



COOS COUNTY CONDITIONAL USE LAND USE 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**

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)

Date Received: 8/15/2023 Receipt #: 140856049 Amount: \$1280.00 Received by: C. Carr

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

Applications shall be submitted by the property owner or a purchaser under a recorded land sale contract. "Property owner" means the owner of record, including a contract purchaser.

The application shall include the signature of all owners of the property.

A legal representative may sign on behalf of an owner upon providing evidence of formal legal authority to sign.

LAND INFORMATION

A. Property Owner(s) Lubin Fassnacht Revocable Living Trust Dated October 1, 2018

Mailing address: 2507 Corona Dr., Davis, CA. 95616

Phone: 530-848-6477

Email: cdfassnacht@gmail.com

Township: 29S Range: 15W Section: 1 ¼ Section: C 1/16 Section: B Tax lots: 404

Select Select Select Select Select

Tax Account Number(s): 2895204

Zone: Select Zone Controlled Development (CD)

Tax Account Number(s)

Please Select

B. Special Districts and Services

Water City Water

Sewage Disposal On-Site Septic

School Bandon

Fire District Bandon RFPD

C. Type of Application (s) please consult with staff to determine prior to submittal

- Administrative Conditional Use for _____
- Hearings Body Conditional Use for _____
- Historical, Cultural and Archaeological Resources, Natural Areas of Wilderness
- Beaches and Dunes
- Non-Estuarine Shoreland Boundary
- Significant Wildlife Habitat
- Natural Hazards
 - Flood
 - Landslide
 - Liquefaction
 - Erosion
 - Wildfires
- Airport Surfaces Overlay
- Variance to which standard _____

Include the supplemental application with all criteria addressed. If you require assistance with the criteria please contact a land use attorney or professional consultant. Property information may be obtained from a tax statement or can be found on the County Assessor's web page 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. PROPOSAL AND CRITERIA: A written statement of intent, attached to this application, with necessary supporting evidence which fully and factually describes the following:

1. Project summary and details including timelines.
2. 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. This shall be addressed on the supplemental criteria page (see staff for criteria).

II. PLOT PLAN OR SKETCH PLAN: A detailed drawing delineating the following:

- Owner's name, address, and phone number, map and Tax lot number
- North Arrow and Scale - using standard engineering scale.
- Accurate shape and dimensions of parcel, development site, including the lengths of the all property lines.
- Any adjacent public or private roads, all easements and/or driveway locations. Include road names. Driveway location and parking areas, including the distance from at least one property line to the intersection of the driveway and the road (apron area);
- All natural features, which may include, but are not limited to water features, wetlands, ravines, slope and distances from features to structures.
- Existing and proposed structures, water sources, sewage disposal system and distances from these items to each other and the property boundaries.

III. DEED: A copy of the current deed, including the legal description, of the subject property.

IV. CERTIFICATION: 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 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. If the property owner would like staff to contact a legal representative or consultant please provide the contact information using a consent form.

PROPERTY OWNER SIGNATURES REQUIRED FOR PROCESSING

Lon M Lubin, Trustee

Christopher P. ... Trustee

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: No address yet. We have applied to Coos County for an address.

Type of Access: Public Road Name of Access: Rohrer Rd.

Is this property in the Urban Growth Boundary? Yes

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-

SANITATION INFORMATION

If this is a request for a recreational, commercial, industrial, vacation rental, manufactured home park, mass or small gathering Coos Health and Wellness, Environmental Health Staff will be reviewing the proposal to ensure the use meets environmental health standards for sanitation and water requirements to serve the facility. If the proposal indicates that you are using a community water system a review may be required. A fee is charged for this service and shall be submitted with the application \$83.00. If you have questions about regulations regarding environmental health services please call 541-266-6720. This form is required to be signed off for any type of subdivision, recreational, commercial, industrial, vacation rental, manufactured home park, mass or small gathering.

Water Service Type: Shared/Community Sytem Sewage Disposal Type: On-site septic

Please check if this request is for industrial, commercial, recreational or home base business use and complete the following questions:

- How many employees/vendors/patrons, total, will be on site?
- Will food be offered as part of the an on-site business?
- Will overnight accommodations be offered as part of an on-site business?
- What will be the hours of operation of the business?

Please check if the request is for a land division.

