

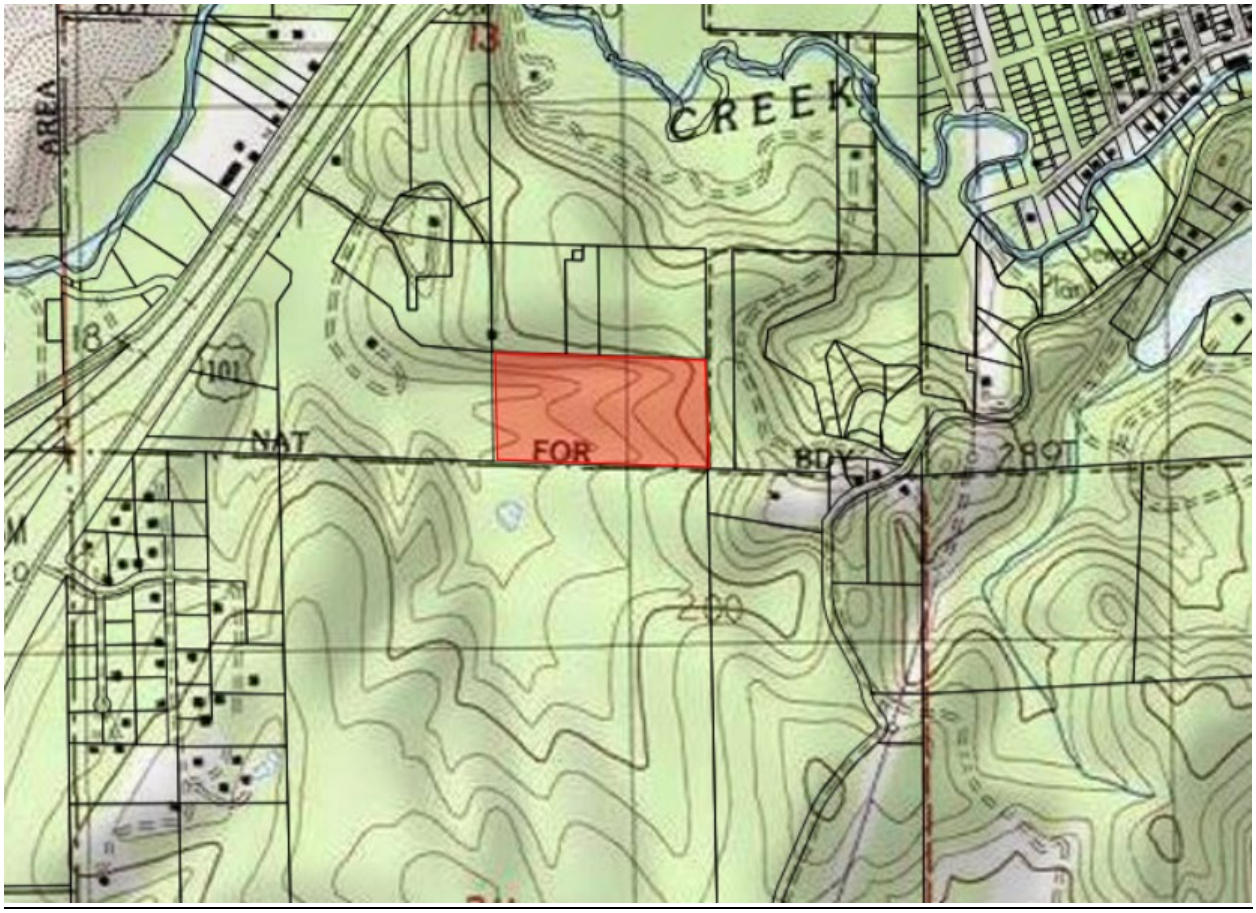
FINDING: Section 4.6.130(1)(a) and Section 4.6.130(1)(b) require proof of adverse impacts to the subject property and nearby Farm and Forest operations. The subject property is located southwest of the City of Lakeside alongside Highway 101. The proposed homesite is located approximately in the southwest corner of the subject property, as shown on the applicants plot plan. According to the plot

plan, the proposed homesite is 235 feet from the west property line and 245 feet from the south property line. The applicant's plot plan did not include a scale plot plan of the entire subject property. Staff estimates that the proposed homesite is approximately 1000 feet away from the eastern boundary and 400 feet away from the northern boundary.



The above map shows the properties nearby. The subject property is located southwest of the City of Lakeside. Staff must review the proposed use's impact on nearby farm and forest operations. Based on the map above, Staff estimates the proposed homesite is 245 feet away from the forestlands that are being utilized for industrial timber production. When looking for the effects of new forest dwellings on nearby pesticide practices, the parcel size is more important than whether the land is classified as non-industrial or industrial timberlands. Senate Bill 1602 increased the helicopter spray distance buffer from 60 feet to 300 feet of an inhabitable dwelling starting January 1, 2021. The Anderson v. Coos County, 51 Or LUBA 454 (2006) case established an important factor. According to the LUBA case, a reasonable assumption could conclude that herbicides would be applied to land less than 40 acres using ground application methods. Spraying herbicides using ground spraying applications is permitted up to the property line. Herbicide application by aerial spraying is preferred for lands over 40 acres. The adjacent timberland parcel to the south is approximately 160 acres (as shown on the Assessor Map). It is assumed that the current, or any future, landowner will be using aerial herbicide spraying practices. Staff finds that not being able to aerial spray for 50 feet buffer of the adjacent timber stand will not have a significant impact on the forestry practices for timber production.

According to the topographic map below, the adjacent parcel appears to have a slope of less than 35%, so a groundside harvest would be preferred. Groundside timber harvests are typically confined to the harvest unit. The location of the dwelling should not adversely affect commercial timber harvesting on adjacent parcels.



On the northern side of the subject property there are smaller parcels. Some of these parcels have established dwellings. Commercial timber production is not currently being conducted on this land.

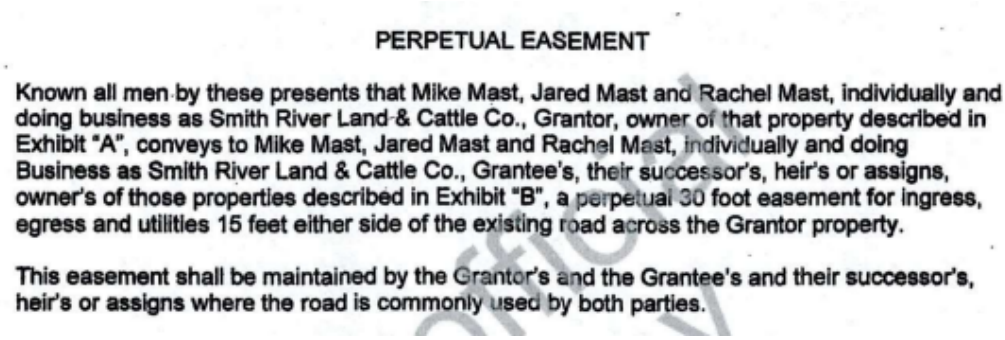
Staff finds that there will not be adverse impacts to the farm/forest uses on the adjacent resources by constructing a dwelling on the subject property at the location identified in the plot plan.

Section 4.6.130(1)(c) requires the minimum forest lands be removed for access roads, service corridors and structures. The applicants are utilizing an existing private easement to the parcel that is identified on instrument #2020-04833. Staff will provide additional FINDINGs below.

Section 4.6.130(1)(d) requires that risk associated with wildfires are minimized. The subject property is southwest of the City of Lakeside. The applicant is proposing to build the dwelling approximately 225 to 250 feet from the western and southern property lines. This location will provide an adequate fuel break zone, while somewhat clustering the dwelling in relation to the approved dwellings to the west. As a result of installation of these fuel-free breaks and numerous other factors discussed above, staff believes that the proposed development on adjacent farmlands and forests will be mitigated.

Section 4.6.130(3) requires the applicants to provide evidence to the governing body that the domestic water supply is from a source authorized in accordance with the Water Resources Department's administrative rules for the appropriation of ground water or surface water and not from a Class II stream as defined in the Forest Practices rules (OAR chapter 629). The applicants stated that the water source will be from a source authorized in accordance with Water Resources Department's administrative rules. While the applicants submitted a well contractor's report. Water Resources Department verification is still required that no water use permit is required for the proposed uses. The approval of this project will be conditional on this.

Section 4.6.130(4) requires that if road access to the dwelling is by a road owned and maintained by a private party, ODF or BLM a long-term access use permit or agreement be submitted. Access to the subject property is via a private road named Wind Song Lane. The applicant submitted the easement that the subject property uses. This easement is recorded in the Coos County Clerk's office as #2020-04833.



PERPETUAL EASEMENT

Known all men by these presents that Mike Mast, Jared Mast and Rachel Mast, individually and doing business as Smith River Land & Cattle Co., Grantor, owner of that property described in Exhibit "A", conveys to Mike Mast, Jared Mast and Rachel Mast, individually and doing Business as Smith River Land & Cattle Co., Grantee's, their successor's, heir's or assigns, owner's of those properties described in Exhibit "B", a perpetual 30 foot easement for ingress, egress and utilities 15 feet either side of the existing road across the Grantor property.

This easement shall be maintained by the Grantor's and the Grantee's and their successor's, heir's or assigns where the road is commonly used by both parties.

Maintenance of the roadway appears to be the responsibility of the applicant. Therefore, this criterion has been addressed.

Section 4.6.130(5) requires a stocking survey if property is larger than ten (10) acres. There are greater than 10 acres on the subject property; therefore, a stocking survey is required. Assessor's Office will be notified of this proposed development by the Planning Department.

All The criteria found in SECTION 4.6.130 have been addressed.

- *Section 4.6.140 Development and Siting Criteria:*

This section contains all of the development standards for uses (unless otherwise accepted out by a use review) and all of the siting standards for development.

1. *Minimum Lot Size for the creation of new parcels shall be at least 80 acres. Minimum lot size will not affect approval for development unless specified in use. The size of the parcel will not prohibit development as long as it was lawfully created or otherwise required to be a certain size in order to qualify for a use.*
2. *Setbacks: All buildings or structures with the exception of fences shall be set back a minimum of thirty-five (35) feet from any road right-of-way centerline, or five (5) feet from any right-of-way line, whichever is greater.*
3. *Fences, Hedges and Walls: No requirement, except for vision clearance provisions in Section 7.1.525.*
4. *Off-Street Parking and Loading: See Chapter VII.*

5. *Minimizing Impacts: In order to minimize the impact of dwellings in forest lands, all applicants requesting a single family dwelling shall acknowledge and file in the deed record of Coos County, a Forest Management Covenant. The Forest Management Covenant shall be filed prior to any final County approval for a single family dwelling.*
6. *Riparian Vegetation Protection. Riparian vegetation within 50 feet of a wetland, stream, lake or river, as identified on the Coastal Shoreland and Fish and Wildlife habitat inventory maps shall be maintained except that:*
   a. *Trees certified as posing an erosion or safety hazard. Property owner is responsible for ensuring compliance with all local, state and federal agencies for the removal of the tree.*
   b. *Riparian vegetation may be removed to provide direct access for a water-dependent use if it is a listed permitted within the zoning district;*
   c. *Riparian vegetation may be removed in order to allow establishment of authorized structural shoreline stabilization measures;*
   d. *Riparian vegetation may be removed to facilitate stream or stream bank clearance projects under a port district, ODFW, BLM, Soil & Water Conservation District, or USFS stream enhancement plan;*
   e. *Riparian vegetation may be removed in order to site or properly maintain public utilities and road right-of-ways;*
   f. *Riparian vegetation may be removed in conjunction with existing agricultural operations (e.g., to site or maintain irrigation pumps, to limit encroaching brush, to allow harvesting farm crops customarily grown within riparian corridors, etc.) provided that such vegetation removal does not encroach further into the vegetation buffer except as needed to provide an access to the water to site or maintain irrigation pumps; or*
   g. *The 50 foot riparian vegetation setback shall not apply in any instance where an existing structure was lawfully established and an addition or alteration to said structure is to be sited not closer to the estuarine wetland, stream, lake, or river than the existing structure and said addition or alteration represents not more than 100% of the size of the existing structure's "footprint".*
   h. *Riparian removal within the Coastal Shoreland Boundary will require a conditional use. See Special Development Considerations Coastal Shoreland Boundary.*
   i. *The 50' measurement shall be taken from the closest point of the ordinary high water mark to the structure using a right angle from the ordinary high water mark.*
7. *All new dwellings and permanent structures and replacement dwellings and structures shall, at a minimum, meet the following standards. The dwelling shall be located within a fire protection district or shall be provided with residential fire protection by contract. If the dwelling is not within a fire protection district, the applicant shall provide evidence that the applicant has asked to be included within the nearest such district. If the applicant is outside the rural fire protection district, the applicant shall provide evidence that they have contacted the Coos Forest Protective Association of the proposed development.*
8. *The Planning Director may authorize alternative forms of fire protection when it is determined that these standards are impractical that shall comply with the following:*
   a. *The means selected may include a fire sprinkling system, onsite equipment and water storage or other methods that are reasonable, given the site conditions;*
   b. *If a water supply is required for fire protection, it shall be a swimming pool, pond, lake, or similar body of water that at all times contains at least 4,000 gallons or a stream that has a continuous year round flow of at least one cubic foot per second;*
   c. *The applicant shall provide verification from the Water Resources Department that any permits or registrations required for water diversion or storage have been obtained or that permits or registrations are not required for the use; and*

d. Road access shall be provided to within 15 feet of the water's edge for firefighting pumping units. The road access shall accommodate the turnaround of firefighting equipment during fire season. Permanent signs shall be posted along the access route to indicate the location of the emergency water source.

9. Fire Siting Standards for New Dwellings:

a. The property owner shall provide and maintain a water supply of at least 500 gallons with an operating water pressure of at least 50 PSI and sufficient ¾ inch garden hose to reach the perimeter of the primary fuel-free building setback.

b. If another water supply (such as a swimming pool, pond, stream, or lake) is nearby, available, and suitable for fire protection, then road access to within 15 feet of the water's edge shall be provided for pumping units. The road access shall accommodate the turnaround of firefighting equipment during the fire season. Permanent signs shall be posted along the access route to indicate the location of the emergency water source.

10. Firebreak:

a. This firebreak will be a primary safety zone around all structures. Vegetation within this primary safety zone may include mowed grasses, low shrubs (less than ground floor window height), and trees that are spaced with more than 15 feet between the crowns and pruned to remove dead and low (less than 8 feet from the ground) branches. Accumulated needles, limbs and other dead vegetation should be removed from beneath trees.

b. Sufficient garden hose to reach the perimeter of the primary safety zone shall be available at all times.

c. The owners of the dwelling shall maintain a primary fuel-free break area surrounding all structures and clear and maintain a secondary fuel-free break on land surrounding all structures and clear and maintain a secondary fuel-free break area on land surrounding the dwelling that is owned or controlled by the owner in accordance with the provisions in "Recommended Fire Siting Standards for Dwellings and Structures and Fire Safety Design Standards for Roads" dated March 1, 1991, and published by Oregon Department of Forestry and shall demonstrate compliance with Table 1.

Table 1 – Minimum Primary Safety Zone

Slope	*Feet of Primary Safety Zone*	*Feet of Additional Primary Safety Zone Down Slope*
0%	*30*	*0*
10%	*30*	*50*
20%	*30*	*75*
25%	*30*	*100*
40%	*30*	*150*

11. All new and replacement structures shall use non-combustible or fire resistant roofing materials, as may be approved by the certified official responsible for the building permit.

12. If a water supply exceeding 4,000 gallons is suitable and available (within 100 feet of the driveway or road) for fire suppression, then road access and turning space shall be provided for fire protection pumping units to the source during fire season. This includes water supplies such as a swimming pool, tank or natural water supply (e.g. pond).

13. The dwelling shall not be sited on a slope of greater than 40 percent.

14. If the dwelling has a chimney or chimneys, each chimney shall have a spark arrester.

15. The dwelling shall be located upon a parcel within a fire protection district or shall be provided with residential fire protection by contract. If the dwelling is not within a fire protection district, the applicant shall provide evidence that the applicant has asked to be included within the nearest such district.

16. Except for private roads and bridges accessing only commercial forest uses, public roads, bridges, private roads and driveways shall be constructed so as to provide adequate access for firefighting equipment.
17. Access to new dwellings shall meet road and driveway standards in Chapter VII.

FINDING: Section 4.6.140(1) is only applicable in the creation of new parcels and that is not part of this request; therefore, it is not applicable.

Section 4.6.140(2) requires a setback from any road right-of-way. The provided plot plan illustrated that all setbacks for the proposed dwelling will be more than satisfied.

Section 4.6.140(3) applies to fences, hedges and walls. The proposal does not include any fences, hedges, or wall; therefore, this criterion does not apply.

Sections 4.6.140(4) and 4.6.140(17) require parking, loading, access and road standards be addressed. A Driveway/Access/Parking Verification Permit application must be signed off prior to issuance of a Zoning Compliance Letter. This will be made a condition of approval.

Section 4.6.140(5) requires that the property owners sign and record in the deed of records for the county a document binding the landowner, and the landowner's successors in interest, prohibiting them from pursuing claim for relief or cause of action alleging injury from farming or forest practices for which no action or claim is allowed under ORS 30.936 or 30.937. These forms shall be signed in front of a notary and recorded. This criterion was addressed above and will be made a condition of approval.

Section 4.6.140(6) requires a setback from any wetland. There are no known wetlands on this parcel. Therefore, this criterion is not applicable.

Section 4.6.140(7) and Section 4.6.140(15) requires the dwelling shall be located within a fire protection district or shall be provided with residential fire protection by contract. The dwelling will be located within the Lakeside Fire Rural Fire Protection District; therefore, this criterion has been satisfied.

Section 4.6.140(8) The applicant shall meet the minimum fire protection standards. However, if these standards are impractical the applicants shall comply with alternative forms of fire protection. The applicants did not request to have alternative forms of fire protection considered. Therefore, this criterion is not applicable.

Section 4.6.140(9) requires water supply of at least 500 gallons with pressure of at least 50 PSI and sufficient ¾ inch hose. The applicants state that they will provide and maintain a water supply of at least 500 gallons with operating water pressure of at least 50 PSI and sufficient ¾ inch garden hose to reach the perimeter of the primary fuel-free building set back. The property owner shall provide evidence of this prior to issuance of a Zoning Compliance Letter, this will be made a condition of approval. Therefore, this requirement has been addressed.

Section 4.6.140(10) determines the primary and secondary fire safety setbacks. The applicants states that the dwelling site is relatively flat. Staff utilized the Oregon DOGAMI LiDAR Viewer to get approximate slope of the site area including the fuel-free break zone. The LiDAR viewer estimated the slope as 12.93 degrees, which is 22.96% in slope. The applicants will need to maintain 105 feet of primary fuel-free break to the standards identified above. The applicants will also need to maintain a 100 feet secondary fuel-free break. The applicants are only responsible to maintain

the fuel-free breaks on land they own or control. These criteria will be made a condition of approval.

Section 4.6.140(11) requires the roofing material to be non-combustible or fire resistance. The applicant stated that the roofing materials that will be used will be made of non-combustible or fire resistant roofing materials. As a condition of approval, the property owner shall be required to submit evidence certifying the roofing materials meet this requirement. Therefore, this criterion has been addressed.

Section 4.6.140(12) requires a water supply exceeding 4000 gallons. The applicant stated there are no water source over 4,000 gallons on the subject property. Therefore, this criterion has been addressed.