Coos County Environmental Health Use Only:

Staff Reviewing Application: _____

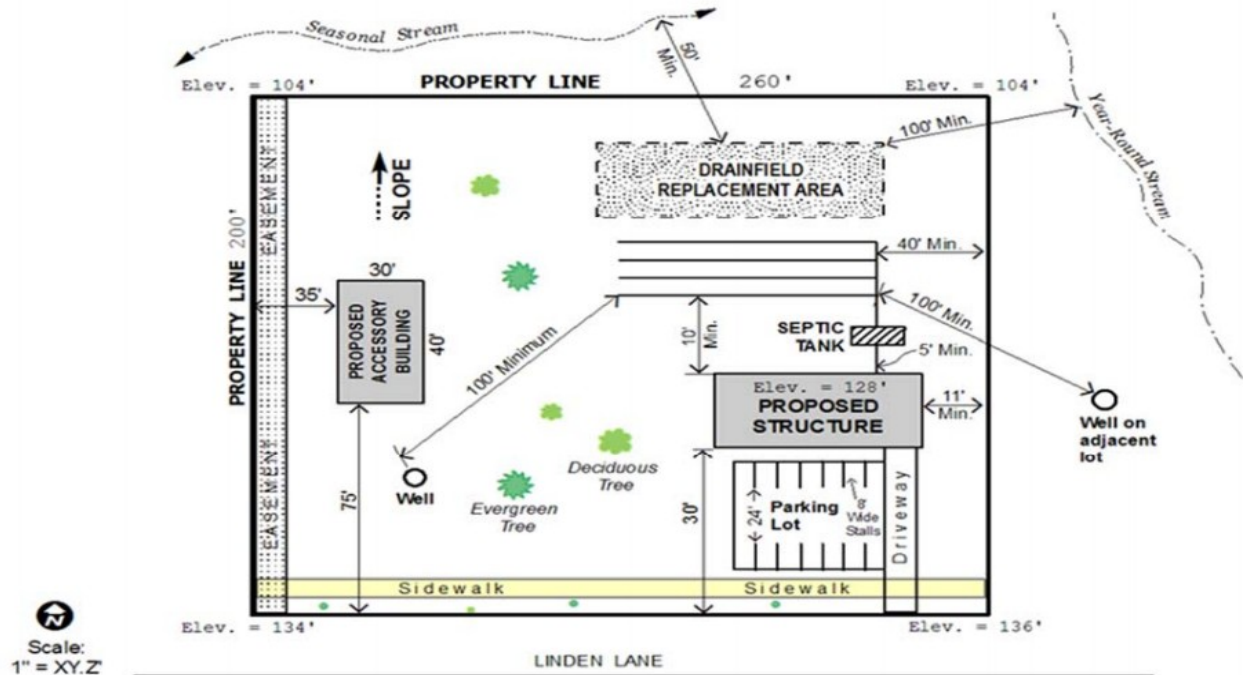
Staff Signature: _____

- This application is found to be in compliance and will require no additional inspections
- This application is found to be in compliance but will require future inspections
- This application will require inspection prior to determining initial compliance. The applicant shall contact Coos Health and Wellness, Environmental Heath Division to make an appointment.

Additional Comments:
Water service will be provided by the City of Bandon. See attached letter stating that the city water service is available for this property.

Plot Plan
The grid for the plot plan is found on the next page

SAMPLE PLOT PLAN



ITEMS THAT MUST BE ON THE PLOT PLAN:

At a minimum, the site plan should provide information on the following items:

- Existing and proposed lot lines, lot or parcel numbers, and acreage/square footage of lots.
- Dimensions of all illustrated features (i.e. all structures, septic systems, driveways, roads, etc.)
- Significant natural features (slopes greater than 20%, geologic hazards, wetlands, drainage ways, rivers, streams, and the general location of existing trees, etc.).
- Existing easements (access, storm drainage, utility, etc.).
- Existing and proposed (structures, outbuildings, septic, etc.) on site and on adjoining properties.
- Existing and proposed road locations including widths, curbs, and sidewalks.
- Existing and proposed driveway approach locations on site, existing driveway approaches on adjoining properties on the same side of the street, and existing driveway approaches across the street from the site.
- Contiguous properties under the same ownership.
- General predevelopment topographical information (minimum 10' contour intervals).
- Location of utilities.
- If redevelopment is viable in the future, a redevelopment plan should be included.
- Preliminary site utility plan.
- Please add any additional Road or parking items from the parking form.

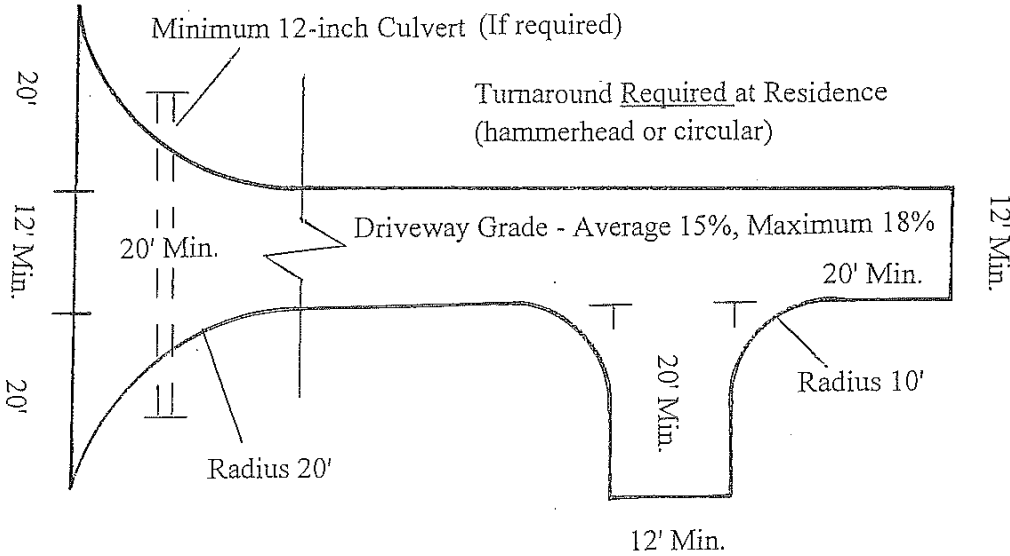
ADDITIONAL DRIVEWAY, ROAD, PARKING STANDARDS
 DRIVEWAY STANDARDS DRAWING – SINGLE RESIDENCE

Sight Distance Requirements (at the approach entrance)

- Speed less than 35 mph – 100’ both directions
- Speed greater than 35mph – 150’ both directions

All Weather Surface – minimum 4 – inches aggregate base or as required by Roadmaster.

Figure 7.1.425



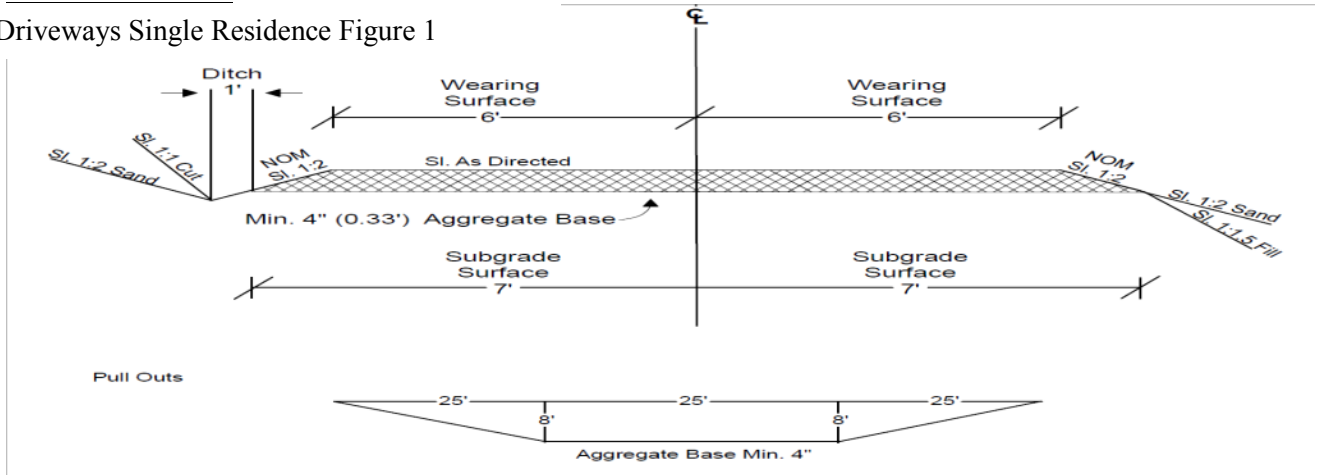
Construct appropriate ditches to prevent water runoff from discharging from the land onto a public road under county jurisdiction. Pursuant to ORS 368.256 the creation of a road hazard prohibited.

If driveway is over 1,000 ft., a pullout is required every 600 ft.

If a driveway cannot meet the maximum 18% grade then a legal agreement may be signed and recorded at the County Clerk’s office releasing the County from any liability from such driveway development. This document must be referenced on the property deed to allow future purchasers know that the driveway does meet standard. A sign shall be placed at the bottom of the driveway to warn any users of the driveway that it is not built to standard. Proof must be filed with the Planning and Road Department that the documents have been filed and a sign has been placed. The form located on the following page must be completed, signed and recorded prior to any land use authorizations.