Section 4.6.140(13) requires that a dwelling not be located on a slope of greater than 40%. The plot plan and information from the application shows the proposed dwelling and other structures will not be sited on a slope greater than 40%. Therefore, this criterion has been addressed.

Section 4.6.140(14) states that if a dwelling has a chimney it shall have a spark arrester. As a condition of approval, the property owner shall supply information certifying that all chimneys have a spark arrester by providing a copy of the building plans. Therefore, this criterion has been addressed.

Section 4.6.140(16) requires adequate access for firefighting equipment. At the time of road inspection, prior to receiving a zoning compliance letter, the Roadmaster or his designee will confirm that the standards have been met in order that emergency equipment can be accessed properly. Therefore, this criterion has been addressed.

Therefore, all criteria in Section 4.6.140 Development and Siting Criteria has been addressed.

D. SPECIAL DEVELOPMENT CONSIDERATIONS AND OVERLAYS

- *SECTION 4.11.125 Special Development Considerations: The considerations are map overlays that show areas of concern such as hazards or protected sites. Each development consideration may further restrict a use. Development considerations play a very important role in determining where development should be allowed In the Balance of County zoning. The adopted plan maps and overlay maps have to be examined in order to determine how the inventory applies to the specific site.*

- *4.11.128 Historical, Cultural and Archaeological Resources, Natural Areas and Wilderness (Balance of County Policy 5.7)*

The Historical/Archeological maps have inventoried the following:

- *Historical;*
- *Area of Archaeological Concern;*
- *Botanical; and*
- *Geological Resources.*

Purpose Statement:

Coos County shall manage its historical, cultural and archaeological areas, sites, structures and objects so as to preserve their original resource value. This strategy recognizes that preservation of significant historical, cultural and archaeological resources is necessary to sustain the County's cultural heritage.

b. Areas of Archaeological Concern: Coos County shall continue to refrain from wide-spread dissemination of site-specific inventory information concerning identified archaeological sites. Rather, Coos County shall manage development in these areas so as to preserve their value as archaeological resources.

i. This strategy shall be implemented by requiring development proposals to be accompanied by documentation that the proposed project would not adversely impact the historical and archaeological values of the project's site. "Sufficient documentation" shall be a letter from a qualified archaeologist/historian and/or a duly authorized representative of a local Indian tribe(s).

ii. Properties which have been determined to have an "archaeological site" location must comply with the following steps prior to issuance of a "Zoning compliance Letter" for building and/or septic permits.

1) The County Planning Department shall make initial contact with the Tribe(s) for determination of an archaeological site(s). The following information shall be provided by the property owner/agent:

a) Plot plan showing exact location of excavation, clearing, and development, and where the access to the property is located;

b) Township, range, section and tax lot(s) numbers; and

c) Specific directions to the property.

2) The Planning Department will forward the above information including a request for response to the appropriate tribe(s).

3) The Tribe(s) will review the proposal and respond in writing within 30 days to the Planning Department with a copy to the property owner/agent.

4) It is the responsibility of the property owner/agent to contact the Planning Department in order to proceed in obtaining a "Zoning Compliance Letter" (ZCL) or to obtain further instruction on other issues pertaining to their request.

iii. In cases where adverse impacts have been identified, then development shall only proceed if appropriate measures are taken to preserve the archaeological value of the site. "Appropriate measures" are deemed to be those, which do not compromise the integrity of remains, such as:

1) Paving over the sites;

2) Incorporating cluster-type housing design to avoid the sensitive areas; or

3) Contracting with a qualified archaeologist to remove and re-inter the cultural remains or burial(s) at the developer's expense. If an archaeological site is encountered in the process of development, which previously had been unknown to exist, then, these three appropriate

measures shall still apply. Land development activities found to violate the intent of this strategy shall be subject to penalties prescribed by ORS 97.745 (Source: Coos Bay Plan).

iv. This strategy is based on the recognition that preservation of such archaeologically sensitive areas is not only a community's social responsibility but is also a legal responsibility pursuant to Goal #5 and ORS 97.745. It also recognizes that historical and archaeological sites are non-renewable, cultural resources (Source: Coos Bay Plan).

Section 4.11.128(b): An official notice was required to be sent to the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians. However, an advisory comment was received from the Coquille Tribe. The comments are attached. Therefore, this criterion is met.

- *4.11.132 Natural Hazards (Balance of County Policy 5.11):*

Coos County has inventoried the following hazards:

- *Flood Hazard*
  - *Riverine flooding*
  - *Coastal flooding*
- *Landslides and Earthquakes*
  - *Landslide Susceptibility*
  - *Liquefaction potential*
- *Tsunamis*
- *Erosion*
  - *Riverine streambank erosion*
  - *Coastal*
    - *Shoreline and headlands*
    - *Wind*
- *Wildfire*

Purpose Statements:
Coos County shall regulate development in known areas potentially subject to natural disasters and hazards, so as to minimize possible risks to life and property. Coos County considers natural disasters and hazards to include river and coastal flooding, landslides, liquefaction potential due to earthquakes, fault lines, tsunamis, riverbank erosion, coastal erosion along shorelines and headlands, coastal erosion due to wind, and wildfires, including those areas affected by gorse.

This strategy shall be implemented by enacting special protective measures through zoning and other implementing devices, designed to minimize risks to life and property associated with new development and substantial improvements. The determination of whether a property is located in one of the above referenced potentially hazardous areas shall be made by the reviewing body (Planning Director, Planning Commission, Board of Commissioners, or any designee based upon adopted inventory mapping). A specific site may not include the characteristics for which it is mapped. In these circumstances staff shall apply § 4.11.132.ii.2m.

b. Landslides and Earthquakes
Landslides: Coos County shall promote protection to life and property in areas potentially subject to landslides. New development or substantial improvements proposed in such areas shall be subject to geologic assessment review in accordance with section 4.11.150. Potential landslide areas subject to geologic assessment review shall include all lands partially or completely within "very high" landslide

susceptibility areas as mapped in DOGAMI Open File Report O-16-02, "Landslide susceptibility map of Oregon."

Earthquakes: Coos County shall promote protection of life and property in areas potentially subject to earthquake hazards. New development or substantial improvements in mapped areas identified as potentially subject to earthquake induced liquefaction shall be subject to a geologic assessment review as set out in this section. Such areas shall include lands subject to "very high" and "high" liquefaction identified in DOGAMI Open File Report O-13-06, "Ground motion, ground deformation, tsunami inundation, co-seismic subsidence, and damage potential maps for the 2012 Oregon Resilience Plan for Cascadia Subduction Zone Earthquakes."

Coos County shall continue to support Oregon State Building Codes to enforce any structural requirements related to landslide and earthquakes. Staff will notify Oregon State Building Codes by providing a copy of the geologic assessment report with the Zoning Compliance Letter.

FINDING: The property is located within an inventory hazard area for Landslides and requires an additional review to ensure it meets the criteria of Section 4.11.150.

4.11.150 Geological Hazards special development Review Standards

Applications for a geologic hazard review may be made concurrently with any other type of application required for the proposed use or activity. A review of the property must be conducted prior to any ground disturbance. All geologic hazard assessment reports shall include a description of the qualification of the licensed professional or professionals that prepared the assessment.

The applicant shall present a geologic hazard assessment report (geologic assessment) prepared by a qualified licensed professional competent in the practice of geosciences, at the applicant's expense, that identifies site specific geologic hazards, associated levels of risk, and the suitability of the site for the use and/or activity in view of such hazards. The geologic assessment shall include the required elements of this section and one of the following:

a. A statement that the use and/or activity can be accomplished without measures to mitigate or control the risk of geologic hazard to the subject property resulting from the proposed use and/or activity;

b. A statement that there is an elevated risk posed to the subject property by geologic hazards that requires mitigation measures in order for the use and/or activity to be undertaken safely sited on the property; or

c. A certification that there are no high or very high geological hazards present on site. If such is certified by a licensed profession then an application is not required. Coos County is not liable for any type of certification that a geological hazard is not present on site.

FINDING: The property has areas that are subject to very high landslide potential. The location of this hazards area appears to be where the proposed development will occur; therefore, requiring that this hazard be addressed. The applicant did provide a geological assessment addressing the fact that the property had potential for landslides prepared by a qualified licensed professional competent in the practice of geosciences. The report was written by Eric Oberbeck with Cascadia Geoservers, Inc. Mr. Oberbeck is a Oregon Certified Engineering Geologist, and stamped the report with his CEG stamp numbered 1332.

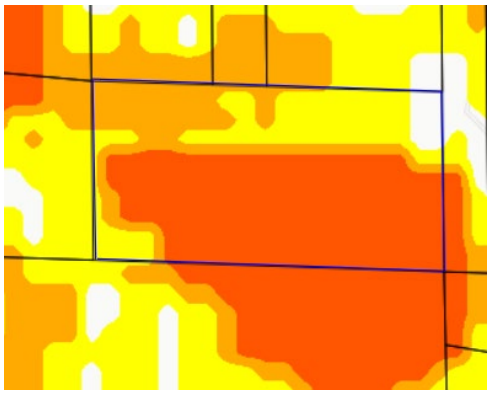
Section 4.11.150.b will need to be addressed, since there is an elevated risk posed to the subject property by geologic hazards that requires mitigation measures in order for the use and/or activity to be undertaken safely sited on the property.

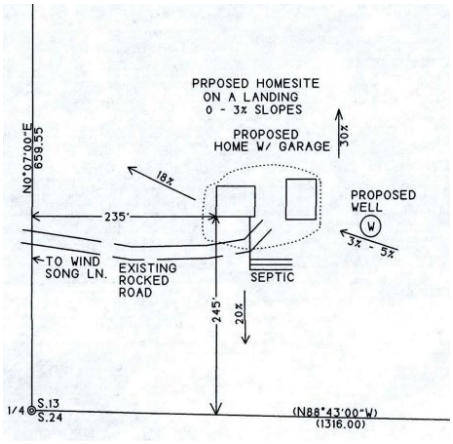
The geologic report noted the following conclusions; ***"Tax Lot 207 is located on a relatively wide and level ridge that separates two drainages. Based on our LIDAR review, there are landforms which we interpret to be associated with geologic hazards, including landslides, on areas adjacent to the two sites".***

As discussed, both Tax Lots 201 and 207 are within areas which have been identified by the state as being landslide complexes. As such, portions of both tax lots are unsuitable to develop. The areas which were evaluated as part of this study, which are located on ridges above the slopes, were determined to be stable

Based on our surface and subsurface investigation, it is our opinion that the proposed building sites on Tax Lots 201 and 207 are suitable to site a single-family residence, provided they are developed in accordance with our recommendations and sited in the locations that were evaluated by this study".

Staff finds that based on the recommendation of Eric Oberbeck, RG/CEG #1332, that the proposed development site is suitable for a single-family dwelling, as along as the recommendations of Cascadia Geoservices report #21121 are followed. Therefore, this criterion has been addressed.





Maps not to scale

FLOATING ZONE: AIRPORT SURFACES

DESIGNATION: /AS

Bandon, Lakeside and Powers Airports

SECTION 4.11.300 Purpose:

The purpose of the Airport Surface Floating zone is to protect public health, safety and welfare. It is recognized that obstructions to aviation have potential for endangering the lives and property of users of selected airports, and property of occupancy of land in the airport's vicinity. An obstruction may affect future instrument approach minimums and obstructions may reduce the area available for the landing, take-off and maneuvering of aircraft, thus tending to destroy or impair the utility of the airport and the public investment therein.

FINDING: Notice was sent to the Oregon Department of Aviation (ODA). Coos County relies on ODA for expert advice for this area. Seth Thompson, ODA aviation planner, commented that ODA had no comment on this application. Therefore, the criterion has been addressed.

IV. DECISION

In conclusion Staff finds that the applicant has address most of the relevant criteria and the ones that have not been address or cannot be completed until after the approval is obtained have been made conditions of approval. Therefore, the proposed Template Dwelling meets the requirements of the Coos County Zoning and Land Development Ordinance, with conditions listed in Exhibit "A" of this report.

V. EXPIRATION:

Permits approved under ORS 215.416 for a proposed residential development on agricultural or forest land outside of an urban growth boundary under ORS 215.010 to 215.293 or 215.317 to 215.438 or under county legislation or regulation, the permit is valid for four years.

A. *Extensions for Residential Development as provided for under ORS 215.213 (3) and (4), 215.284, 215.317, 215.705 (1) to (3), 215.720, 215.740, 215.750 and 215.755 (1) and (3) shall be granted as follows:*

i. *First Extension - An extension of a permit for "residential development" as described in Subsection (1) above is valid for two (2) years.*

1. *The applicant shall submit an application requesting an extension to the County Planning Department prior to expiration of the final decision. See Section 5.0.250 for time lines for final decisions. Untimely extension requests will not be processed.*
2. *Upon the Planning Department receiving the applicable application and fee, staff shall verify that the application was received within the deadline and if so issue an extension.*
3. *An extension of a permit as described in this section is not a land use decision as defined in ORS 197.015.*

ii. *Additional Extensions - A county may approve no more than five additional one-year extensions of a permit if:*

1. *The applicant submits an application requesting the additional extension prior to the expiration of a previous extension;*
2. *The applicable residential development statute has not been amended following the approval of the permit; and*
3. *An applicable rule or land use regulation has not been amended following the issuance of the permit, unless allowed by the county, which may require that the applicant comply with the amended rule or land use regulation.*

An extension of a permit as described in this section is not a land use decision as defined in ORS 197.015.

This conditional use is for a residential development within a resource zone and is valid for four years for the date of final approval Tuesday, March 03, 2026.

VII. NOTICE REQUIREMENTS:

A notice of decision will be provided to property owners within 750 feet of the subject properties and the following agencies, special districts, or parties: Lakeside Rural Fire Protection District

A Notice of Decision and Staff Report will be provided to the following:

Applicants/Owners, Department of Land Conservation and Development, Coos County Assessor's Office and the Planning Commission and Board of Commissioners.

Adjacent property owners will receive a Notice of Decision and maps, but all other attachments can be found by contacting the Planning Department or visiting the website. If not found on the website the public may contact the department to view the official record.

EXHIBIT "D"
COMMENTS

Reply Reply All Forward

Thu 2/10/2022 1:31 PM

CT

THPO <THPO@coquilletribe.org>

RE: Emailing: ACU-21-063 request for comments - Tribes

To Planning Department

This Message originated outside your organization.

Good afternoon,

Coquille THPO will defer cultural resources comments to the other tribes indicated by Oregon LCIS for this project (ACU-21-063).

Please keep us informed of significant archaeological findings, which may include ancestral human remains or funerary items. In the event that ancestral remains are observed or disturbed, follow the State Guidelines. In the event that proposed mitigation measures may be developed for other cultural resources in the Project area, we would like to have the opportunity to comment.

Masi (thank you),
Todd

Todd Martin (he/him/his)
Tribal Historic Preservation Specialist
Coquille Indian Tribe
495 Miluk Drive
Coos Bay, Oregon 97420

m: 541-217-5721
o: 541-756-0904 x1209
f: 541-888-2418
toddmartin@coquilletribe.org
THPO@coquilletribe.org

EXHIBIT "E"
APPLICATION

Coos County Land Use Permit Application

SUBMIT TO COOS COUNTY PLANNING DEPT. AT 60 E. SECOND STREET OR MAIL TO: COOS COUNTY PLANNING 250 N. BAXTER, COQUILLE OR 97423. EMAIL PLANNING@CO.COOS.OR.US *PHONE: 541-396-7770*

FILE NUMBER:

Date Received: 10/18/21 *Receipt #:* 228450 *Received by:* MB

This application shall be filled out electronically. If you need assistance please contact staff.

If the fee is not included the application will not be processed.
(If payment is received on line a file number is required prior to submittal)

LAND INFORMATION

A. Land Owner(s) Smith River Land & Cattle Co.

Mailing address: 19678 Lower Smith River Road, Reedsport, OR 97467

Phone: 541-271-4940 Email:

Township:	Range:	Section:	¼ Section:	1/16 Section:	Tax lots:
23S	13W	13	Select	Select	207
Select	Select	Select	Select	Select	

Tax Account Number(s): 99918693 Zone: Select Zone Forest Mixed Use (FMU)

Tax Account Number(s) Please Select

B. Applicant(s) Mike Mast

Mailing address: 19678 Lower Smith River Road, Reedsport, OR 97467

Phone: 541-271-4940

C. Consultant or Agent: Troy Rambo

Mailing Address P.O. Box 809, North Bend, OR 97459

Phone #: 541-751-8900 Email: mandrllc@frontier.com

Type of Application Requested

- ☐ Comp Plan Amendment
- ☐ Text Amendment
- ☐ Map - Rezone
- ☑ Administrative Conditional Use Review - ACU
- ☐ Hearings Body Conditional Use Review - HBCU
- ☐ Variance - V
- ☐ Land Division - P, SUB or PUD
- ☐ Family/Medical Hardship Dwelling
- ☐ Home Occupation/Cottage Industry

Special Districts and Services

Water Service Type: On-Site (Well or Spring) Sewage Disposal Type: On-Site Septic

School District: North Bend Fire District: Lakeside RFPD

Please include the supplement application with request. If you need assistance with the application or supplemental application please contact staff. Staff is not able to provide legal advice. If you need help with findings please contact a land use attorney or contultant.

Any property information may be obtained from a tax statement or can be found on the County Assessor's webpage at the following links: Map Information Or Account Information

D. ATTACHED WRITTEN STATEMENT. With all land use applications, the "burden of proof" is on the applicant. It is important that you provide information that clearly describes the nature of the request and indicates how the proposal complies with all of the applicable criteria within the Coos County Zoning and Land Development Ordinance (CCZLDO). You must address each of the Ordinance criteria on a point-by-point basis in order for this application to be deemed complete. A planner will explain which sections of the Ordinance pertain to your specific request. The information described below is required at the time you submit your application. The processing of your application does not begin until the application is determined to be complete. An incomplete application will postpone the decision, or may result in denial of the request. Please mark the items below to ensure your submittal is complete.

Application Check List: Please make off all steps as you complete them.

I. ☐ A written statement of intent, attached to this application, with necessary supporting evidence which fully and factually describes the following:
   1. ☐ A complete explanation of how the request complies with the applicable provisions and criteria in the Zoning Ordinance. A planner will explain which sections of the Ordinance pertain to your specific request. You must address each of the Ordinance criteria on a point-by-point basis in order for this application to be deemed complete.
   2. ☐ A description of the property in question, including, but not limited to the following: size, vegetation, crops grown, access, existing buildings, topography, etc.
   3. ☐ A complete description of the request, including any new structures proposed.
   4. ☐ If applicable, documentation from sewer and water district showing availability for connection.

II. ☐ A plot plan (map) of the property. Please indicate the following on your plot plan:
   1. ☐ Location of all existing and proposed buildings and structures
   2. ☐ Existing County Road, public right-of-way or other means of legal access
   3. ☐ Location of any existing septic systems and designated repair areas
   4. ☐ Limits of 100-year floodplain elevation (if applicable)
   5. ☐ Vegetation on the property
   6. ☐ Location of any outstanding physical features
   7. ☐ Location and description (paved, gravel, etc.) of vehicular access to the dwelling location

III. ☐ A copy of the current deed, including the legal description, of the subject property. Copies may be obtained at the Coos County Clerk's Office.

I certify that this application and its related documents are accurate to the best of my knowledge. I am aware that there is an appeal period following the date of the Planning Director's decision on this land use action. I understand that the signature on this application authorizes representatives of the Coos County Planning Department to enter upon the subject property to gather information pertinent to this request. If the application is signed by an agent, the owner's written authorization must be attached.