RURAL FIGURES

Driveways Single Residence Figure 1



FORESTRY, MINING OR AGRICULTURAL ACCESS:

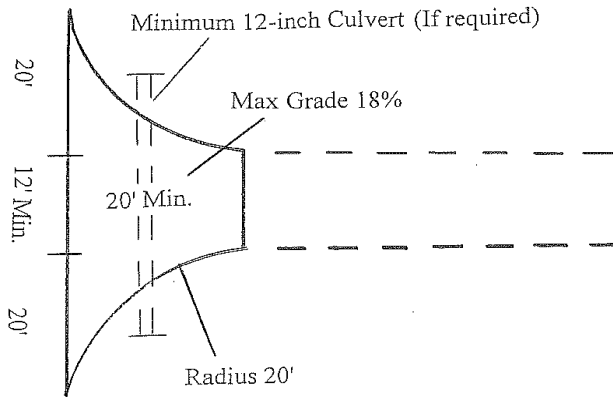
A private road which is created to provide ingress or egress in conjunction with the use of land for forestry, mining or agricultural purposes shall not be required to meet minimum road, bridge or driveway standards set forth in this ordinance, nor are such resource-related roads, bridges or driveways reviewable by the County. However, all new and re-opened forestry, mining or agricultural roads shall meet the access standards listed in this section.

Forestry, Mining or Agricultural Access Standard drawing
Sight Distance Requirements (at the approach entrance)

- Speed less than 35 mph – 100’ both directions
- Speed greater than 35 mph – 150’ both directions

All Weather Surfaces – minimum aggregate base as required by the Roadmaster
The access will be developed from the edge of the developed road.

Figure 7.1.450

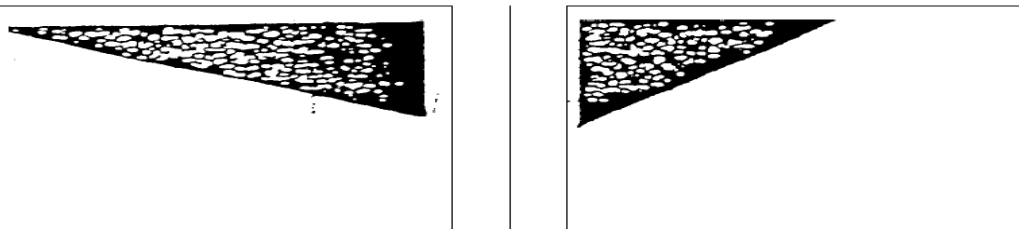
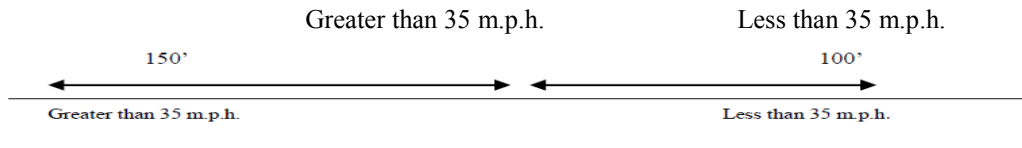


Construct appropriate ditches to prevent water runoff from discharging from the land onto a road under county jurisdiction. Pursuant to ORS 368.256 creation of a road hazard is prohibited.

VISION CLEARANCE TRIANGLE:

The following regulations shall apply to all intersections of streets and roads within all districts in order to provide adequate visibility for vehicular traffic. There shall be no visual obstructions over thirty-six (36) inches in height within the clear vision area established herein. In addition to street or road intersections, the provisions of this section shall also apply to mobile home park, recreational vehicle park, and campground accesses (entrances or exists).

The clear vision area shall extend along the right-of-way of the street for a minimum of 100 feet where the speed limit is less than 35 M.P.H.; and not less than 150 feet where the speed limit is greater than 35 m.p.h. The clear vision area shall be effective from a point in the center of the access not less than 25 feet back from the street right-of-way line.