If this application is refereed directly to a hearings officer or hearings body I understand that I am obligated to pay the additional fees incurred as part of the conditions of approval. I understand that I/we are not acting on the county's behalf and any fee that is a result of complying with any conditions of approval is the applicants/property owner responsibility. I understand that conditions of approval are required to be complied with at all time and an violation of such conditions may result in a revocation of this permit. Signatures required below for application processing.

[signature] 10-14-21

ACCESS INFORMATION

The Coos County Road Department will be reviewing your proposal for safe access, driveway, road, and parking standards. There is a fee for this service. If you have questions about these services please contact the Road Department at 541-396-7660.

Property Address: O Wind Song Lane

Type of Access: Private Easement - Provide Easement Name of Access: Wind Song Lane

Is this property in the Urban Growth Boundary? No
Is a new road created as part of this request? No

Required parking spaces are based on the use of the property. If this is for a residential use two spaces are required. Any other use will require a separate parking plan submitted that is required to have the following items:

- Current utilities and proposed utilities;
- Roadmaster may require drawings and specs from the Oregon Standards Specification Manual (OSSC) (current edition).
- The location and design of bicycle and pedestrian facilities shall be indicated on the site plan if this is a parking plan;
- Location of existing and proposed access point(s) on both sides of the road where applicable;
- Pedestrian access and circulation will be required if applicable. Internal pedestrian circulation shall be provided in new commercial, office, and multi-family residential developments through the clustering of buildings, construction of walkways, landscaping, accessways, or similar techniques;
- All plans (industrial and commercial) shall clearly show how the internal pedestrian and bicycle facilities of the site connect with external existing or planned facilities or systems;
- Distances to neighboring constructed access points, median openings (where applicable), traffic signals (where applicable), intersections, and other transportation features on both sides of the property;
- Number and direction of lanes to be constructed on the road plus striping plans;
- All planned transportation features (such as sidewalks, bikeways, auxiliary lanes, signals, etc.); and
- Parking and internal circulation plans including walkways and bikeways, in UGB's and UUC's.

Additional requirements that may apply depending on size of proposed development.

a. Traffic Study completed by a registered traffic engineer.
b. Access Analysis completed by a registered traffic engineer
c. Sight Distance Certification from a registered traffic engineer.

Regulations regarding roads, driveways, access and parking standards can be found in Coos County Zoning and Land Development Ordinance (CCZLDO) Article 7.

By signing the application I am authorizing Coos County Roadmaster or designee to enter the property to determine compliance with Access, Parking, driveway and Road Standards. Inspections should be made by calling the Road Department at 541-396-7660

Coos County Road Department Use Only

Roadmaster or designee: _____

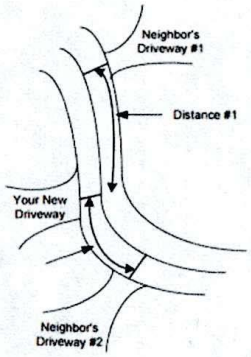
☐ Driveway ☐ Parking ☐ Access ☐ Bonded Date: Receipt #_____

File Number: DR-21-

ADDRESS APPLICATION INFORMATION FILE NUMBER: AD-

ADDRESS OF DRIVEWAY #1 CLOSEST TO YOUR NEW DRIVEWAY: _____

DISTANCE FROM DRIVEWAY #1 TO YOUR NEW DRIVEWAY: _____
Is this driveway on the same side of the road as your Driveway: Select



ADDRESS OF DRIVEWAY #2 CLOSEST TO YOUR NEW DRIVEWAY: _____

DISTANCE FROM DRIVEWAY #2 TO YOUR NEW DRIVEWAY: _____
Is this driveway on the same side of the road as your Driveway: Select

The distance information is important from your new driveway to the closest driveways on either side of you (doesn't matter which side of the road) and what the addresses are to those two driveways. This information is important to include in the formula used to calculate the correct address.

Staff from the County Road Department will place the stake and once the driveway stake has been placed, it must not be moved. If your stake is removed or damaged you may purchase replacements.

Additional Notes or directions:

☐ This application is not required.

October 7, 2021

Coos County Planning Dept.

Subject Properties - T.L. 207 - 23S 13W 13

Applicant/Owner:

Smith River Land & Cattle Co.
19678 Lower Smith River Road
Reedsport, OR 97467

RE: Forest Dwelling (Template Dwelling) criteria and applicant's findings

Coos County Zoning and Land Development Ordinance (CCZLDO)

SECTION 4.6.100 FOREST AND FOREST MIXED USE – USE TABLES Table 1 identifies the uses and activities in the Forest (F) and Forest/Mixed Use (FMU) zone. The tables describe the use, type of review, applicable review standards. Development shall also comply with Section 4.6.140 Development and Siting Standards. All dwellings and structures are subject to the siting standards found in Section 4.6.130. Exceptions to minimum lot and parcel sizes for the purpose of land division may apply as set out in Section 4.6.145 Land Division for Open Space and Special Assessment, and Section 4.6.145 Exceptions to Minimum Parcel Size. Properties that are located in a Special Development Consideration and/or overlays shall comply with the applicable review process identified by that Special Development Consideration and/or overlay located in Article 4.11.

If a use specifically states Forest Mixed Use only it is not permitted in the Forest Zone. If land is in a zone that allows both farm and forest uses, a dwelling may be sited based on the predominate use of the tract on January 1, 1993.

SECTION 4.6.110 (OAR 660-006-0025) Uses Authorized in Forest Zones (1) Goal 4 requires that forest land be conserved. Forest lands are conserved by adopting and applying comprehensive plan provisions and zoning regulations consistent with the goals and this rule. In addition to forest practices and operations and uses auxiliary to forest practices, as set forth in ORS 527.722, the Commission has determined that five general types of uses, as set forth in the goal, may be allowed in the forest environment, subject to the standards in the goal and in this rule. These general types of uses are: (a) Uses related to and in support of forest operations; (b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment; (c) Locationally dependent uses, such as communication towers, mineral and aggregate resources, etc.; (d) Dwellings authorized by ORS 215.705 to 215.755; and (e) Other dwellings under prescribed conditions.

Use		TR	Subject to
Dwellings authorized by ORS 215.705 to 215.755; and (e) Other dwellings under prescribed conditions.			
63.	Template Dwelling (Alternative forestland dwellings ORS 215.750)	ACU	(9)(B)(II), (9)(C)

(9)(B) DWELLING ON FOREST AND FOREST MIXED USE ZONES -

(II) Template Dwelling - 215.750 Alternative forestland dwellings; criteria.

(1) In western Oregon, a governing body of a county or its designate may allow the establishment of a single-family dwelling on a lot or parcel located within a forest zone if the lot or parcel is predominantly composed of soils that are:

(a) Capable of producing 0 to 49 cubic feet per acre per year of wood fiber if:
(A) All or part of at least three other lots or parcels that existed on January 1, 1993, are within a 160-acre square centered on the center of the subject tract; and
(B) At least three dwellings existed on January 1, 1993, on the other lots or parcels continue to exist on the other lots or parcels;

(b) Capable of producing 50 to 85 cubic feet per acre per year of wood fiber if:
(A) All or part of at least seven other lots or parcels that existed on January 1, 1993, are within a 160-acre square centered on the center of the subject tract; and
(B) At least three dwellings existed on January 1, 1993, on the other lots or parcels; or

(c) Capable of producing more than 85 cubic feet per acre per year of wood fiber if:
(A) All or part of at least 11 other lots or parcels that existed on January 1, 1993, are within a 160-acre square centered on the center of the subject tract; and
(B) At least three dwellings existed on January 1, 1993, on the other lots or parcels.

(3) Lots or parcels within urban growth boundaries shall not be used to satisfy the eligibility requirements under subsection (1) or (2) of this section.

(4) A proposed dwelling under this section is not allowed:

(a) If it is prohibited by or will not comply with the requirements of an acknowledged comprehensive plan and acknowledged land use regulations or other provisions of law.
(b) Unless it complies with the requirements of ORS 215.730.
(c) Unless no dwellings are allowed on other lots or parcels that make up the tract and deed restrictions established under ORS 215.740 (3) for the other lots or parcels that make up the tract are met.
(d) If the tract on which the dwelling will be sited includes a dwelling.

(5) Except as described in subsection (6) of this section, if the tract under subsection (1) or (2) of this section abuts a road that existed on January 1, 1993, the measurement may be made by creating a 160-acre rectangle that is one mile long and one-fourth mile wide centered on the center of the subject tract and that is to the maximum extent possible, aligned with the road.

(6) (a) If a tract 60 acres or larger described under subsection (1) or (2) of this section abuts a road or perennial stream, the measurement shall be made in accordance with subsection (5) of this section. However, one of the three required dwellings shall be on the same side of the road or stream as the tract and:

(A) Be located within a 160-acre rectangle that is one mile long and one-fourth mile wide centered on the center of the subject tract and that is, to the maximum extent possible, aligned with the road or stream; or

(B) Be within one-quarter mile from the edge of the subject tract but not outside the length of the 160-acre rectangle, and on the same side of the road or stream as the tract.

(b) If a road crosses the tract on which the dwelling will be located, at least one of the three required dwellings shall be on the same side of the road as the proposed dwelling.

(7) Notwithstanding subsection (4)(a) of this section, if the acknowledged comprehensive plan and land use regulations of a county require that a dwelling be located in a 160-acre square or rectangle described in subsection (1), (2), (5) or (6) of this section, a dwelling is in the 160-acre square or rectangle if any part of the dwelling is in the 160-acre square or rectangle. [1993 c.792 §4(6),(7),(8); 1999 c.59 §58; 2005 c.289 §1]

Response to SECTION 4.6.110(9)(B)(II)

- **Based on the "Soil Survey of Coos County, Oregon", the property is capable of producing more than 85 cubic feet per acre per year of wood fiber and is required to meet Section 4.6.110(9)(B)(II)(1)(c).**
- **There are no parcels located within the Urban Growth Boundary.**
- **The subject property does not have a dwelling located and there are no deed or comprehensive plan restrictions that would prohibit siting a new dwelling as long as it complies with the Forest Template Dwelling criteria. The tract in this case is of tax lot 207 in Township 23S Range 13W Section 13 and consist of 20 acres.**
- **The template was configured based on the criteria. The template used is a 160-acre square. The centered on the center of the subject tract and meets or exceeds the required 11 units of land required and within those properties there are a minimum of three dwellings sited on or before January 1, 1993. There are of 12 parcels within the 160 acre square ranging from 0.45 acres to 160.00 acres of which are zoned F and RR-2. Three of these parcels have pre – 1993 dwellings. By allowing the siting of a dwelling on this site, the parcel would conform to what already exists within the area.**

9(C) ADDITIONAL CRITERIA FOR ALL DWELLINGS ALLOWED IN THE FOREST AND FOREST MIXED USE ZONES.

(1) A local government shall require as a condition of approval of a single-family dwelling allowed on lands zoned forestland:

(a) If the lot or parcel is more than 10 acres in western Oregon as defined in ORS 321.257, the property owner submits a stocking survey report to the assessor and the assessor verifies that the minimum stocking requirements adopted under ORS 527.610 to 527.770 have been met.

(b) the dwelling meets the following requirements:

(A) The dwelling has a fire retardant roof.

(B) The dwelling will not be sited on a slope of greater than 40 percent.

(C) Evidence is provided that the domestic water supply is from a source authorized by the Water Resources Department and not from a Class II stream as designated by the State Board of Forestry.

(D) The dwelling is located upon a parcel within a fire protection district or is provided with residential fire protection by contract.

(E) If the dwelling is not within a fire protection district, the applicant provides evidence that the applicant has asked to be included in the nearest such district.
(F) If the dwelling has a chimney or chimneys, each chimney has a spark arrester.
(G) The owner provides and maintains primary fuel-free break and secondary break areas on land surrounding the dwelling that is owned or controlled by the owner.

Response to SECTION 4.6.110(9)(C)(1)

- **The property is 20 acres therefore a stocking survey is required. The subject property was logged in 2015 and replanted and is well stocked.**
- **The dwelling will have a fire retardant roof.**
- **The property has some moderate slopes along the draw that runs through the property Lake. The proposed home site is a landing and is relatively flat.**
- **The property is located within the Lakeside Rural Fire Protection District.**
- **The water source for this property will be from well and not a Class II steam. As a condition of approval the applicant will receive a sign off from Oregon Water Resources to verify the water source. Under ORS 537.545 (b) & (d) - no permit is required.**
- **If the proposed dwelling has a chimney, a spark arrestor will be installed.**
- **The owner will provide and maintain a primary fuel-free fire break and secondary fire break areas of land surrounding the dwelling consistent with the requirements of Section 4.6.140.9 and 4.6.140.10.**

(2) (a) If a governing body determines that meeting the requirement of subsection (1)(b)(D) of this section would be impracticable, the governing body may provide an alternative means for protecting the dwelling from fire hazards. The means selected may include a fire sprinkling system, on-site equipment and water storage or other methods that are reasonable, given the site conditions. The applicant shall request and provide alternatives to be considered.

(b) If a water supply is required under this subsection, it shall be a swimming pool, pond, lake or similar body of water that at all times contains at least 4,000 gallons or a stream that has a minimum flow of at least one cubic foot per second. Road access shall be provided to within 15 feet of the water's edge for fire-fighting pumping units, and the road access shall accommodate a turnaround for fire-fighting equipment. [1993 c.792 §5; 1995 c.812 §6; 1997 c.293 §1; 2003 c.621 §103]

Response to SECTION 4.6.110(9)(C)(2)

- **The property is within a fire district and there is no need for alternative fire protections.**
- **There is no need for an additional water supply.**

SECTION 4.6.130 ADDITIONAL CRITERIA FOR ALL NEW AND REPLACEMENT DWELLINGS AND STRUCTURES IN FOREST

The following siting criteria or their equivalent shall apply to all new dwellings and structures in forest and agriculture/forest zones. These criteria are designed to make such uses compatible with forest operations and agriculture, to minimize wildfire hazards and risks and to conserve values found on forest lands. A governing body shall consider the criteria in this rule together with the requirements OAR 660-0060-0035 to identify the building site:

(1) Dwellings and structures shall be sited on the parcel so that:

(a) They have the least impact on nearby[1] or adjoining forest or agricultural lands;
(b) The siting ensures that adverse impacts on forest operations and accepted farming practices on the tract will be minimized;
(c) The amount of forest lands used to site access roads, service corridors, the dwelling and structures is minimized; and
(d) The risks associated with wildfire are minimized.

(2) Siting criteria satisfying section (1) of this section may include setbacks from adjoining properties, clustering near or among existing structures, siting close to existing roads and siting on that portion of the parcel least suited for growing trees.

(3) The applicant shall provide evidence to the governing body that the domestic water supply is from a source authorized in accordance with the Water Resources Department's administrative rules for the appropriation of ground water or surface water and not from a Class II stream as defined in the Forest Practices rules (OAR chapter 629). For purposes of this section, evidence of a domestic water supply means:

(a) Verification from a water purveyor that the use described in the application will be served by the purveyor under the purveyor's rights to appropriate water;
(b) A water use permit issued by the Water Resources Department for the use described in the application; or
(c) Verification from the Water Resources Department that a water use permit is not required for the use described in the application. If the proposed water supply is from a well and is exempt from permitting requirements under ORS 537.545, the applicant shall submit the well constructor's report to the county upon completion of the well.

(4) As a condition of approval, if road access to the dwelling is by a road owned and maintained by a private party or by the Oregon Department of Forestry, the U.S. Bureau of Land Management, or the U.S. Forest Service, then the applicant shall provide proof of a long-term road access use permit or agreement. The road use permit may require the applicant to agree to accept responsibility for road maintenance.

(5) Approval of a dwelling shall be subject to the following requirements:

(a) Approval of a dwelling requires the owner of the tract to plant a sufficient number of trees on the tract to demonstrate that the tract is reasonably expected to meet Department of Forestry stocking requirements at the time specified in department of Forestry administrative rules;
(b) The planning department shall notify the county assessor of the above condition at the time the dwelling is approved;
(c) If the lot or parcel is more than 10 acres in western Oregon or more than 30 acres in eastern Oregon, the property owner shall submit a stocking survey report to the county assessor and the assessor will verify that the minimum stocking requirements have been met by the time required by Department of Forestry rules;
(d) Upon notification by the assessor the Department of Forestry will determine whether the tract meets minimum stocking requirements of the Forest Practices Act. If that department determines that the tract does not meet those requirements, that department will notify the owner and the assessor that the land is not being managed as forest land. The assessor will then remove the forest land designation pursuant to ORS 321.359 and impose the additional tax; and
(e) The county governing body or its designate shall require as a condition of approval of a single-family dwelling under ORS 215.213, 215.383 or 215.284 or otherwise in a farm or forest zone, that the landowner for the dwelling sign and record in the deed records for the county a document

binding the landowner, and the landowner's successors in interest, prohibiting them from pursuing a claim for relief or cause of action alleging injury from farming or forest practices for which no action or claim is allowed under ORS 30.936 or 30.937.

Response to SECTION 4.6.130

- **The property owner is creating a new home site. The area is cleared and a road is already constructed. The site is an landing that was constructed in 2015 for logging. It is located in the western portion of the property on a flat ridgetop. Give all of these factors this seems to be area to site the dwelling ensuring the least impact to the nearby or adjoining forest or agricultural lands. Utilizing the existing cleared area ensures that adverse impacts on forest operations and accepted farming practices on the tract will be minimized. The applicant is using an existing site which requires little to no vegetation to be removed; therefore, the removal of forest lands used to site access roads, service corridors, the dwelling and structures has been minimized. The fuel free setbacks will ensure risks associated with wildfire are minimized.**
- **The applicant acknowledges and will provide evidence to the governing body that the domestic water supply is from a source authorized in accordance with the Water Resources Department's administrative rules prior to obtaining a zoning compliance letter to constructed the dwelling. Under ORS 537.545 (b) & (d) - no permit is required to take water for single or group purposes in the amount not to exceed 15,000 gallons per day.**
- **The access is a private driveway off of Wind Song Road. Wind Song Road is a privately maintained road.**
- **The subject property was logged in 2015 and will meet the minimum stocking requirements.**

SECTION 4.6.140 DEVELOPMENT AND SITING CRITERIA:

This section contain all of the development standards for uses (unless otherwise accepted out by a use review) and all of the siting standards for development.

1. Minimum Lot Size for the creation of new parcels shall be at least 80 acres. Minimum lot size will not affect approval for development unless specified in use. The size of the parcel will not prohibit development as long as it was lawfully created or otherwise required to be a certain size in order to qualify for a use.

2. Setbacks: All buildings or structures with the exception of fences shall be set back a minimum of thirty-five (35) feet from any road right-of-way centerline, or five (5) feet from any right-of-way line, whichever is greater.

3. Fences, Hedges and Walls: No requirement, except for vision clearance provisions in Section 7.1.525.

4. Off-Street Parking and Loading: See Chapter VII.

5. Minimizing Impacts: In order to minimize the impact of dwellings in forest lands, all applicants requesting a single family dwelling shall acknowledge and file in the deed record of Coos County, a Forest Management Covenant. The Forest Management Covenant shall be filed prior to any final County approval for a single family dwelling.

6. Riparian Vegetation Protection. Riparian vegetation within 50 feet of a wetland, stream, lake or river, as identified on the Coastal Shoreland and Fish and Wildlife habitat inventory maps shall be maintained except that:
    a. Trees certified as posing an erosion or safety hazard. Property owner is responsible for ensuring compliance with all local, state and federal agencies for the removal of the tree.
    b. Riparian vegetation may be removed to provide direct access for a water-dependent use if it is a listed permitted within the zoning district;
    c. Riparian vegetation may be removed in order to allow establishment of authorized structural shoreline stabilization measures;
    d. Riparian vegetation may be removed to facilitate stream or stream bank clearance projects under a port district, ODFW, BLM, Soil & Water Conservation District, or USFS stream enhancement plan;
    e. Riparian vegetation may be removed in order to site or properly maintain public utilities and road right-of-ways;
    f. Riparian vegetation may be removed in conjunction with existing agricultural operations (e.g., to site or maintain irrigation pumps, to limit encroaching brush, to allow harvesting farm crops customarily grown within riparian corridors, etc.) provided that such vegetation removal does not encroach further into the vegetation buffer except as needed to provide an access to the water to site or maintain irrigation pumps; or
    g. The 50 foot riparian vegetation setback shall not apply in any instance where an existing structure was lawfully established and an addition or alteration to said structure is to be sited not closer to the estuarine wetland, stream, lake, or river than the existing structure and said addition or alteration represents not more than 100% of the size of the existing structure's "footprint".
    h. Riparian removal within the Coastal Shoreland Boundary will require a conditional use. See Special Development Considerations Coastal Shoreland Boundary.
    i. The 50' measurement shall be taken from the closest point of the ordinary high water mark to the structure using a right angle from the ordinary high water mark.

7. All new dwellings and permanent structures and replacement dwellings and structures shall, at a minimum, meet the following standards. The dwelling shall be located within a fire protection district or shall be provided with residential fire protection by contract. If the dwelling is not within a fire protection district, the applicant shall provide evidence that the applicant has asked to be included within the nearest such district. If the applicant is outside the rural fire protection district, the applicant shall provide evidence that they have contacted the Coos Forest Protective Association of the proposed development.

8. The Planning Director may authorize alternative forms of fire protection when it is determined that these standards are impractical that shall comply with the following:

    a. The means selected may include a fire sprinkling system, onsite equipment and water storage or other methods that are reasonable, given the site conditions;
    b. If a water supply is required for fire protection, it shall be a swimming pool, pond, lake, or similar body of water that at all times contains at least 4,000 gallons or a stream that has a continuous year round flow of at least one cubic foot per second;
    c. The applicant shall provide verification from the Water Resources Department that any permits or registrations required for water diversion or storage have been obtained or that permits or registrations are not required for the use; and
    d. Road access shall be provided to within 15 feet of the water's edge for firefighting pumping units. The road access shall accommodate the turnaround of firefighting equipment during

fire season. Permanent signs shall be posted along the access route to indicate the location of the emergency water source.

9. Fire Siting Standards for New Dwellings:
    a. The property owner shall provide and maintain a water supply of at least 500 gallons with an operating water pressure of at least 50 PSI and sufficient ¾ inch garden hose to reach the perimeter of the primary fuel-free building setback.
    b. If another water supply (such as a swimming pool, pond, stream, or lake) is nearby, available, and suitable for fire protection, then road access to within 15 feet of the water's edge shall be provided for pumping units. The road access shall accommodate the turnaround of firefighting equipment during the fire season. Permanent signs shall be posted along the access route to indicate the location of the emergency water source.

10. Firebreak:
    a. This firebreak will be a primary safety zone around all structures. Vegetation within this primary safety zone may include mowed grasses, low shrubs (less than ground floor window height), and trees that are spaced with more than 15 feet between the crowns and pruned to remove dead and low (less than 8 feet from the ground) branches. Accumulated needles, limbs and other dead vegetation should be removed from beneath trees.
    b. Sufficient garden hose to reach the perimeter of the primary safety zone shall be available at all times.
    c. The owners of the dwelling shall maintain a primary fuel-free break area surrounding all structures and clear and maintain a secondary fuel-free break on land surrounding all structures and clear and maintain a secondary fuel-free break area on land surrounding the dwelling that is owned or controlled by the owner in accordance with the provisions in "Recommended Fire Siting Standards for Dwellings and Structures and Fire Safety Design Standards for Roads" dated March 1, 1991, and published by Oregon Department of Forestry and shall demonstrate compliance with Table 1.

Table 1 – Minimum Primary Safety Zone

Slope	Feet of Primary Safety Zone	Feet of Additional Primary Safety Zone Down Slope
0%	**30**	**0**
10%	**30**	**50**
20%	**30**	**75**
25%	**30**	**100**
40%	**30**	**150**

11. All new and replacement structures shall use non-combustible or fire resistant roofing materials, as may be approved by the certified official responsible for the building permit.

12. If a water supply exceeding 4,000 gallons is suitable and available (within 100 feet of the driveway or road) for fire suppression, then road access and turning space shall be provided for fire protection pumping units to the source during fire season. This includes water supplies such as a swimming pool, tank or natural water supply (e.g. pond).

13. The dwelling shall not be sited on a slope of greater than 40 percent.

14. If the dwelling has a chimney or chimneys, each chimney shall have a spark arrester.

15. The dwelling shall be located upon a parcel within a fire protection district or shall be provided with residential fire protection by contract. If the dwelling is not within a fire protection district, the applicant shall provide evidence that the applicant has asked to be included within the nearest such district.

16. Except for private roads and bridges accessing only commercial forest uses, public roads, bridges, private roads and driveways shall be constructed so as to provide adequate access for firefighting equipment.

17. Access to new dwellings shall meet road and driveway standards in Chapter VII.

Response to SECTION 4.6.140

- **The property is a legal non-conforming unit of land and no land division is proposed.**
- **The applicant will exceed the road setback.**
- **There is no proposed fence at this time.**
- **A driveway/access/parking permit will be requested at the time of the application.**
- **The applicant has acknowledged and will file in the deed record of Coos County, a Forest Management Covenant prior to receiving a zoning compliance letter.**
- **The riparian vegetation will not be disturbed during the development of the site.**
- **The property is within the Lakeside Rural Fire Protection District. No additional fire protection is required.**
- **The property owner will provide and maintain a water supply of at least 500 gallons with an operating water pressure of at least 50 PSI and sufficient ¾ inch garden hose to reach the perimeter of the primary fuel-free building setback.**
- **The slope on the proposed home site is between 0% to 3% and does not require additional primary safety zone. The applicant will meet the primary setback of 30 feet.**
- **The proposed dwelling use non-combustible or fire resistant roofing materials.**
- **There is no water supply exceeding 4,000 gallons.**
- **The dwelling will not be sited on a slope of greater than 40 percent.**
- **The new dwelling will not have a chimney and in the event one is installed it will install a spark arrester.**
- **The property is within the Lakeside RFP. The access and driveway will be the minimum standards of Chapter VII which meets the requirement to allow emergency vehicles to enter the property.**

RECORDING REQUESTED BY:
TICOR TITLE
300 Anderson Ave
Coos Bay, OR 97420

Coos County, Oregon	2021-05707
$91.00 Pgs=2	05/21/2021 02:33 PM
eRecorded by: TICOR TITLE COOS BAY	
Debbie Heller, CCC, Coos County Clerk	

AFTER RECORDING RETURN TO:
Mike Mast, Jared Mast, Rachel Mast individually and doing business as Smith River Land & Cattle Co.
19678 Lower Smith River Rd.
Reedsport, OR 97467

SEND TAX STATEMENTS TO:
No Change

99918296, 99918693, 23-13-13 TL201 and 23-13-13 TL207
Vacant Land, Lakeside, OR 97449

SPACE ABOVE THIS LINE FOR RECORDER'S USE

BARGAIN AND SALE DEED - STATUTORY FORM
(INDIVIDUAL or CORPORATION)

Mike Mast, Jared Mast and Rachel Mast, doing business as Smith River Land & Cattle Co., Grantor, conveys to **Mike Mast, Jared Mast, Rachel Mast individually and doing business as Smith River Land & Cattle Co.**, Grantee, the following described real property, situated in the County of Coos, State of Oregon,

PARCEL 1: - SOLD

A parcel of land located in the E1/2 of the SW1/4 of Section 13, Township 23 South, Range 13 West of the Willamette Meridian, Coos County, Oregon, more particularly described as follows:

Beginning at an 1" iron pipe from which the 1" iron pipe at the CS1/16 of said Section 13 bears N0°06'E a distance of 659.55 feet; thence N85°44'55"W (basis of bearing per CS# 4B60) a distance of 383.26 feet to a 5/8" rebar; thence N52°16'03"W a distance of 166.05 feet to a 5/8" rebar; thence N24°26'38"W a distance of 135.91 feet to a 5/8" rebar; thence N56°05'38"W a distance of 472.02 feet to a 5/8" rebar; thence N28°15'30"E a distance of 359.61 feet to a 5/8" rebar on the South boundary of Parcel 1 of Partition 1995 #13, Coos County, Oregon; thence N53°16'00"W (basis of bearing per Partition 1995 #13) along said boundary a distance of 188.14 feet to a 5/8" rebar; thence N66°46'00"W a distance of 179.29 feet to a 5/8" rebar on the Easterly boundary of U.S. Highway 101; thence S36°31'00"W (basis of bearing per Instrument No. 91-08-0986, Deed Records of Coos County, Oregon) along said Highway boundary a distance of 566.29 feet, more or less, to a point that bears 1230.00 feet North and 1201.21 feet East of the of the Southwest corner of said Section 13; thence leaving said Highway boundary S50°25'E a distance of 218.50 feet; thence S3°13'W a distance of 71.07 feet; thence S34°17'W a distance of 146.05 feet; thence S1°53'E a distance of 178.14 feet; thence S1°35'E a distance of 730.89 feet to the W1/16 corner common to Sections 13 and 24, Township 23 South, Range 13 West of the Willamette Meridian, Coos County, Oregon; thence East along the said common line between Sections 13 and 24 a distance of 1320 feet, more or less, to the 1/4 corner between said Sections 13 and 24; thence North a distance of 660 feet, more or less to the point of beginning.

PARCEL 2:

The South 1/2 of the SW 1/4 of the SE 1/4, of Section 13, Township 23 South, Range 13 West of the Willamette Meridian, Coos County, Oregon.

The true consideration for this conveyance No Dollars And No/100 Dollars **($0.00)**. (See ORS 93.030).

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.

BARGAIN AND SALE DEED - STATUTORY FORM
(continued)

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

Dated: 5/19/2021

Mike Mast, Jared Mast, and Rachel Mast doing business as Smith River Land & Cattle Co.

Mike Mast

Jared Mast

Rachel Mast
Rachel Mast

State of Oregon
County of Coos

This instrument was acknowledged before me on 5/19/2021 by Mike Mast, Jared Mast and Rachel Mast doing business as Smith River Land & Cattle Co.

Notary Public - State of Oregon

My Commission Expires: 9/8/2022

OFFICIAL STAMP
DENISE ALTHEA MATESKI
NOTARY PUBLIC-OREGON
COMMISSION NO. 979336
MY COMMISSION EXPIRES SEPTEMBER 18, 2022

After recording return to: Mike Mast, Jared Mast and Rachel Mast, individually and
doing business as Smith River Land & Cattle Co.
19678 Lower Smith River Road
Reedsport, OR 97467

Consideration: $0.00

Until a change is requested, all tax statements are to be sent to the following address:
Mike Mast, Jared Mast and Rachel Mast, individually and
doing business as Smith River Land & Cattle Co.
19678 Lower Smith River Road
Reedsport, OR 97467

PERPETUAL EASEMENT

Known all men by these presents that Mike Mast, Jared Mast and Rachel Mast, individually and doing business as Smith River Land & Cattle Co., Grantor, owner of that property described in Exhibit "A", conveys to Mike Mast, Jared Mast and Rachel Mast, individually and doing Business as Smith River Land & Cattle Co., Grantee's, their successor's, heir's or assigns, owner's of those properties described in Exhibit "B", a perpetual 30 foot easement for ingress, egress and utilities 15 feet either side of the existing road across the Grantor property.

This easement shall be maintained by the Grantor's and the Grantee's and their successor's, heir's or assigns where the road is commonly used by both parties.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301, 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930 AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND TO SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007 AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009 and SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.

Dated this 19TH day of MAY, 2020.

Coos County, Oregon
$96.00

2020-04833
05/22/2020 02:21 PM
Pgs=3

00114515202000048330030037

Debbie Heller, CCC, Coos County Clerk

Exhibit "A"

Tax Lot 201 – Section 13 23S 13W Tax Account No. 99918296

A parcel of land located in the E1/2 of the SW1/4 of Section 13, Township 23 South, Range 13 West of the Willamette Meridian, Coos County, Oregon, more particularly described as follows:

Beginning at an 1" iron pipe from which the at the CS1/16 of said Section 13 bears N0°06'E a distance of 659.55 feet; thence N85°44'55"W (basis of bearing per CS# 4B60) a distance of 383.26 feet to a 5/8" rebar; thence N52°16'03"W a distance of 166.05 feet to a 5/8" rebar; thence N24°26'38"W a distance of 135.91 feet to a 5/8" rebar; thence N55°05'39"W a distance of 472.02 feet to a 5/8" rebar; thence N28°15'30"E a distance of 359.61 feet to a 5/8" rebar on the South boundary of Parcel 1 of Partition 1995 #13, Coos County, Oregon; thence N53°16'00"W (basis of bearing per Partition 1995 #13) along said boundary a distance of 188.14 feet to a 5/8" rebar; thence N66°46'00"W a distance of 179.29 feet to a 5/8" rebar on the Easterly boundary of U.S. Highway 101; thence S36°31'00"W (basis of bearing per Instrument No. 91-08-0986, Deed Records of Coos County, Oregon) along said Highway boundary a distance of 566.29 feet, more or less, to a point that bears 1230.00 feet North and 1201.21 feet East of the of the Southwest corner of said Section 13; thence leaving said Highway boundary S50°25'E a distance of 218.50 feet; thence S3°13'W a distance of 71.07 feet; thence S34°17'W a distance of 146.05 feet; thence S1°53'E a distance of 178.14 feet; thence S1°35'E a distance of 730.89 feet to the W1/16 corner common to Sections 13 and 24, Township 23 South, Range 13 West of the Willamette Meridian, Coos County, Oregon; thence East along the said common line between Sections 13 and 24 a distance of 1320 feet, more or less, to the 1/4 corner between said Sections 13 and 24; thence North a distance of 660 feet, more or less to the point of beginning

Exhibit "B"

Tax Lot 201 – Section 13 23S 13W Tax Account No. 99918693

A parcel of land located in the SW1/4 of the SE1/4 of Section 13, Township 23 South, Range 13 West of the Willamette Meridian, Coos County, Oregon, more particularly described as follows:

The S1/2 of the SW1/4 of the SE1/4 of Section 13, Township 23 South, Range 13 West of the Willamette Meridian, Coos County, Oregon.

GRANTOR'S:

Mike Mast, individually and doing business as Smith River Land & Cattle Co.

Jared Mast, individually and doing business as Smith River Land & Cattle Co.

Rachel Mast

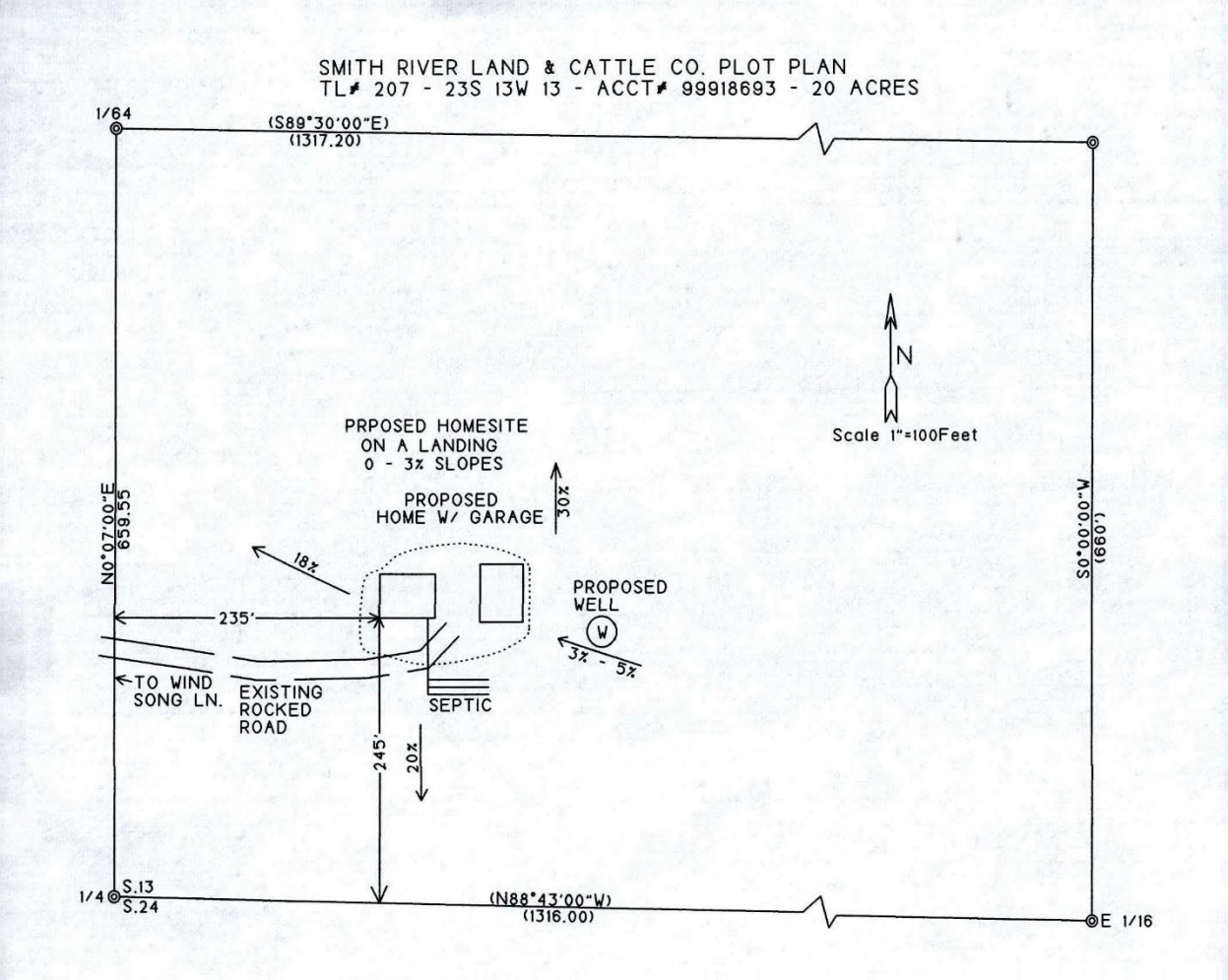
Rachel Mast, individually and doing business as Smith River Land & Cattle Co.

STATE OF OREGON)
) ss.
County of COOS)

OFFICIAL STAMP
TROY JON RAMBO
NOTARY PUBLIC-OREGON
COMMISSION NO. 960213
MY COMMISSION EXPIRES MARCH 09, 2021

The foregoing instrument was acknowledged before me this 19TH day of MAY, 2020 by Mike Mast, Jared Mast and Rachel Mast, individually and doing business as Smith River Land & Cattle Co.