PARKING STANDARDS

USE	STANDARD
Retail store and general commercial except as provided in subsection b. of this section.	1 space per 200 square feet of floor area, plus 1 space per employee. 1 Bicycle space
Retail store handling bulky merchandise (furniture, appliances, automobiles, machinery, etc.)	1 space per 600 square feet of floor area, plus 1 space per employee. 1 Bicycle space
Bank, general office, (except medical and dental).	1 space per 600 square feet of floor area, plus 1 space per employee. 1 Bicycle space
Medical or dental clinic or office.	1 ½ space per examination room plus 1 space per employee. 1 Bicycle space
Eating or drinking establishment.	1 space per 200 square feet of floor area, plus 1 space for every 4 seats. 1 Bicycle space
Bowling Alley	5 spaces per alley plus 1 space per 2 employees. 1 Bicycle space
Dance hall, skating rink, lodge hall.	1 space per 100 square feet of floor area plus 1 space per 2 employees. 1 Bicycle space
Stadium, arena, theater, race track	1 space per 4 seats or every 8 feet of bench length or equivalent capacity if no seating is provided. 1 Bicycle space
Storage warehouse, manufacturing establishment, or trucking freight terminal	1 space per employee. 1 Bicycle space
Wholesale establishment.	1 space per employee plus 1 space per 700 square feet of patron serving area. 1 Bicycle space
Welfare or correctional institution	1 space per 5 beds for patients or inmates, plus 1 space per employee. 1 Bicycle space
Convalescent hospital, nursing home, sanitarium, rest home, home for the aged.	1 space per 5 beds for patients or residents, plus 1 space per employee. 1 Bicycle space
Church, mortuary, sports arena, theater.	1 space for 4 seats or every 8 feet of bench length in the main auditorium. 1 Bicycle space
Library, reading room.	1 space per 400 square feet of floor area plus 1 space per employee. 1 Bicycle space
Preschool nursery, kindergarten.	2 spaces per teacher; plus off-street loading and unloading facility. 1 Bicycle space per 20 students
Elementary or junior high school.	1 space per classroom plus 1 space per administrative employee or 1 space per 4 seats or every 8 feet of bench length in the auditorium or assembly room whichever is greater. 1 Bicycle space per 10 students
High school	1 space per classroom plus 1 space per administrative employee plus 1 space for each 6 students or 1 space per 4 seats or 8 feet of bench length in the main Auditorium, whichever is greater. 1 Bicycle space per 20 students

Other auditorium, meeting room.	1 space per 4 seats or every 8 feet of bench length. 1 Bicycle space
Single-family dwelling.	2 spaces per dwelling unit.
Two-family or multi-family dwellings.	1 ½ spaces per dwelling unit. 1 bicycle space per unit for buildings with 4 or more units.
Motel, hotel, rooming or boarding house.	1 space per guest accommodation plus 1 space per employee.
Mobile home or RV park.	1 ½ spaces per mobile home or RV site.

Parking lot standards – Use the table above along with the area available to calculate the number of spaces required and determine the type of parking lot that needs to be created. The table below explains the spacing and dimensions to be used.

Minimum Horizontal Parking Widths for Standard Automobiles					
	One-way Parallel	30 deg	45 deg	60 deg	90 deg
Figures	A	B	C	D	E
Single row of Parking					
Parking Aisle	9'	20'	22'	23'	20'
Driving Aisle	12'	16'	17'	20'	24'
Minimum width of module (row and aisle)	21'	36'	39'	43'	44'
Figures #'s					
	F	G	H	I	J
Two Rows of Parking					
Parking Aisle	18'	40'	44'	46'	40'
Driving Aisle	12'	16'	17'	20'	24'
Minimum width of module (row and aisle)	30'	56'	61'	66'	64'

For figures please see Coos County Zoning and Land Development Ordinance (CCZLDO) § 7.5.175.

Please note: If you are developing in any wetlands or floodplain please contact Department of State Lands to ensure you are not required to obtain a state permit.

Statement for Conditional Land Use Application

In 2022 we purchased a lot, designated as 29S 15W 01CB TL 404, located on Rohrer Rd in the Sunset City neighborhood south of the Bandon City limits. This property is within the urban growth boundary of the city. The lot currently has no structures on it. We intend to build a two-story single-family residence on the property, as shown in the attached site plan. The house will be stick built, and have a size of 2358 square feet. Additionally,

- Water will be provided by the City of Bandon. See the attached letter from the city stating that water service is available for this property. There is an existing water hookup located in the southwest corner of the property.
- Sewage disposal will be handled by an on-site septic system. The DEQ has performed a site evaluation and our site plan incorporates the designated location for the septic sand filter.
- Electricity service in the Sunset City neighborhood is provided via underground cables.

This plot is situated in the “Limited Suitability for Development” Beaches & Dunes zone, according to the Coos County zone map website. To assess the suitability of the site for construction, we hired Cascadia Geoservices, Inc. Their geotechnical report is attached to our conditional land use (Beaches & Dunes) application.

In addition to the Conditional Land Use Application, we have included:

- A site plan showing the location of the driveway, to aid in the assessment of the site access and the determination of the address for this property.
- A more detailed site and house plan.
- The deed for the property
- A letter from the City of Bandon stating that water service is available for this property
- The geotechnical report from Cascadia Geoservices, Inc.

Please note that the address application for this property was included in our recent (mistaken) submission of a compliance determination application. If you would like us to submit a separate new address application, we would be happy to do so.