Notary Public for Oregon


SMITH RIVER LAND & CATTLE CO. PLOT PLAN
TL# 207 - 23S 13W 13 - ACCT# 99918693 - 20 ACRES
1/64
(S89°30'00"E)
(1317.20)
N
Scale 1"=100Feet
PRPOSED HOMESITE
ON A LANDING
0 - 3% SLOPES
PROPOSED
HOME W/ GARAGE
30%
18%
N0°07'00"E
659.55
S0°00'00"W
(660')
235'
PROPOSED
WELL
W
3% - 5%
TO WIND
SONG LN.
EXISTING
ROCKED
ROAD
SEPTIC
245'
20%
1/4
S.13
S.24
(N88°43'00"W)
(1316.00)
E 1/16

United States Department of Agriculture

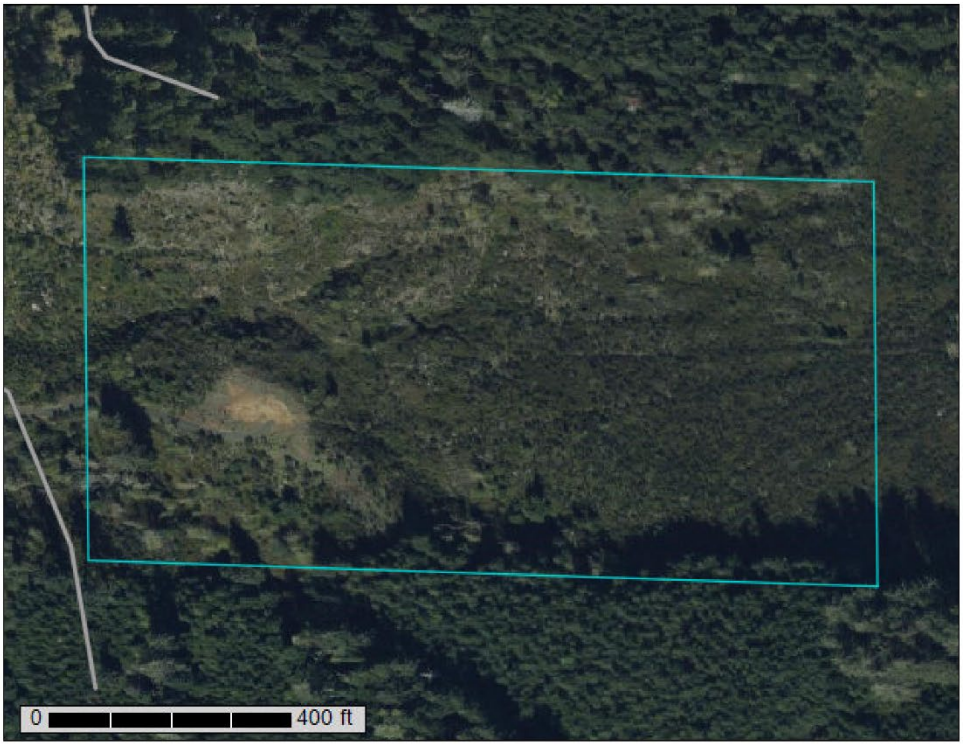
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Coos County, Oregon

ACU-21-063_Subject_Property



February 8, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

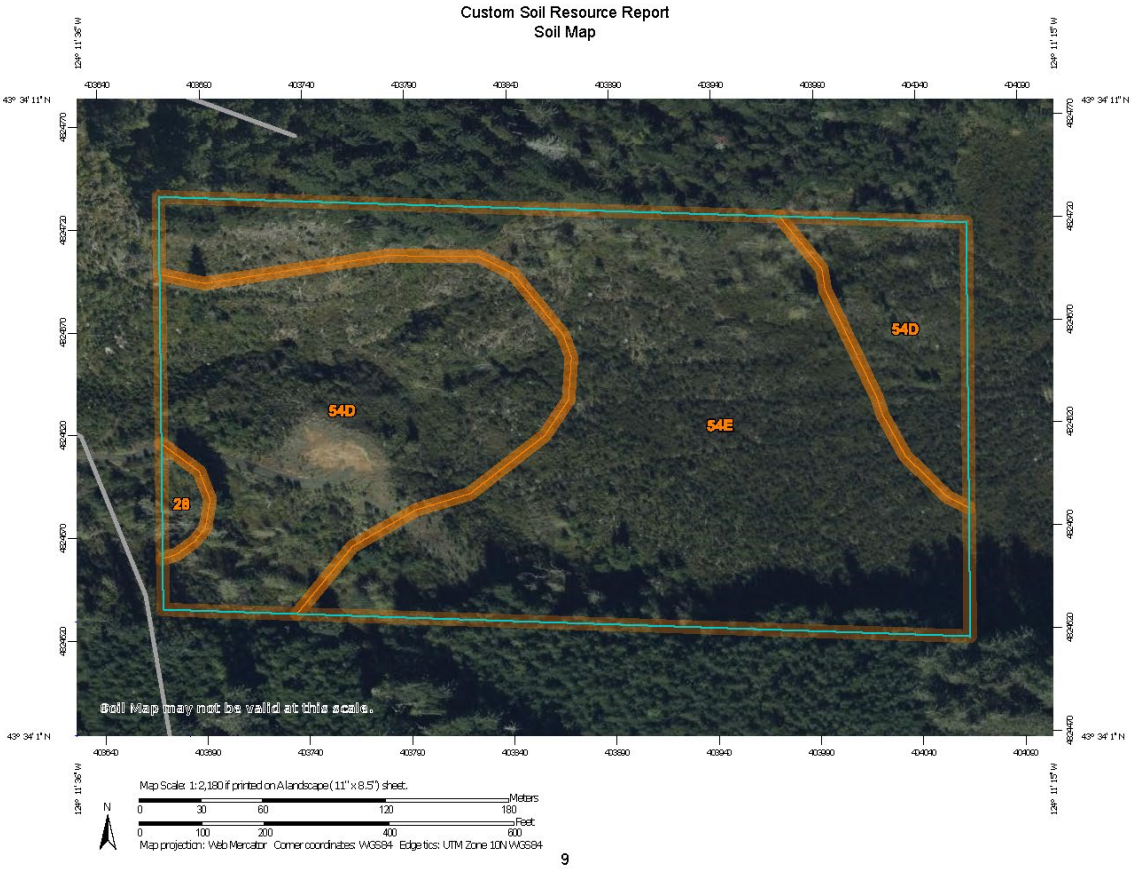
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


Custom Soil Resource Report
Soil Map
54D
54E
54D
28
Soil Map may not be valid at this scale.
Map Scale: 1:2,180 if printed on A landscape (11" x 8.5") sheet.
Meters
Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

9

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Coos County, Oregon
Survey Area Data: Version 17, Oct 27, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 5, 2019—Oct 10, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
28	Heceta fine sand	0.2	1.2%
54D	Templeton silt loam, 7 to 30 percent slopes	8.0	40.7%
54E	Templeton silt loam, 30 to 50 percent slopes	11.4	58.1%
Totals for Area of Interest		**19.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Coos County, Oregon

28—Heceta fine sand

Map Unit Setting

National map unit symbol: 21n8
Elevation: 0 to 80 feet
Mean annual precipitation: 50 to 70 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 200 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Heceta and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Heceta

Setting

Landform: Deflation basins on dunes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits

Typical profile

H1 - 0 to 4 inches: fine sand
H2 - 4 to 60 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: R004AB203OR - Aquic Interdune
Forage suitability group: Poorly Drained (G004AY018OR)
Other vegetative classification: Poorly Drained (G004AY018OR)
Hydric soil rating: Yes

54D—Templeton silt loam, 7 to 30 percent slopes

Map Unit Setting

National map unit symbol: 21q0
Elevation: 50 to 800 feet
Mean annual precipitation: 60 to 70 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 200 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Templeton and similar soils: 75 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Templeton

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Colluvium and residuum weathered from sedimentary rock

Typical profile

H1 - 0 to 16 inches: silt loam
H2 - 16 to 42 inches: silt loam
H3 - 42 to 52 inches: weathered bedrock

Properties and qualities

Slope: 7 to 30 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F004AB404WA - Coastal Upland Warm Forest
Forage suitability group: Well Drained >15% Slopes (G004AY013OR)
Other vegetative classification: Well Drained >15% Slopes (G004AY013OR)
Hydric soil rating: No

54E—Templeton silt loam, 30 to 50 percent slopes

Map Unit Setting

National map unit symbol: 21q1
Elevation: 50 to 800 feet
Mean annual precipitation: 60 to 80 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 200 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Templeton and similar soils: 75 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Templeton

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Colluvium and residuum weathered from sedimentary rock

Typical profile

H1 - 0 to 16 inches: silt loam
H2 - 16 to 42 inches: silt loam
H3 - 42 to 52 inches: weathered bedrock

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F004AB404WA - Coastal Upland Warm Forest
Hydric soil rating: No

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Vegetative Productivity

This folder contains a collection of tabular reports that present vegetative productivity data. The reports (tables) include all selected map units and components for each map unit. Vegetative productivity includes estimates of potential vegetative production for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture and rangeland. In the underlying database, some states maintain crop yield data by individual map unit component. Other states maintain the data at the map unit level. Attributes are included for both, although only one or the other is likely to contain data for any given geographic area. For other land uses, productivity data is shown only at the map unit component level. Examples include potential crop yields under irrigated and nonirrigated conditions, forest productivity, forest site index, and total rangeland production under of normal, favorable and unfavorable conditions.

Forestland Productivity

This table can help forestland owners or managers plan the use of soils for wood crops. It shows the potential productivity of the soils for wood crops.

Potential productivity of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forestland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Reference:
United States Department of Agriculture, Natural Resources Conservation Service, National Forestry Manual.

Report—Forestland Productivity

Forestland Productivity–Coos County, Oregon				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			Cu ft/ac/yr	
28—Heceta fine sand				
Heceta	—	—	—	—
54D—Templeton silt loam, 7 to 30 percent slopes				
Templeton	Douglas-fir	125	186.00	Douglas-fir, Sitka spruce, Western hemlock
	Red alder	94	114.00	
	Sitka spruce	169	257.00	
	Western hemlock	161	257.00	
	Western redcedar	—	—	
54E—Templeton silt loam, 30 to 50 percent slopes				
Templeton	Douglas-fir	125	186.00	Douglas-fir, Sitka spruce, Western hemlock
	Red alder	94	114.00	
	Sitka spruce	169	257.00	
	Western hemlock	161	257.00	
	Western redcedar	—	—	

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Preliminary Geotechnical Site Evaluation

Wind Song Lane
North Bend, Oregon 97459
T23S, R13W, Sec 13, Tax Lots 201 and 207

Mr. Mike Mast
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November 8, 2021
CGS Project No. 21121

TABLE OF CONTENTS

INTRODUCTION

Cascadia Geoservices, Inc. (CGS) is pleased to provide you with this Preliminary Geotechnical Site Evaluation report which summarizes our evaluation of portions of your two properties (Tax Lots 201 and 207, T23S, R13W, Sec 13) which are located near North Bend, Oregon (see Figure 1, Location Map). We understand that you have requested that CGS evaluate the subject properties and provide you with recommendations for developing the site. This report summarizes our project understanding and site investigation, including subsurface explorations, and provides our conclusions and recommendations for developing the site.

PROJECT UNDERSTANDING AND DESCRIPTION

Our understanding is based on email and telephone correspondence with you beginning on September 27, 2021, and on a preliminary site visit to the properties on October 7, 2021. Our understanding is further based on a second site visit on October 16, 2021, at which time a geologic reconnaissance of each site was conducted and six exploratory test pits (three test pits per site) were completed.

We understand that a building site has been located on each tax lot and that this report is specific to each building site (see Figure 2 and Figure 3, Site Map). We further understand that you are proposing the sell the tax lots. In the event that the future owners decided to site a structure in a different area than the location of the evaluated building sites, CGS should be contacted, and those areas should be reviewed. As of the date of this report, CGS has not been provided with construction documents or with a site plan. During the October 16, 2021, site visit, the owner of Tax Lot 201, Rodney Murphey, was on site and provided CGS with the location of the proposed building corners. The test pits were excavated around the perimeter of the proposed structure. The location of the proposed structure on Tax Lot 207 was not located on the ground at the time of our site investigation.

SURFACE DESCRIPTION

The sites are located within the Coast Range physiographic region of southwestern Oregon. Tax Lots 201 and 207 are 31.85 and 20.0 acres, respectively, and are contiguous along a common eastern boundary of TL 201 and western boundary on TL 207. We further understand that Tax Lot 201 has a northwest-flowing drainage swale and includes portions of the slopes that descend into the drainage. The building site

consists of a level-to-gently-west-sloping cut pad located on a hill on the north side of the drainage at an approximate elevation of 80.0 feet above mean sea level (AMSL). Tax Lot 207 is located on a northwest-southeast-trending ridge that separates two drainages. The building site on Tax Lot 207 is a level cut-pad and is at an approximate elevation of 95.0 feet AMSL. We understand that the two tax lots were recently logged and that a house was removed from the building site on Tax Lot 201. Both building sites are accessed via Highway 101, Wind Song Lane, and a private unimproved driveway. The sites are in an area which is forested and is occupied primarily by residential homes.

Based on mapping done by others,[1,2] the soil on the building sites consists of silt loam (54D – Templeton silt loam, 7 to 30 percent slopes). The soils are described as well drained and derived from colluvium which in turn derived from weathered sedimentary rock. These soils overlie Coaledo Formation (Eocene age) sandstone.

The building sites appeared stable at the time of our site visit, with no ground cracks, areas of settlement, fresh earthen scarps, or landslides observed.

SUBSURFACE EXPLORATIONS

In order to analyze the soils at the site, CGS observed the excavation of six test pits (three per site) during our October 16, 2021 site visit. The test pits were excavated by Natural Origins LLC of Bandon, Oregon, using a track-mounted mini excavator. The test pits were excavated to a depth ranging from 5.0 to 7.0 feet below ground surface (bgs) at six locations (three per building site). The test pits were logged by a member of our staff from our southern Oregon coast office. A dynamic cone penetrometer (DCP),[3] pocket penetrometer, and/or hand tools were used by CGS to test the relative consistency of the surficial soils in the test pits. Soil samples from the test pits were collected and stored in moisture-proof plastic bags and transported to our lab. Upon completion, the test pits were refilled with uncompacted excavated material. The

[1] United States Department of Agriculture. Natural Resource Conservation Service Web Soil Survey. Retrieved from http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

[2] Baldwin, E. M., Beaulieu, J. D., Newton, V. C., (1973 and 1979). Geologic Map of the Northern Coos Basin Area, Oregon. Oregon Department of Geology and Mineral Industries (DOGAMI).

[3] The dynamic cone penetrometer (DCP) test uses a 15 lb. steel mass falling 20 inches to strike an anvil to penetrate a 1.5-inch-diameter 45-degree (vertex angle) cone that has been seated in the bottom of a hand-augered hole. The penetrometer is used to determine a penetration resistance relationship with the standard penetration resistance of virgin soils. The penetration rate (PR) is the average number of blows needed to advance the cone a distance of 1 inch.

locations of the test pits were determined using GPS and are shown on Figure 2, Site Map. Detailed logs for the test pits are included at the end of this report in Attachment 1.

Subsurface Conditions Encountered

Tax Lot 201: The material encountered in the test pits was variable. Test pit TP-1W encountered loose, reddish brown, silty fine sand that overlies medium-dense fine sand. The medium-dense fine sand was encountered at 3.0 feet bgs and was observed to be light reddish brown, becoming tannish brown at 4.5 feet. The sand was poorly graded and strongly cemented. The samples were observed to be moist. TP-1W was excavated to a final depth of 5.5 feet bgs.

Test pit TP-2W encountered medium-dense, tannish brown, silty fine sand. The test pit was excavated to a final depth of 5.0 feet bgs. The samples were observed to be moist and moderately cemented. The silty fine sand encountered was medium dense and generally homogenous with depth. Loose surficial soils were not encountered, and it is inferred that the test pit was excavated in an area that had been previously cut to expand and level the proposed building site.

The soil encountered in test pit TP-3W consisted of fine sandy silt. The upper 4.0 feet of fine sandy silt was observed to be loose, reddish brown, and moist. Roots were encountered to a depth of 2.0 feet bgs. The fine sandy silt became medium stiff at 4.0 feet bgs. The test pit was excavated to a final depth of 6.0 feet bgs.

Based on mapping done by others[4], we infer that the medium-dense fine sand and silty fine sand encountered at 3.0 feet and 0.0 feet bgs in test pits TP-1W and TP-2W, respectively, is Coaledo Formation sandstone. Further, we infer that the medium-dense fine sandy silt encountered at 4.0 feet bgs in TP-3W is Coaledo Formation decomposed siltstone. We note that there were no wet soils or landslide debris encountered in the test pits.

Tax Lot 207: The material encountered in the test pits was variable. Test pit TP-1E encountered loose, dark reddish brown and black, silty fine sand. The soil was observed to be moist and included abundant charcoal fragments and large decomposed roots.

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[4] Baldwin, E. M., Beaulieu, J. D., Newton, V. C., (1973 and 1979). Geologic Map of the Northern Coos Basin Area, Oregon. Oregon Department of Geology and Mineral Industries (DOGAMI).

Based on the consistency, lack of soil structure, charcoal, and large decomposed roots, we infer that this soil is fill. The fill was encountered to 5.0 feet bgs. Below the fill we encountered medium-dense, tannish brown, silty fine sand. The silty fine sand was observed to be moist and was encountered to the bottom of the test pit at 6.0 feet bgs.

TP-2E consisted of very-soft-to-soft, tannish orangish brown and light gray silty clay that overlies silty fine sand. The silty fine sand was observed to be medium dense, tannish brown, moist, and was encountered at 6.0 feet bgs to the bottom of the test pit at 7.0 feet bgs.

TP-3E consisted of loose, reddish brown, silty fine sand which became light reddish brown and medium dense at 4.0 feet bgs. The silty fine sand included roots to 3.0 feet bgs. The samples were observed to be moist. The test pit was excavated to a final depth of 6.0 feet bgs.

Based on mapping done by others, we infer that the silty fine sand encountered at 5.0 feet, 6.0 feet, and 4.0 feet bgs in test pits TP-1E to TP-3E, respectively, is sandstone of the Coaledo Formation.

Our analysis of the subsurface conditions on the site is based on the soil encountered in our test pits and is summarized as follows:

Silty Fine Sand (Fill):

Encountered on Tax Lot 207 in test pit TP-1E to 5.0 feet bgs. The fill was observed to be loose, dark reddish brown and black, silty fine sand: moist, with charcoal and large, decomposed roots. We infer that the fill was generated during preparation of the proposed building pad on Tax Lot 207. The approximate cut/fill line has been mapped and shown on Figure 3, Site Map.

Sandstone/Decomposed Siltstone (Coaledo Formation):

Tax Lot 201:

Sandstone: Encountered at 3.0 feet bgs and at the surface in test pits TP-1W and TP-2W, respectively, to the bottom of the test pits. The sandstone encountered in TP-1W was observed to be medium dense, light reddish brown, becoming tannish brown at 4.5 feet bgs. The sand was poorly graded and strongly cemented. The sandstone encountered in TP-2W was observed to be medium dense, tannish brown, and included a significant percentage of silt.

Decomposed siltstone: Encountered in TP-3W at 4.0 feet bgs to the bottom of the test pit at 6.0 feet bgs. The decomposed siltstone was observed to be medium stiff, light reddish brown, fine sandy silt.

Tax Lot 207:

Sandstone: Encountered at 5.0 feet, 6.0 feet, and 4.0 feet bgs in test pits TP-1E toSTP-3E, respectively, to the bottom of the test pits. Consisted of medium-dense, light brown and light reddish brown, silty fine sand: moist.

Decomposed siltstone: Encountered in TP-2E at the surface to 6.0 feet bgs. Consisted of very-loose-to-loose, tannish orangish brown and light gray silty clay that was moist.

LABORATORY ANALYSIS

Select samples were packaged in moisture-proof bags and transported to our laboratory where they were classified in general accordance with the Unified Soil Classification System, Visual-Manual Procedure. In addition, select samples were analyzed, where applicable, for water content (ASTM D698), percent of fines (ASTM D1140) and Atterberg limits (ASTM D4318). The results are summarized below in Table 1. The Lab Analysis Reports for the samples are provided at the back of this report as Attachment 2.

Table 1: Laboratory Testing Results

Sample ID	Test Pit / Depth (feet)	Type of Soil	Water Content (%)	Fines (%)	USCS Symbol[5]
SS-2W	TP-1W / 3.0	Fine Sand	12.0	2.0	SP
SS-5W	TP-2W / 4.0	Silty Fine Sand	38.0	24.0	SM
SS-8W	TP-3W / 4.0	Fine Sandy Silt	53.0	79.0	ML
SS-3E	TP-1E / 5.0	Silty Fine Sand	46.0	36.0	SM
SS-4E	TP-2E / 2.0	Silty Clay	36.0	83.0	CH
SS-8E	TP-3E / 4.0	Silty Fine Sand	35.0	30.0	SM

Our lab analysis indicates that the sandy soils on the Tax Lot 201 building site have a highly variable percentage of fines and water content. The high-water content in the silts is due to the cohesive soils' intrinsic water-holding capacity. Our lab analysis indicates that the sandy soils on the Tax Lot 207 building site have a similar percentage of fines and water content. The clay that was encountered on Tax Lot 207 building site was determined in the field to be medium plasticity.

Our analysis and recommendations are based on the following physical properties of the soils encountered, which are listed below in Table 2.

[5] Classification symbols are estimated based on visual observation.

Table 2: Physical Properties of Soil

Type of Soil	Test Pit / Depth (feet)	N-Value	Effective Unit Weight (pcf)	Drained Friction Angle, φ' (degrees)	Drained Cohesion, c' (psf)
Fine Sand	TP-1W / 3.0	10-15	95-125	36	0
Silty Fine Sand	TP-2W / 4.0	12-15	110-140	34	0-100
Fine Sandy Silt	TP-3W / 2.0	6-8	75-110	32	0-150
Silty Clay	TP-2E / 2.0	1-4	80-110	19	400-600

GROUNDWATER

Groundwater was not encountered in any of our test pits. Further, there was no seepage or caving detected in any of the test pits. Our review of water-well cards for the area[6] indicates that groundwater levels are variable and are typically greater than 50.0 feet bgs. We anticipate that the primary groundwater table is near the elevation of the unnamed drainage that is south of Tax Lot 201 and west of Tax Lot 207, which is approximately 60.0 feet below the building sites. It is our opinion that water levels will rise during periods of sustained rainfall and that perched groundwater will form within the surficial sands above confining layers of clay. Based on the topography, we anticipate that the hydraulic gradient is to the south and west regarding the Tax Lot 201 building site. Further, based on topography, we anticipate that the hydraulic gradient is to the west, north, and south regarding the Tax Lot 207 building site.

GEOLOGIC HAZARDS

A review of the State Landslide Inventory Database (Oregon HazVu)[7] indicates that both building sites are part of a large landslide complex. Further, the state has identified the building sites and surrounding slope as having a very high susceptibility to future

[6] Oregon Water Resources Department well report query, viewed online at https://apps.wrd.state.or.us

[7] (HazVu). Oregon Department of Geology and Mineral Industries (DOGAMI) Statewide Geohazards Viewer. Viewed at https://www.oregongeology.org

landslides. We note that we did not identify landslide debris within the soil encountered in the test pits.

A review of LIDAR mapping for the area[8] indicates that the tax lots are situated in an unnamed northwest draining watershed. The LIDAR imagery indicates that Tax Lot 201 is located on relatively level terrain which is part of a northwest trending ridge north of and above the drainage. Irregular topography is evident on the flanks of the slopes below (south) of the site. Tax Lot 207 is located on a relatively wide and level ridge that separates two drainages. Based on our LIDAR review, there are landforms which we interpret to be associated with geologic hazards, including landslides, on areas adjacent to the two sites.

Based on a review of U.S. Geological Survey maps,[9] there are not geologically young fault systems within ½ mile of the subject property. As with other folds and faults located in the Cascadia forearc, it is suspected that great megathrust earthquakes along the Cascadia Subduction Zone will cause future rupture and displacement on these faults.

SEISMIC DESIGN CRITERIA

Our seismic design parameters are based on Site Class D – Stiff Soil. The subject properties are located in an area that is highly influenced by regional seismicity due to the proximity to the Cascadia Subduction Zone (CSZ). Seismic design criteria, in accordance with the ASCE[10] 7-16 (IBC-19[11]), are summarized in Tables 3 and 4 below.

[8] LIDAR is an aerial imagery technology that penetrates the vegetative cover by measuring distance by measuring the amount of time it takes for light to travel from a light-emitting source to an object and back to a sensor.

[9] U.S. Geological Survey (USGS), Quaternary Faults Web Mapping Application, viewed at https://earthquake.usgs.gov

[10] American Society of Civil Engineers

[11] 2019 International Building Code

Table 3: Tax Lot 201 ASCE 7-16 (IBC-19) Seismic Design Parameters

Seismic Design Parameters	Short Period	1 Second
Maximum Credible Earthquake Spectral Acceleration	S_s = 1.522 g	S_1 = 0.789 g
Site Class	D – Stiff Soil	
Site Coefficient	F_a = 1.0	F_v = null
Adjusted Spectral Acceleration	S_{MS} = 1.522 g	S_{M1} = null
Design Spectral Response Acceleration Parameters	S_{DS} = 1.015 g	S_{D1} = null
Peak Ground Acceleration	PGA = 0.776 g	

Table 4: Tax Lot 207 ASCE 7-16 (IBC-19) Seismic Design Parameters

Seismic Design Parameters	Short Period	1 Second
Maximum Credible Earthquake Spectral Acceleration	S_s = 1.517 g	S_1 = 0.787 g
Site Class	D – Stiff Soil	
Site Coefficient	F_a = 1.0	F_v = null
Adjusted Spectral Acceleration	S_{MS} = 1.517 g	S_{M1} = null
Design Spectral Response Acceleration Parameters	S_{DS} = 1.011 g	S_{D1} = null
Peak Ground Acceleration	PGA = 0.773 g	

Liquefaction

Liquefaction occurs when loosely packed, water-logged granular sediments lose their strength in response to strong ground shaking. Liquefaction occurring beneath buildings and other structures can cause major damage during earthquakes. Liquefaction potential was assessed based on the information obtained from our borings and using the parameters suggested in Youd & Andrus, et al., 2001.[12] According to our seismic analysis, the building sites will experience a peak ground acceleration (PGA) during a

[12] Youd, T. L., Andrus, I. M., et al., 2001. Resistance of Soils: Summary Report from the 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils. ASCE, Journal of Geotechnical and Geoenvironmental Engineering, v. 127, no. 10, pp. 817-833.

design seismic event of 0.776 g and 0.773 g for Tax Lots 201 and 207, respectively. Further, groundwater was not observed in the test pits. Based on the inferred depth of groundwater and the consistency of the soils encountered in our test pits, it is our opinion that the liquefaction potential for the two sites site is low.

Tsunamis

Based on recent mapping and modeling done by the state of Oregon,[13] the sites are not within the Tsunami Inundation Zone. We note that access roads and low-lying areas are in the inundation zone and will be impacted by a local-source Cascadia Subduction Zone earthquake of 9.0 or larger. Because of this, we strongly recommend that you check local resources and the state of Oregon's Department of Geology and Mineral Industries (DOGAMI) Tsunami Resource Center for current information regarding tsunami preparedness and emergency procedures.

SETBACK

The 2017 Oregon Residential Specialty Code,[14] Section R.403.1.9.1 (code) requires that buildings adjacent to descending slope surfaces be founded in firm material with an embedment and setback from the slope surface sufficient to provide vertical and lateral support for the footing without detrimental settlement. When determining setbacks, the code recommends a minimum setback of at least the smaller of H/3 and 40 feet for descending slopes and the smaller of H/2 and 15 feet from ascending slopes.[15] For slopes steeper than 100 percent, the setback shall be measured from an imaginary plane 45 degrees to the horizontal projected upward from the toe of the slope. We provide our setback recommendations in our **DISCUSSION AND RECOMMENDATIONS** section of this report.

DISCUSSION AND RECOMMENDATIONS

Based on our surface and subsurface investigation, it is our opinion that the proposed building sites on Tax Lots 201 and 207 are suitable to site a single-family residence,

[13] Local-source (Cascadia Subduction Zone) Tsunami Inundation Map. State of Oregon Department of Geology and Mineral Industries online at http://www.oregongeology.org

[14] Oregon Residential Specialty Code, 2017, State of Oregon, viewed at http://ecodes.biz

[15] H = the height of the slope

provided they are developed in accordance with our recommendations and sited in the locations that were evaluated by this study.

As discussed, both Tax Lots 201 and 207 are within areas which have been identified by the state as being landslide complexes. As such, portions of both tax lots are unsuitable to develop. The areas which were evaluated as part of this study, which are located on ridges above the slopes, were determined to be stable. As such if the home sites are moved from those areas which were evaluated, CGS should be contacted, and the new, proposed homes sites evaluated. Further, we recommend that CGS be retained to review construction documents including the proposed sites plans.

Tax Lot 201 Building Site: The use of a conventional shallow foundation is feasible, provided that soft and/or loose soil underneath the building footprint, including a 5-foot margin outside of the building footprint perimeter, is removed and the footings are set on the medium-dense, tannish brown, silty fine sand or fine sand which is well cemented and which was encountered in our test pits at a depth of from 3.0 to 4.0 feet bgs. The footings can also be set on engineered granular fill that is set on the silty fine sand or fine sand.

Tax Lot 207 Building Site: The use of a conventional shallow foundation is feasible, provided that the upper 4.0 to 6.0 feet of soft and/or loose soil underneath the building footprint, including a 5-foot margin outside of the building footprint perimeter, is removed and the footings are set on the medium-dense, tannish brown, silty fine sand or on granular fill that is used to rebuild the excavation.

Placement of the granular fill is described in the **Site Preparation** portion of this report.

Based on the building code setback requirements and CGS's professional experience working in the area, we recommend that the proposed perimeter foundations on both structures located on Tax Lot 201 and 207 building sites be set back a minimum of 20.0 feet from the descending slopes. These are absolute minimum setback distances.

All footings should be designed for an allowable bearing pressure of 1,500 pounds per square foot (psf). The weight of the footing and overlying backfill can be disregarded in calculating footing sizes. The recommended allowable bearing pressure applies to the total of dead plus long-term-live loads, and this bearing pressure may be doubled for short-term loads such as those resulting from wind or seismic forces. For footings in

contact with native soils, use a coefficient of friction equal to 0.20 when calculating resistance to sliding.

All surfaces with building foundations or pavement areas should be prepared in accordance with the **Site Preparation** section of this report. The building foundations may be installed on either firm native subgrade or engineered fill. Continuous wall and isolated spread footings should be at least 2 and 3 feet wide, respectively. The bottom of exterior footings should be at least 18 inches below the lowest adjacent exterior grade. The bottom of interior footings should be established at least 12 inches below the base of the floor slab.

Based on CGS's estimates, total post-construction settlement will be less than one (1) inch, with post-construction differential settlement of less than 0.5 inches over a 50-foot span for maximum column and perimeter footing loads of less than 75 kips and 3 kips per linear foot.

Lateral loads on footings can be resisted by passive earth pressure on the sides of the structures and by friction at the base of the footings. An allowable passive earth pressure of 263 pounds per cubic foot (pcf) may be used for footings confined by native soils and new structural fills. Adjacent floor slabs, pavements, or the upper 12-inch depth of adjacent, unpaved areas should not be considered when calculating passive resistance.

Floor Slabs

Satisfactory subgrade support for reinforced building floor can be obtained from the subgrade prepared in accordance with our site preparation recommendations. All loose fill and disturbed material should be removed to a depth of 1.0- foot bgs. A minimum of 12 inches of loose imported granular material should be placed and compacted over the prepared subgrade. Imported granular material should be crushed rock or crushed gravel that is fairly well graded between coarse and fine, contains no deleterious materials, has a maximum particle size of one (1) inch, and has less than 5 percent by weight passing the U.S. Standard No. 200 Sieve.

CONSTRUCTION

Site Preparation

In addition to deepening the footing trenches for the residences, all existing near-surface root zones should be stripped and removed from the project site in all proposed building areas and for a 5-foot margin around the building area. The stripping depths may range up to 6.0 feet bgs and will most likely vary based on proximity to existing trees and shrubs on the site. The actual stripping depth should be based on field observations at the time of construction. Stripped material should be transported off site for disposal or stockpiled for use in landscaped areas. Deeper excavations and debris removal may be required at the discretion of the engineering geologist. The resulting subgrade should be compacted using a smooth-drum roller or plate compactor.

Structural fill used to refill excavation trenches should meet the specifications of Selected Granular Backfill in accordance with Oregon Standards for Specifications for Construction[16]. The imported granular material should be crushed rock or crushed gravel that is fairly well graded between coarse and fine, contains no deleterious materials, has a maximum particle size of one (1) inch, and has less than 5 percent by weight passing the U.S. Standard No. 200 Sieve. The granular fill should be placed in 9-inch lifts and compacted to at least 95 percent of the maximum dry density, as determined by ASTM D1557. Compaction should be checked using either a nuclear gauge or Sand Cone Test, as determined by ASTM D1556, and by a proof-roll.

Where imported granular material is placed over soft-soil subgrades, we recommend a geotextile be placed as a barrier between the subgrade and imported granular material. Depending on site conditions, the geotextile should meet the specifications of ODOT SS 02320.10 – Geosynthetics, Acceptance, for soil separation or stabilization. The geotextile should be installed in conformance with ODOT SS 00350.40 – Geosynthetic Construction, General Requirements.

A CGS engineering geologist (or their representative) should confirm suitable bearing conditions and evaluate all footing subgrades. Observations should also confirm that loose or soft materials, organics, unsuitable fill, and old topsoil zones are removed.

[16] Oregon Standards for Specifications for Construction, 2021. Oregon Department of Transportation. Viewed online at https://www.oregon.gov

Localized deepening of footing excavations may be required to penetrate any deleterious materials.

Probing

Following stripping, excavation, and site preparation and prior to placing structural fill, the exposed excavated surface and the footing or slab subgrade should be evaluated by probing. A member of our geotechnical staff should carry out the probing. Soft or loose zones identified during the field evaluation should be compacted to an unyielding condition or be excavated and replaced with structural fill.

If construction occurs during wet weather, we recommend that a thin layer of compacted crushed rock be placed over the footing subgrades to help protect them from disturbance due to foot traffic and the elements.

Setback

We recommend that proposed structures be set back a minimum distance of 20.0 feet from the descending slopes. It is our opinion that this is an absolute minimum setback. We recommend that you contact CGS prior to the construction phase of the site preparation to help determine and locate exact setback distances.

DRAINAGE

Surface and Groundwater

We anticipate that groundwater will rise during periods of heavy rainfall. This, coupled with surface runoff, may cause the outboard portion of the building pad and slope to become unstable and to fail.

We recommend that the site be graded to prevent ponding and to provide positive drainage away from the proposed structures and from all descending slopes.

Wet-Weather/Wet-Soil Conditions

The soils at the site are susceptible to disturbance during the wet season. Trafficability or grading operations within the exposed soils may be difficult during or after extended wet periods or when the moisture content of the soils is more than a few percentage points above optimum. Soils disturbed during site-preparation activities, or soft or loose zones identified during probing, should be removed and replaced with compacted structural fill.

CONSTRUCTION OBSERVATIONS

Satisfactory pavement and earthwork performance depends on the quality of construction. Sufficient monitoring of the contractor's activities is a key part of determining that the work is completed in accordance with the construction drawings and specifications. We recommend that a representative from CGS be retained to observe general excavation, stripping, fill placement, footing subgrades, and subgrades and base rock for floor slabs and pavements.

Subsurface conditions observed during construction should be compared with those encountered during the subsurface explorations. Recognition of changed conditions requires experience; therefore, qualified personnel should visit the site with sufficient frequency to detect whether subsurface conditions change significantly from those anticipated.

LIMITATIONS

Cascadia Geoservices, Inc.'s (CGS) professional services are performed, findings obtained, and recommendations prepared in accordance with generally accepted principles and practices for engineering geologists. No other warranty, express or implied, is made. The Customer acknowledges and agrees that:

1. CGS is not responsible for the conclusions, opinions, or recommendations made by others based upon our findings.
2. This report has been prepared for the exclusive use of the addressee, and their agents, and is intended for their use only. It is not to be photographed, photocopied, or similarly reproduced, in total or in part, without the expressed written consent of the Customer and Cascadia Geoservices, Inc.
3. The opinions, comments, and conclusions presented in this report are based upon information derived from our literature review, historical topographic map and aerial photograph review, and on our site observations. The scope of our services is intended to evaluate soil and groundwater (ground) conditions within the primary influence or influencing the proposed development area. Our services do not include an evaluation of potential ground conditions beyond the depth of our explorations or agreed-upon scope of our work. Conditions between or beyond our site observations may vary from those encountered.

4. Recommendations provided herein are based in part upon project information provided to CGS. If the project information is incorrect or if additional information becomes available, the correct or additional information should be immediately conveyed to CGS for review.
5. The scope of services for this subsurface exploration and report did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous substances in the soil, surface water, or groundwater at this site.
6. If there is a substantial lapse of time between the submission of this report and the start of work at the site, if conditions have changed due to natural causes or construction operations at or adjacent to the site, or if the basic project scheme is significantly modified from that assumed, this report should be reviewed to determine the applicability of the conclusions and recommendations. Land use, site conditions (both on and off site), or other factors may change over time and could materially affect our findings. Therefore, this report should not be relied upon after two years from its issue, or in the event that the site conditions change.
7. The work performed by the Consultant is not warrantied or guaranteed.
8. There is an assumed risk when building on marginal ground, sites subject to flooding, or adjacent to bluffs, sea cliffs, or on steep ground.
9. The Consultant's work will be performed to the standards of the engineering and geology professions and will be supervised by licensed professionals. Attempts at improving marginal ground, sites subject to flooding, or adjacent to bluffs, sea cliffs, or on steep ground supporting the Customer's property may, through acts of God or otherwise, be temporary and that marginal ground, sites subject to flooding, or adjacent to bluffs, sea cliffs, or on steep ground may continue to degrade over time. The Customer hereby waives any claim that they may have against CGS for any claim, whether based on personal injury, property damage, economic loss, or otherwise, for any work performed by CGS for the Customer relating to or arising out of attempts to stabilize the marginal ground, sites subject to flooding, or bluffs, sea cliffs, or steep ground located at the Customer's property identified hereunder. It is further understood and agreed that continual monitoring of the Customer's property may be required, and that such

monitoring is done by sophisticated monitoring instruments used by CGS. It is further understood and agreed that repairs may require regular and periodic maintenance by the Customer.