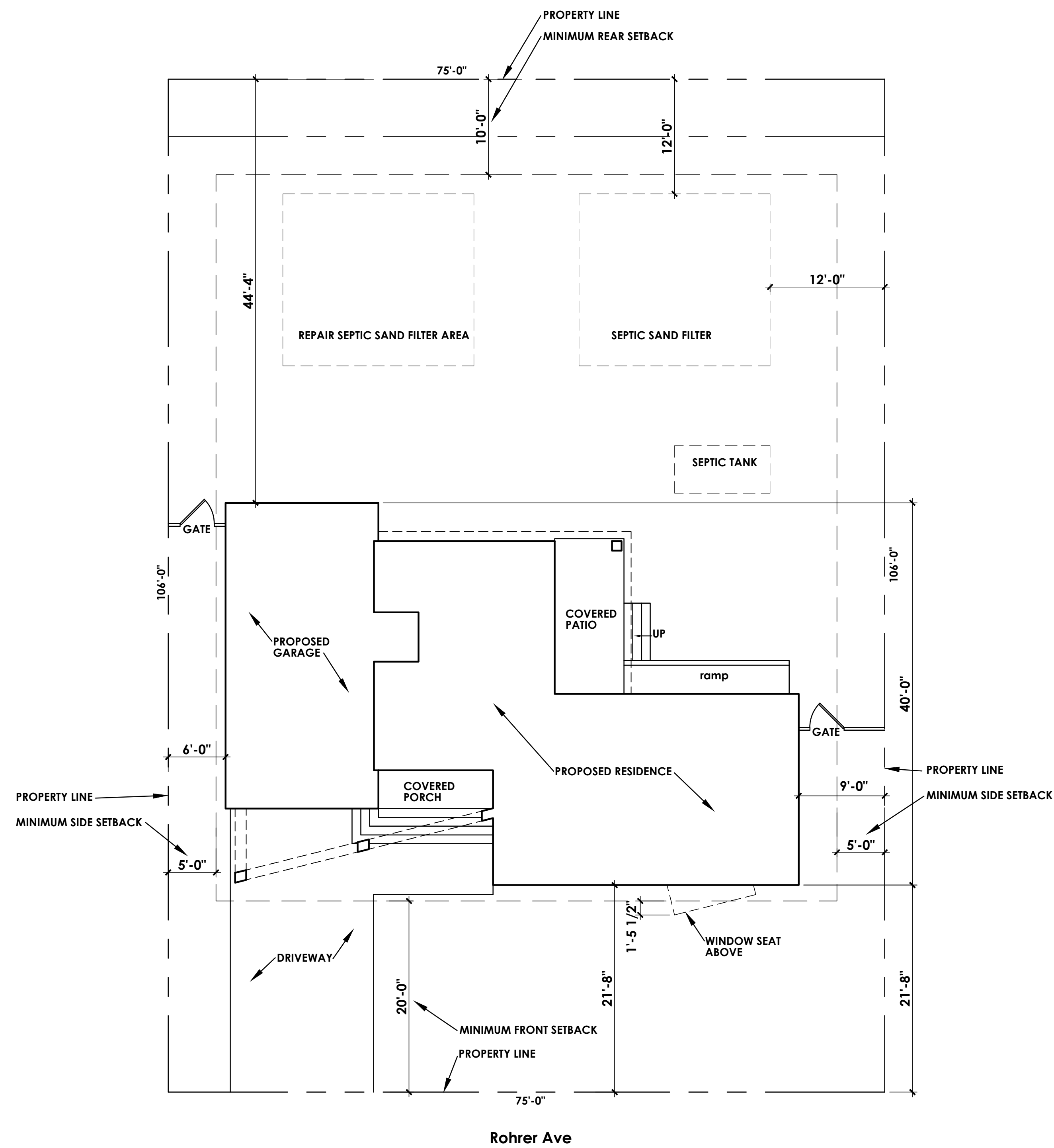
We have paid the application fees using your online portal and are submitting the receipt for that payment along with the Conditional Land Use application.

The proposed timeline of this project, if the conditional land use application is approved, is to choose a contractor in Fall of 2023 and to begin construction in early 2025.

Please let us know if you need additional information or have any questions.

Thanks and best regards,

Christopher Fassnacht and Lori Lubin



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- 3 FLOOR PLAN
- 4 FLOOR PLAN
- 5 ROOF PLAN
- 6 SECTIONS
- 7 EXTERIORS
- 8 UTILITY LAYOUT
- D1 DETAILS
- S1 STRUCTURAL PLANS, FOUNDATION LAYOUT, DETAILS
- S2 STRUCTURAL PLANS, FRAMING LAYOUT

LEGAL DESCRIPTION:

Map 29S15W01CB
Tax Lot# 404

BUILDING CODE

All construction, materials, products shall comply with the 2021 Oregon Residential Specialty Code, based on the 2018 IRC. 2022 Oregon Structural Specialty Code based on the 2021 IBC.

All products and materials shall be installed in accordance with their manufacture's installation instructions/approvals.

OCCUPANCY: R-3

SQ. FTG. CALCULATION

LOT SIZE	7,950 SQ. FT.
FIRST FLOOR	1018 SQ. FT.
SECOND FLOOR	1340 SQ. FT.
TOTAL LIVING	2358 SQ. FT.
COVERED PORCH	48 SQ. FT.
COVERED PATIO	112 SQ. FT.
GARAGE	501 SQ. FT.

SCOPE:

-Two story structure with 3 bedroom,
2.5 bath

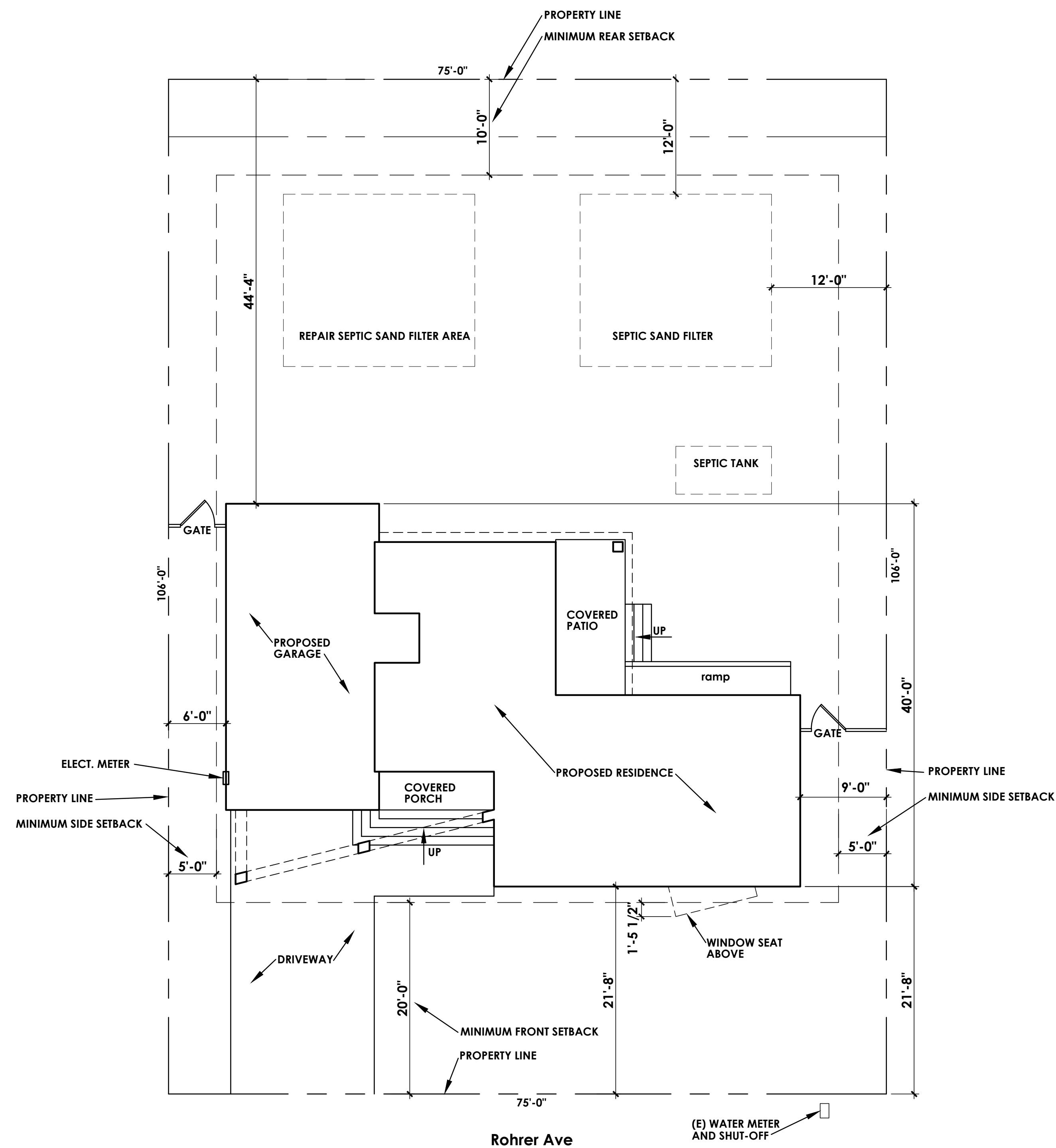
Lubin-Fassnacht Residence

Tax Lot 404, Rohrer Ave Bandon, OR

Lubin Residence
Tax Lot 404 Rohrer Ave
Bandon, OR 97411

wbd
william beck design
420 June Ave SE
Bandon, OR 97411
541 260 1068

- △ 06-13-23
- △ 00-00-00
- △ 00-00-00
- △ 00-00-00
- △ 00-00-00
- △ 00-00-00



SITE

1/8" = 1'-0"