10. The Customer shall indemnify, defend, at the Customer's sole expense, and hold harmless CGS, affiliated companies of CGS, its partners, joint ventures, representatives, members, designees, officers, directors, shareholders, employees, agents, successors, and assigns (Indemnified Parties) from and against any and all claims for bodily injury or death, damage to property, demands, damages, and expenses (including but not limited to investigative and repair costs, attorney's fees and costs, and consultant's fees and costs) (hereinafter "Claims") which arise or are in any way connected with the work performed, materials furnished, or services provided under this Agreement by CGS or its agents.

PROFESSIONAL QUALIFICATIONS

To review our professional qualifications, please visit our website at www.CascadiaGeoservices.com.

Sincerely,

Cascadia Geoservices, Inc.

Eric Oberbeck, RG/CEG
Expires June 1, 2022

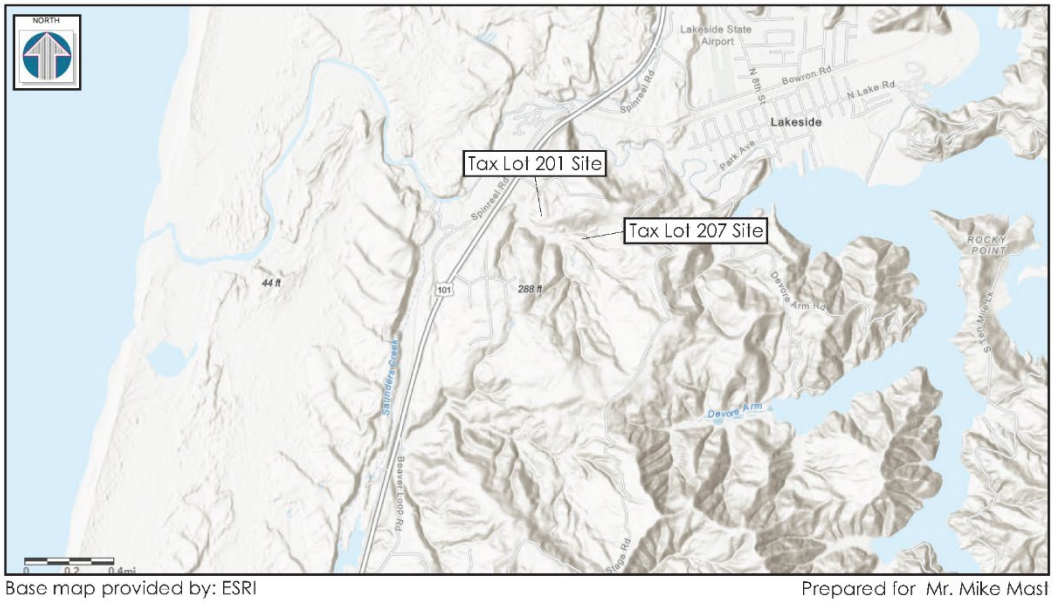
Adam Fulthorpe, Staff Geologist

FIGURES

Figure 1, Location Map
Figure 2, Site Map Tax Lot 201
Figure 3, Site Map Tax Lot 207

ATTACHMENTS

Attachment 1 – Summary Test Pit Logs
Attachment 2 – Lab Analysis Reports



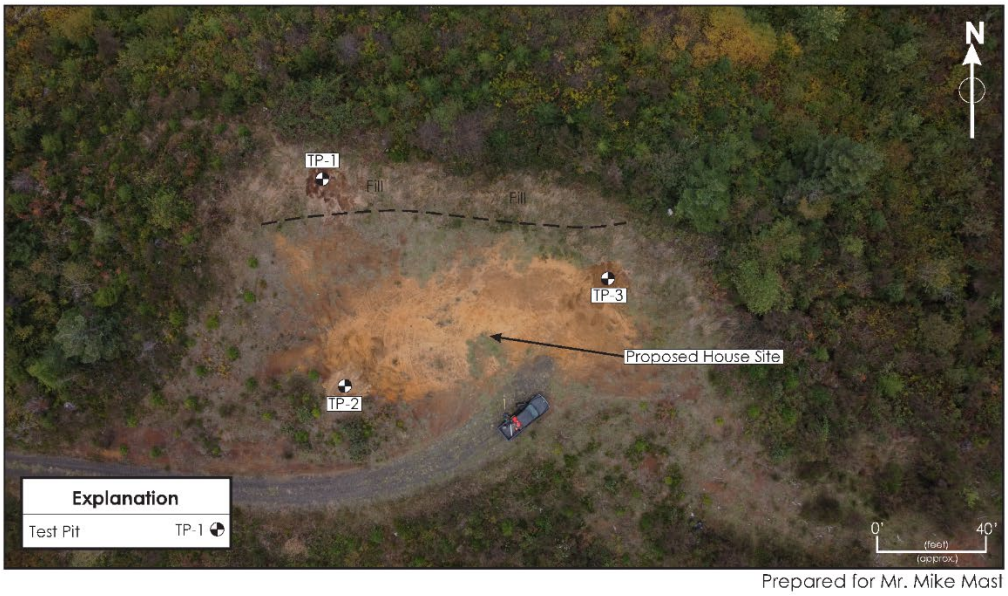
Base map provided by: ESRI

Prepared for Mr. Mike Mast

CASCADIA Geoservices Geologists and Engineers	Project: 21121 November 2021	**Location Map** Geotechnical Site Evaluation Wind Song Lane, North Bend, Oregon 97459 T23S R13W Sec 13, Tax Lot 201and 207	**Figure 1**

Prepared for Mr. Mike Mast

CASCADIA Geoservices Geologists and Engineers	Project: 21121 November 2021	**Site Map** Geotechnical Site Evaluation Wind Song Lane, North Bend, Oregon 97459 T23S R13W Sec 13, Tax Lot 201	**Figure 2**



Prepared for Mr. Mike Mast

CASCADIA Geoservices Geologists and Engineers	Project: 21121 November 2021	**Site Map** Geotechnical Site Evaluation Wind Song Lane, North Bend, Oregon 97459 T23S R13W Sec 13, Tax Lot 207	**Figure 3**

TABLE 1 **SOILS** **ATTACHMENT 1**

FIELD CLASSIFICATIONS

SOIL DESCRIPTION FORMAT	
(1) consistency,	(9) structure,
(2) color,	(10) cementation,
(3) grain size,	(11) reaction to HCL,
(4) classification name [secondary PRIMARY additional];	(12) odor,
(5) moisture,	(13) groundwater seepage,
(6) plasticity of fines,	(14) caving,
(7) angularity	**(15) (unit name and/or origin),**
(8) shape,	

Note: Bolded items are the minimum required elements for a soil description.

1. CONSISTENCY - COARSE-GRAINED

TERM	SPT (140-LB. HAMMER)[1]	D & M SAMPLER (140-LB. HAMMER)[1]	DYNAMIC CONE PENETROMETER PENETRATION RATE SAMPLER (DCP)[4,5,6]	FIELD TEST (USING ½-INCH REBAR)
Very loose	0 – 4	0 – 11	0 – 2	Easily penetrated when pushed by hand
Loose	4 – 10	11 – 26	2 – 5	Easily penetrated several inches when pushed by hand
Medium dense	10 – 30	26 – 74	6 – 31	Easily to moderately penetrated when driven by 5 lb. hammer
Dense	30 – 50	74 – 120	32 – 42	Penetrated 1-foot with difficulty when driven by 5 lb. hammer
Very dense	>50	>120	>43	Penetrated only few inches when driven by 5 lb. hammer

1. CONSISTENCY - FINE-GRAINED

TERM	SPT (140-LB. HAMMER)[1]	D & M SAMPLER (140-LB. HAMMER)[1]	DYNAMIC CONE PENETROMETER PENETRATION RATE SAMPLER (DCP)[5,6]	POCKET PEN.[2]	TORVANE[3]	FIELD TEST
Very soft	<2	<3	<2	<0.25	<0.13	Easily penetrated several inches by fist
Soft	2 – 4	3 – 6	2 – 3	0.25 – 0.5	0.13 – 0.25	Easily penetrated several inches by thumb
Medium stiff	5 – 8	7 – 12	4 – 7	0.50 – 1.0	0.25 – 0.5	Can be penetrated several inches by thumb with moderate effort
Stiff	9 – 15	13 – 25	8 – 16	1.0 – 2.0	0.5 – 1.0	Readily indented by thumb but penetrated only with great effort
Very stiff	16 – 30	26 – 65	17 – 27	2.0 – 4.0	1.0 – 2.0	Readily indented by thumbnail
Hard	>30	>65	>28	>4.0	>2.0	Difficult to indent by thumbnail

1 Standard penetration resistance (SPT N-value); Dames and Moore (D & M) sampler, number of blows/ft. for last 12" and 30" drop. Unconfined
2 compressive strength with pocket penetrometer; in tons per square foot (tsf).
3 Undrained shear strength with torvane (tsf).
4 Up to maximum medium-size sand grains only.
5 Dynamic cone penetration resistance; number of blows/inch.
6 Reference: George F. Sowers et. al. "Dynamic Cone for Shallow In-Situ Penetration Testing of In-Situ Soils, ASTM STP 399, ASTM, , pg. 29. 1966.

2. COLOR

Use common colors. For combinations use hyphens. To describe tint use modifiers: pale, light, and dark. For color variations use adjectives such as "mottled" or "streaked". Soil color charts may be required by client. **Examples:** red-brown; or orange-mottled pale green; or dark brown.

3. GRAIN SIZE

DESCRIPTION		SIEVE*	OBSERVED SIZE
boulders		–	>12"
cobbles		–	3" – 12"
gravel	coarse	¾" – 3"	¾" – 3"
	fine	#4 – ¾"	4.75 mm (0.19") – ¾"
sand	coarse	#10 – #4	2.0 – 4.75 mm
	medium	#40 – #10	0.425 – 2.0 mm
	fine	#200 – #40	0.075 – 0.425 mm
fines		<#200	<0.075 mm

4. CLASSIFICATION NAME

* Use of #200 field sieve encouraged for estimating percentage of fines.

	NAME AND MODIFIER TERMS	CONSTITUENT PERCENTAGE	CONSTITUENT TYPE
Coarse grained	GRAVEL, SAND, COBBLES, BOULDERS	>50%	PRIMARY
	sandy, gravelly, cobbley, bouldery	30 – 50%	secondary
	silty, clayey*	15 – 50%	
	with (gravel, sand, cobbles, boulders)	15 – 30%	additional
	with (silt, clay)*	5 – 15%	
	trace (gravel, sand, cobbles, boulders)		
	trace (silt, clay)*	<5%	
Fine grained	CLAY, SILT*	>50%	PRIMARY
	silty, clayey*	30 – 50%	secondary
	sandy, gravelly		
	with (sand, gravel, cobbles, boulders)	15 – 30%	additional
	with (silt, clay)*		
	trace (sand, gravel, cobbles, boulders)	5 – 15%	
	trace (silt, clay)*		
Organic	PEAT	50 – 100%	PRIMARY
	organic (soil name)	15 – 50%	secondary
	(soil name) with some organics	5 – 15%	additional

* For classification and naming fine-grained soil: dry strength, dilatancy, toughness, and plasticity testing are performed (see Describing Fine-Grained Soil page 2). Confirmation requires laboratory testing (Atterberg limits and hydrometer).

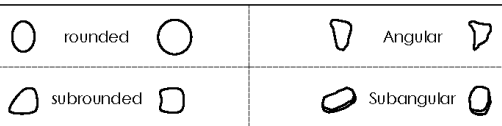
TABLE 1 **SOILS**

FIELD CLASSIFICATIONS

5. MOISTURE	
TERM	FIELD TEST
dry	absence of moisture, dusty, dry to touch
moist	contains some moisture
wet	visible free water, usually saturated

6. PLASTICITY OF FINES
See "Describing fine-grained Soil" on Page 2.

7. ANGULARITY



8. Shape	
TERM	OBSERVATION
flat	particles with width/thickness ratio >3
elongated	particles with length/width ratio >3
flat and elongated	particles meet criteria for both flat and elongated

9. STRUCTURE	
TERM	OBSERVATION
stratified	alternating layers >1 cm thick, describe variation
laminated	alternating layers <1 cm thick, describe variation
fissured	contains shears and partings along planes of weakness
slickensides	partings appear glossy or striated
blocky	breaks into lumps, crumbly
lensed	contains pockets of different soils, describe variation
homogenous	same color and appearance throughout

10. CEMENTATION	
TERM	FIELD TEST
weak	breaks under light finger pressure
moderate	breaks under hard finger pressure
strong	will not break with finger pressure

11. REACTION TO HCL	
TERM	FIELD TEST
none	no visible reaction
weak	bubbles form slowly
strong	vigorous reaction

12. ODOR
Describe odor as organic; or potential non-organic* *Needs further investigation

13. GROUNDWATER SEEPAGE
Describe occurrence (i.e. from soil horizon, fissures with depths) and rate: slow (<1 gpm); moderate (1-3 gpm); fast (>3 gpm)

14. CAVING			
Describe occurrence (depths, soils) and amount with term			
Test Pits	minor (<1 ft³)	moderate (1-3 ft³)	Severe (>3 ft³)

15. (UNIT NAME/ORIGIN)
Name of stratigraphic unit (e.g. Willamette Silt), and/or origin of deposit (Topsoil, Alluvium, Colluvium, Decomposed Basalt, Loess, Fill, etc.).

DESCRIBING FINE-GRAINED SOIL				
	FIELD TEST			
NAME	PLASTICITY (A BELOW)	DRY STRENGTH (B BELOW)	DILATANCY REACTION (C BELOW)	TOUGHNESS OF THREAD (D BELOW)
SILT	non-plastic, low	none, low	rapid	low
SILT with some clay	low	low, medium	rapid, slow	low, medium
clayey SILT	low, medium	medium	slow	medium
silty CLAY	medium	medium, high	slow, none	medium, high
CLAY with some silt	high	High	none	high
CLAY	high	very high	none	high
organic SILT	non-plastic, low	low, medium	slow	low, medium
organic CLAY	medium, high	medium to very high	none	medium, high

A. PLASTICITY	
TERM	OBSERVATION
non-plastic	A 1/8" (3-mm) thread cannot be rolled at any water content.
low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be re-rolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
high	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be re-rolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.

B. DRY STRENGTH	
TERM	OBSERVATION
none	Dry specimen crumbles into powder with mere pressure of handling.
low	Dry specimen crumbles into powder with some finger pressure.
medium	Dry specimen breaks into pieces or crumbles with considerable finger pressure.
high	Dry specimen cannot be broken with finger pressure. Will break into pieces between thumb and a hard surface.
very high	Dry specimen cannot be broken between thumb and a hard surface.

C. DILATANCY REACTION	
TERM	OBSERVATION
none	No visible change in the specimen.
slow	Water appears slowly on surface of specimen during shaking and doesn't disappear or disappears slowly upon squeezing.
rapid	Water appears quickly on the surface of the specimen during shaking and disappears quickly upon squeezing.

D. TOUGHNESS OF THREAD	
TERM	OBSERVATION
low	Only slight hand pressure is required to roll the thread near the plastic limit. The thread and lump are weak and soft.
medium	Medium pressure is required to roll the thread to near the plastic limit. The thread and lump have medium stiffness.
high	Considerable hand pressure is required to roll the thread to near the plastic limit. The thread and lump have very high stiffness.

Rock Descriptions

Scale of Rock Strength

Description	Designation	Unconfined Compressive Strength, psi	Unconfined Compressive Strength, MPa	Field Identification
Extremely weak rock	R0	35 – 150	0.25 – 1	Indented by thumbnail.
Very weak rock	R1	150 – 725	1 – 5	Crumbles under firm blows with point of geology pick; can be peeled by a pocket knife.
Weak rock	R2	725 – 3,500	5 – 25	Can be peeled with a pocket knife; shallow indentation made by firm blow with point of geological hammer.
Medium weak rock	R3	3,500 – 7,000	25 – 50	Cannot by scraped or peeled with a pocket knife; specimen can be fractured with a single firm blow of geological hammer.
Strong rock	R4	7,000 – 15,000	50 – 100	Specimen requires more than one blow with a geological hammer to fracture it.
Very strong rock	R5	15,000 – 36,000	100 – 250	Specimen requires many blows of geological hammer to fracture it.
Extremely strong rock	R6	> 36,000	> 250	Specimen can only be chipped with geological hammer.

Descriptive Terminology for Joint Spacing or Bedding

Descriptive Term	Spacing of Joints	
Very close	Less than 2 inches	< 50 mm
Close	2 inches - 1 foot	50 mm – 300 mm
Moderately close	1 foot - 3 feet	300 mm – 1 m
Wide	3 feet -10 feet	1 m – 3 m
Very wide	Greater than 10 feet	> 3 m

Descriptive Terminology for Vesicularity

Descriptive Term	Percent voids by volume
Dense	< 1%
Slightly vesicular	1 – 10%
Moderately vesicular	10 – 30%
Highly vesicular	30 – 50%
Scoriaceous	> 50%

Correlation of RQD and Rock Quality

Rock Quality Descriptor	RQD Value
Very poor	0 – 25
Poor	25 - 50
Fair	50 - 75
Good	75 – 90

TABLE 1 **ROCKS**
FIELD CLASSIFICATIONS

Scale of Rock Weathering		
Stage	**Description**	**Quality Distinction**
Fresh	Rock is fresh, crystals are bright, few joints may show slight staining as a result of ground water.	No discoloration
Very Slight	Rock is generally fresh, joints are stained, some joints may have thin clay coatings, crystals in broken face show bright.	Discoloration only on major discontinuity surfaces [1]
Slight	Rock is generally fresh, joints are stained and discoloration extends into rock up to 1 in. Joints may contain clay. In granitoid rocks some feldspar crystals are dull and discolored. Rocks ring under hammer if crystalline.	Discoloration on all discontinuity surfaces and on rock
Moderate	Significant portions of rock show discoloration and weathering effects. In granitoid rocks, most feldspars are dull and discolored; some are clayey. Rock has dull sound under hammer and shows significant loss of strength as compared with fresh rock.	Decomposition and/or disintegration < 50% of rock [2]
Moderately Severe	All rock, except quartz discolored or stained. In granitoid rocks, all feldspars dull and discolored and majority show kaolinization. Rock shows severe loss of strength and can be excavated with geologist's pick. Rock goes "clunk" when struck.	Decomposition and/or disintegration > 50%, but not complete
Severe	All rock, except quartz, discolored or stained. Rock "fabric" is clear and evident, but reduced in strength to strong soil. In granitoid rocks, all feldspars kaolinized to some extent. Some fragments of harder rock usually left, such as corestones in basalt.	
Very Severe	All rock, except quartz, discolored or stained. Rock "fabric" is discernible, but mass effectively reduced to "soil" with only fragments of harder rock remaining.	Decomposition and/or disintegration 100% with structure/fabric intact
Complete	Rock is reduced to "soil". Rock "fabric" is not discernible, or only in small scattered locations. Quartz may be present as dikes or stringers.	Decomposition and/or disintegration 100% with structure/fabric destroyed

NOTES: [1] Discontinuities consist of any natural break (joint, fracture or fault) or plane of weakness (shear or gouge zone, bedding plane) in a rock mass

[2] Decomposition refers to chemical alteration of mineral grains; disintegration refers to mechanical breakdown

[3] Stage and description from ASCE Manual No. 56 (1976), quality distinction from Murray (1981)

Rock strength scale taken from Duncan C. Wyllie, "Foundations on Rock, Second Edition, 1999".

TABLE 2

KEY TO TEST PIT AND BORING LOG SYMBOLS

SAMPLE NUMBER ACRONYMS/WATER SYMBOLS

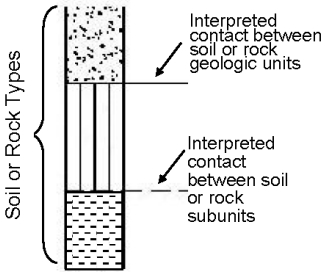
DM - Dames & Moore Sampler
GR - Grab or Bulk Samples
OS - Osterberg (Piston) Sampler
C - Rock Core
SA - Screen Air Sampling
SW - Screen Water Sampling
SS - SPT Standard Penetration Drive Sampler (ASTM D1586)
ST - Shelby Tube Push Sampler (ASTM D1587)

Water Level During Drilling/ Excavation

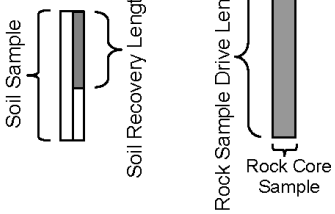
Water Level on Date Measured

LOG GRAPHICS/INSTALLATIONS

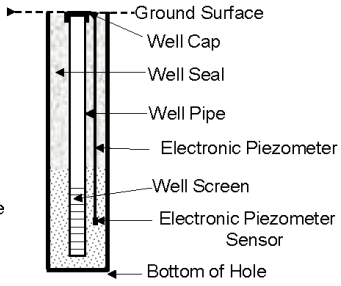
Soil and Rock



Soil and Rock Sampling Symbols



Instrumentation Detail



GEOTECHNICAL FIELD & LABORATORY TESTING/ACRONYM EXPLANATIONS

ATT	Atterberg Limits	OC	Organic Content
AMSL	Above Mean Sea Level	OD	Outside Diameter
BGS	Below ground surface	P200	Percent Passing U.S. Standard No. 200 Sieve
CBR	California Bearing Ratio	PI	Plasticity Index
CON	Consolidation	PL	Plasticity Limit
DCP	Dynamic Cone Penetrometer	PP	Pocket Penetrometer
DD	Dry Density	RES	Resilient Modulus
DS	Direct Shear	SC	Sand Cone
GPS	Global Positioning System	SIEV	Sieve Gradation
HCL	Hydrochloric Acid	SP	Static Penetrometer
HYD	Hydrometer Gradation	TOR	Torvane
kPa	kiloPascal	UC	Unconfined Compressive Strength
LL	Liquid Limit	VS	Vane Shear

ENVIRONMENTAL TESTING/ACRONYM EXPLANATIONS

ATD	At Time of Drilling	ND	Not Detected
BGS	Below ground surface	NS	No Sheen
CA	Sample Submitted for Chemical Analysis	PID	Photoionization Detector Headspace Analysis
HS	High Sheen		
MS	Moderate Sheen	PPM	Parts Per Million

Rev. 3/2019

ATTACHMENT 1

TEST PITS WEST

CASCADIA GEOSERVICES
PROJECT NO: 21121

MAST WEST SITE
WIND SONG LANE
NORTH BEND, OREGON 97459

Cascadia Geoservices, Inc.
190 6th Street
Port Orford, OR 97465
D. 541-332-0433
C. 541-655-0021

DYNAMIC PENETROMETER (DP or DCP)
STATIC PENETROMETER (SP)
MOISTURE CONTENT (%)
INDEX PROPERTIES (IP)
NUCLEAR DENSITY (ND)
DRY DENSITY (DD)
SIEVE (SIEV)

DEPTH IN FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE/ SAMPLE ID	COMMENTS
TP-1W		SURFACE CONDITIONS: Damp				**TP-1W**
0.0		Very loose to loose, reddish-brown, silty fine SAND; moist	0.0	P200 DCPs	SS-1W	W% = 45.0% P200 = 46%
3.0		Medium dense, light reddish-brown, fine SAND; moist, strong cementation (Sandstone) **COALEDO FORMATION** becomes tannish-brown	3.0	P200 DCPs	SS-2W	W% = 12.0% P200 = 2%
5.5		Final depth 5.5 feet bgs; test pit backfilled with uncompacted excavated material	5.5	P200 DCPs	SS-3W	W% = 10.0% P200 = 3% No groundwater or caving observed to the depth of exploration
TP-1W		Location: Lat: 43.569614, Long: -124.195773 (See Figure 2); Elevation: 80 feet (Google Earth)				Date Completed: 10/16/2021
TP-2W		SURFACE CONDITIONS: Damp				**TP-2W**
0.0		Medium dense, tannish-brown, silty fine SAND; moist, moderate cementation (Sandstone) **COALEDO FORMATION**	0.0	P200 DCPs	SS-4W	W% = 39.0% P200 = 29%
5.0		Final depth 5.0 feet bgs; test pit backfilled with uncompacted excavated material	5.0	P200 DCPs	SS-5W	W% = 38.0% P200 = 24% No groundwater or caving observed to the depth of exploration
TP-2W		Location: Lat: 43.569573, Long: -124.195521 (See Figure 2); Elevation: 80 feet (Google Earth)				Date Completed: 10/16/2021

EXCAVATION METHOD: Mini Excavator
EXCAVATED BY: Natural Origins, LLC
LOGGED BY: A. Fulthorpe

ALL EXPLORATIONS-2 PER PAGE \MASTWESTSITE_TP1W-3W_101921.GPJ PRINT DATE 11/5/21

TEST PIT WEST

CASCADIA GEOSERVICES
PROJECT NO: 21121

MAST WEST SITE
WIND SONG LANE
NORTH BEND, OREGON 97459

Cascadia Geoservices, Inc.
190 6th Street
Port Orford, OR 97465
D. 541-332-0433
C. 541-655-0021

◆ DYNAMIC PENETROMETER (DP or DCP)
■ STATIC PENETROMETER (SP)
● MOISTURE CONTENT (%)
INDEX PROPERTIES (IP)
NUCLEAR DENSITY (ND)
DRY DENSITY (DD)
SIEVE (SIEV)

DEPTH IN FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE/ SAMPLE ID	0 25 50	COMMENTS
TP-3W		SURFACE CONDITIONS: Damp					**TP-3W**
0.0		Loose, reddish-brown, fine sandy SILT; moist, with roots	0.0	P200	SS-6W	●	P200 = 59% W% = 48.0%
1.0							
2.0		becomes light reddish-brown with no roots		P200 DCP	SS-7W	4 ◆ ●	W% = 33.0% P200 = 55%
3.0							
4.0		Medium stiff, light reddish-brown, fine sandy SILT; moist (Decomposed Siltstone)	4.0	P200 DCPs	SS-8W	6 7 ◆	●W% = 53.0% P200 = 79%
5.0		**COALEDO FORMATION**					
6.0		Final depth 6.0 feet bgs; test pit backfilled with uncompacted excavated material	6.0	DCPs	SS-9W	6 7 ◆	No groundwater or caving observed to the depth of exploration
7.0							
8.0							
9.0							

TP-3W Location: Lat: 43.569831, Long: -124.195575 (See Figure 2); Elevation: 80 feet (Google Earth) Date Completed: 10/16/2021

EXCAVATION METHOD: Mini Excavator
EXCAVATED BY: Natural Origins, LLC

LOGGED BY: A. Fulthorpe

ALL EXPLORATIONS-2 PER PAGE \MAST\WEST\SITE_TP1W-3W_101921.GPJ PRINT DATE 11/5/21

ATTACHMENT 1

TEST PITS EAST

CASCADIA GEOSERVICES
PROJECT NO: 21121

MAST EAST SITE
WIND SONG LANE
NORTH BEND, OREGON 97459

Cascadia Geoservices, Inc.
190 6th Street
Port Orford, OR 97465
O. 541-332-0433
C. 541-655-0021

DYNAMIC PENETROMETER (DP or DCP)
STATIC PENETROMETER (SP)
MOISTURE CONTENT (%)
INDEX PROPERTIES (IP)
NUCLEAR DENSITY (ND)
DRY DENSITY (DD)
SIEVE (SIEV)

DEPTH IN FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE/ SAMPLE ID	COMMENTS
TP-1E		SURFACE CONDITIONS: Damp			0 25 50	**TP-1E**
0.0		Loose, dark reddish-brown and black, silty fine SAND; moist, with charcoal and large roots (FILL)	0.0	P200 DCPs	SS-1E 2 3	W% = 48.0% P200 = 33%
1.0						
2.0						
3.0						
4.0				P200 DCPs	SS-2E 2 3	W% = 48.0% P200 = 42%
5.0		Medium dense, tannish-brown, silty fine SAND; moist (Sandstone)	5.0	P200 DCPs	SS-3E 6 7	W% = 46.0% P200 = 36%
6.0		**COALEDO FORMATION**	6.0			No groundwater or caving observed to the depth of exploration
7.0		Final depth 6.0 feet bgs; test pit backfilled with uncompacted excavated material				
8.0						
9.0						
TP-1E		Location: Lat: 43.568414, Long: -124.191924 (See Figure 2); Elevation: 95 feet (Google Earth)				Date Completed: 10/16/2021
TP-2E		SURFACE CONDITIONS: Damp			0 25 50	**TP-2E**
0.0		Very loose, tannish-orangish-brown and light gray, silty CLAY; moist	0.0	P200 DCPs	SS-4E 1 2	W% = 36.0% P200 = 83%
1.0						
2.0						
3.0						
4.0		becomes soft with some fine-grained sand		P200 DCPs	SS-5E 2 3	W% = 49.0% P200 = 71%
5.0						
6.0		Medium dense, tannish-brown, clayey SAND; moist (Sandstone)	6.0	P200 DCPs	SS-6E 4 6	W% = 47.0% P200 = 44%
7.0		**COALEDO FORMATION**	7.0			No groundwater or caving observed to the depth of exploration
8.0		Final depth 7.0 feet bgs; test pit backfilled with uncompacted excavated material				
9.0						
TP-2E		Location: Lat: 43.568218, Long: -124.191952 (See Figure 2); Elevation: 95 feet (Google Earth)				Date Completed: 10/16/2021

EXCAVATION METHOD: Mini Excavator
EXCAVATED BY: Natural Origins, LLC

LOGGED BY: A. Fulthorpe

ALL EXPLORATIONS-2 PER PAGE \MASTEASTSITE_TP1E-3E_101921.GPJ PRINT DATE 11/5/21

TEST PIT EAST

CASCADIA GEOSERVICES
PROJECT NO: 21121

MAST EAST SITE
WIND SONG LANE
NORTH BEND, OREGON 97459

Cascadia Geoservices, Inc.
190 6th Street
Port Orford, OR 97465
D. 541-332-0433
C. 541-655-0021

DYNAMIC PENETROMETER (DP or DCP)
STATIC PENETROMETER (SP)
MOISTURE CONTENT (%)
INDEX PROPERTIES (IP)
NUCLEAR DENSITY (ND)
DRY DENSITY (DD)
SIEVE (SIEV)

DEPTH IN FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE/ SAMPLE ID	TP-3E 0 25 50 TP-3E	COMMENTS
0.0		SURFACE CONDITIONS: Damp					
0.0–4.0		Loose, reddish-brown, silty fine SAND; moist, with roots becomes with no roots	0.0	P200 DCPs	SS-7E	3 4	W% = 36.0% P200 = 33%
4.0–6.0		Loose to medium dense, light reddish-brown, fine SAND; moist (Sandstone) **COALEDO FORMATION**	4.0	P200 DCPs	SS-8E	4 5	W% = 35.0% P200 = 30%
5.0				P200 DCPs	SS-9E	4 5	W% = 24.0% P200 = 22%
6.0		Final depth 6.0 feet bgs; test pit backfilled with uncompacted excavated material	6.0				No groundwater or caving observed to the depth of exploration
7.0							
8.0							
9.0							

TP-3E Location: Lat: 43.568267, Long: -124.191578 (See Figure 2); Elevation: 95 feet (Google Earth) Date Completed: 10/16/2021

EXCAVATION METHOD: Mini Excavator
EXCAVATED BY: Natural Origins, LLC

LOGGED BY: A. Fulthorpe

ALL EXPLORATIONS-2 PER PAGE \MASTEASTSITE_TP1E-3E_101921.GPJ PRINT DATE 11/5/21

CASCADIA GEOSERVICES, INC.
Material Laboratory
190 6th St
Port Orford, Oregon 97465
P.541-332-0433

Project No.:	21121 - West
Testing Date:	October 22, 2021
Tests Performed:	Water Content, Soil Finer Than 75µm
Standards Followed:	D2216, D1140
Performed By:	AF

Notes:

Water Content (D2216)

Sample Name	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8					
Pan Letter	A	B	C	D	E	F	G	H					
M_c = Mass of Container, g	1.85	1.81	1.85	1.86	1.83	1.85	1.86	1.84					
M_{cms} = Mass of Container and Moist Specimen, g	17.65	28.63	24.20	25.15	22.18	21.77	21.39	24.54					
M_{cds} = Mass of Container and Dry Specimen, g	12.77	25.80	22.11	18.59	16.54	15.33	16.58	16.70					
M_s = Mass of Oven Dry Specimen = M_{cds} - M_c, g	10.92	23.99	20.26	16.73	14.71	13.48	14.72	14.86					
M_w = Mass of Water = M_{cms} - M_{cds}, g	4.88	2.83	2.09	6.56	5.64	6.44	4.81	7.84					
w = Water Content = M_w/M_s X 100%	45%	12%	10%	39%	38%	48%	33%	53%					

% Finer Than 75µm (D1140)

Sample Name	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8					
Pan Letter	A	B	C	D	E	F	G	H					
M_c = Mass of Container, g	1.85	1.85	1.86	1.85	1.85	1.88	1.87	1.84					
M_{crs} = Mass of Container and Retained Specimen, g	16.65	37.08	31.80	25.17	23.59	16.07	15.68	10.79					
M_s = Mass of Oven Dry Specimen = M_{cds} - M_c, g	10.92	23.99	20.26	16.73	14.71	13.48	14.72	14.86					
M_r = Mass of Retained Specimen = M_{crs} - M_c, g	5.92	23.62	19.57	11.84	11.21	5.46	6.68	3.19					
% Finer Than 75µm = (M_s - M_r)/M_s X 100%	46%	2%	3%	29%	24%	59%	55%	79%					

CASCADIA GEOSERVICES, INC.
Material Laboratory
190 6th St
Port Orford, Oregon 97465
P.541-332-0433

Project No.:	21121 - East
Testing Date:	October 22, 2021
Tests Performed:	Water Content, Soil Finer Than 75µm
Standards Followed:	D2216, D1140
Performed By:	AF

Notes:

Water Content (D2216)

Sample Name	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9				
Pan Letter	A	B	C	D	E	F	G	H	I				
M_c = Mass of Container, g	1.85	1.85	1.85	1.87	1.88	1.85	1.86	1.85	1.84				
M_{cms} = Mass of Container and Moist Specimen, g	17.57	18.92	22.82	24.05	26.12	19.52	21.42	23.20	22.88				
M_{cds} = Mass of Container and Dry Specimen, g	12.44	13.40	16.20	18.13	18.16	13.83	16.22	17.61	18.79				
M_s = Mass of Oven Dry Specimen = M_{cds} - M_c, g	10.59	11.55	14.35	16.26	16.28	11.98	14.36	15.76	16.95				
M_w = Mass of Water = M_{cms} - M_{cds}, g	5.13	5.52	6.62	5.92	7.96	5.69	5.20	5.59	4.09				
w = Water Content = M_w/M_s X 100%	48%	48%	46%	36%	49%	47%	36%	35%	24%				

% Finer Than 75µm (D1140)

Sample Name	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9				
Pan Letter	A	B	C	D	E	F	G	H	I				
M_c = Mass of Container, g	1.85	1.85	1.86	1.85	1.85	1.84	1.87	1.84	1.84				
M_{crs} = Mass of Container and Retained Specimen, g	18.59	15.86	18.53	6.34	13.09	14.45	15.81	19.38	22.72				
M_s = Mass of Oven Dry Specimen = M_{cds} - M_c, g	10.59	11.55	14.35	16.26	16.28	11.98	14.36	15.76	16.95				
M_r = Mass of Retained Specimen = M_{crs} - M_c, g	7.14	6.69	9.13	2.69	4.75	6.68	9.66	11.04	13.22				
% Finer Than 75µm = (M_s - M_r)/M_s X 100%	33%	42%	36%	83%	71%	44%	33%	30%	22%				

Cascadia Geoservices, Inc.
190 6th Street
PO Box 1026
Port Orford, Oregon 97465
D. 541-332-0433
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Email: info@cascadiageoservices.com
www: CascadiaGeoservices.com

January 17, 2022

Addendum to Preliminary Geotechnical Site Evaluation
97468 Wind Song Lane
North Bend, Oregon 97459
T23S, R13W, Sec 13, Tax Lots 201 and 207

Mr. Mike Mast
Smith River Land and Cattle Co.
19678 Lower Smith River Road
Reedsport, Oregon 97467
Sent via email: twinriversranch401@yahoo.com

Mr. Rodney Murphey
97468 Wind Song Ln
North Bend, OR 97459
Email: r.a.murff@gmail.com
CGS Project No. 21121

Dear Mr. Mast and Mr. Murphy,

Cascadia Geoservices, Inc. (CGS) is pleased to provide you with this Addendum to our Preliminary Geotechnical Site Evaluation dated November 8, 2021. Our understanding is based on an email from the Coos County Planning Department dated January 13, 2022. We understand based on the email from the county that both Tax Lots 201 and 207 are within the Beaches and Dunes Overlay Zone. Based on a review of the Coos County Map Atlas, Tax Lots 201 and 207 have been classified, in accordance with Goal 18 eligibility inventory, as "not eligible for protection." Most of the two tax lots are classified as older, stabilized dunes, in accordance with USDA findings. This agrees with our site evaluation. The exception to this is the east-west aligned drainage within the southern portion of Tax Lot 201. This area is classified as being "wet interdunes". Coos County has inventoried the site and surrounding areas to the east as being "suitable for most uses" the exception being the east-west aligned drainage which is classified as

having "Limited Suitability". We note that the area mapped by the county as having limited suitability for development is further north than the area identified by the USDA as being wet interdunes. We further note that are subsurface explorations encountered well cemented soils in 2 of the 3 test pits and only 3.0 feet of loose sand in the upper portion of one test pit.

Based on our site evaluation and on our experience working in this region, it is our opinion that developing the two sites with residential structures will not have an adverse impact on either the sites or adjacent areas. Further, it is our opinion that because the building sites are generally level and the soils well drained, there is no need for temporary or permanent stabilization programs and/or maintenance of new and existing vegetation other than those typically incorporated into residential landscaping. We infer that erosion and sediment control measures, where required, will be utilized during clearing, and leveling of the building sites in accordance with DEQ's Best Management Practices[1].

Further, we see no hazards to either life, public and private property, or to the natural environment by the proposed development. Finally, it is our professional opinion that the proposed development will not cause excessive destruction of desirable vegetation (including inadvertent destruction by moisture loss or root damage), cause exposure of stable and conditionally stable areas to erosion or modify current air wave patterns leading to beach erosion. If, after development, you decide to reclaim portions of the dune, we recommend that you seek advice from your local Soil Conservation Survey.

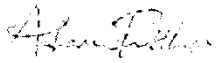
[1] Industrial Stormwater Best Management Practices Manual, February 2013. State of Oregon Department of Environmental Quality at https://www.oregon.gov

PROFESSIONAL QUALIFICATIONS

To review our professional qualifications, please visit our website at www.CascadiaGeoservices.com.

Sincerely,

Cascadia Geoservices, Inc.



Eric Oberbeck, RG/CEG
Expires June 1, 2022

Adam Fulthorpe, Staff Geologist