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Lubin-Fassnacht Residence

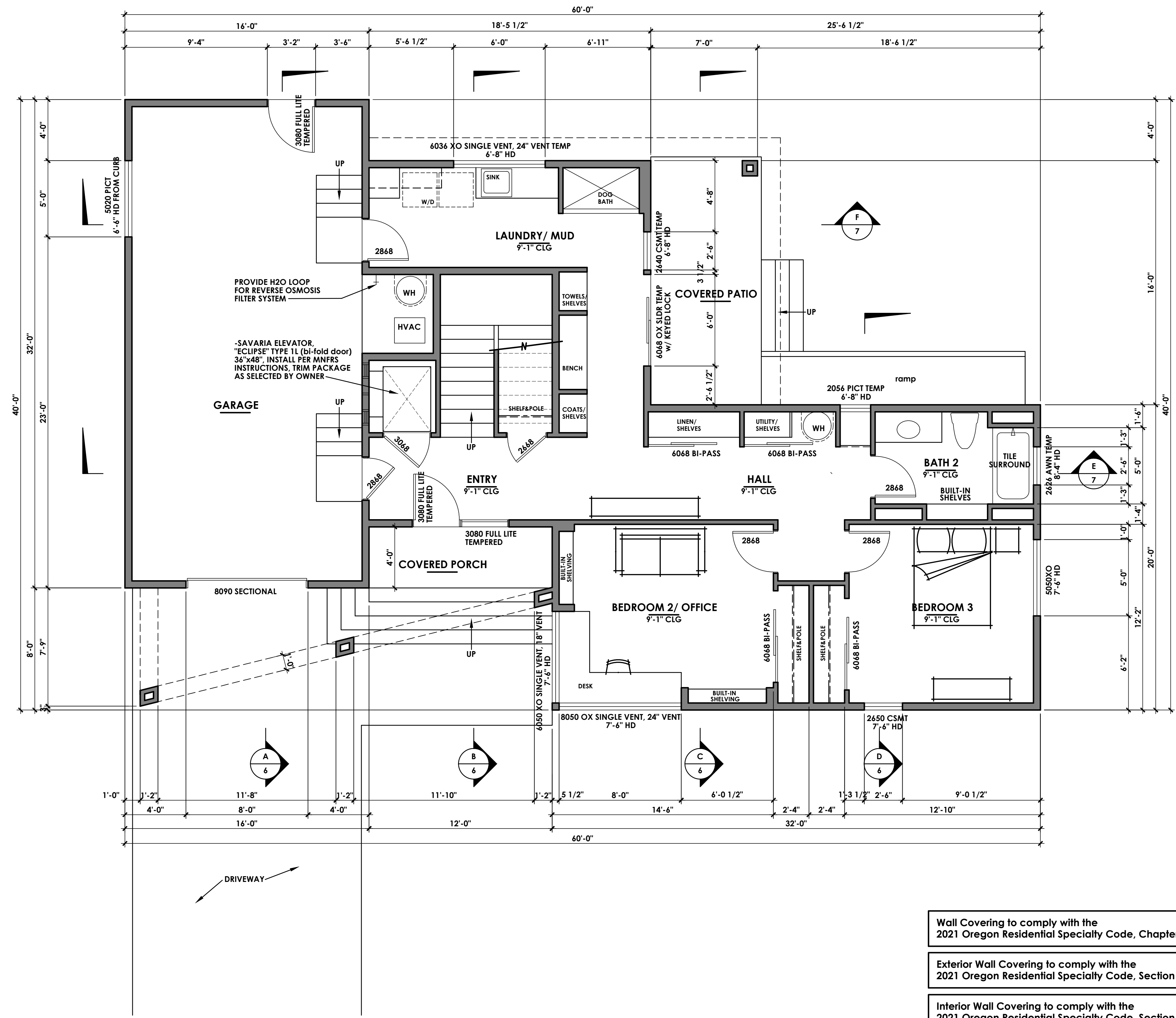
Tax Lot 404, Rohrer Ave Bandon, OR

Lubin Residence
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william beck design
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- Wall Covering to comply with the 2021 Oregon Residential Specialty Code, Chapter 7
- Exterior Wall Covering to comply with the 2021 Oregon Residential Specialty Code, Section 703
- Interior Wall Covering to comply with the 2021 Oregon Residential Specialty Code, Section 702
- Insulation, Energy Efficiency to comply with the 2021 Oregon Residential Specialty Code, Chapter 11 and 2021 Oregon Energy Efficiency Code.

All construction, materials, products shall comply with the 2021 Oregon Residential Specialty Code, based on the 2018 IRC 2022 Oregon Structural Specialty Code based on the 2021 IBC

All products and materials shall be installed in accordance with their manufacture's installation instructions/listed approvals.

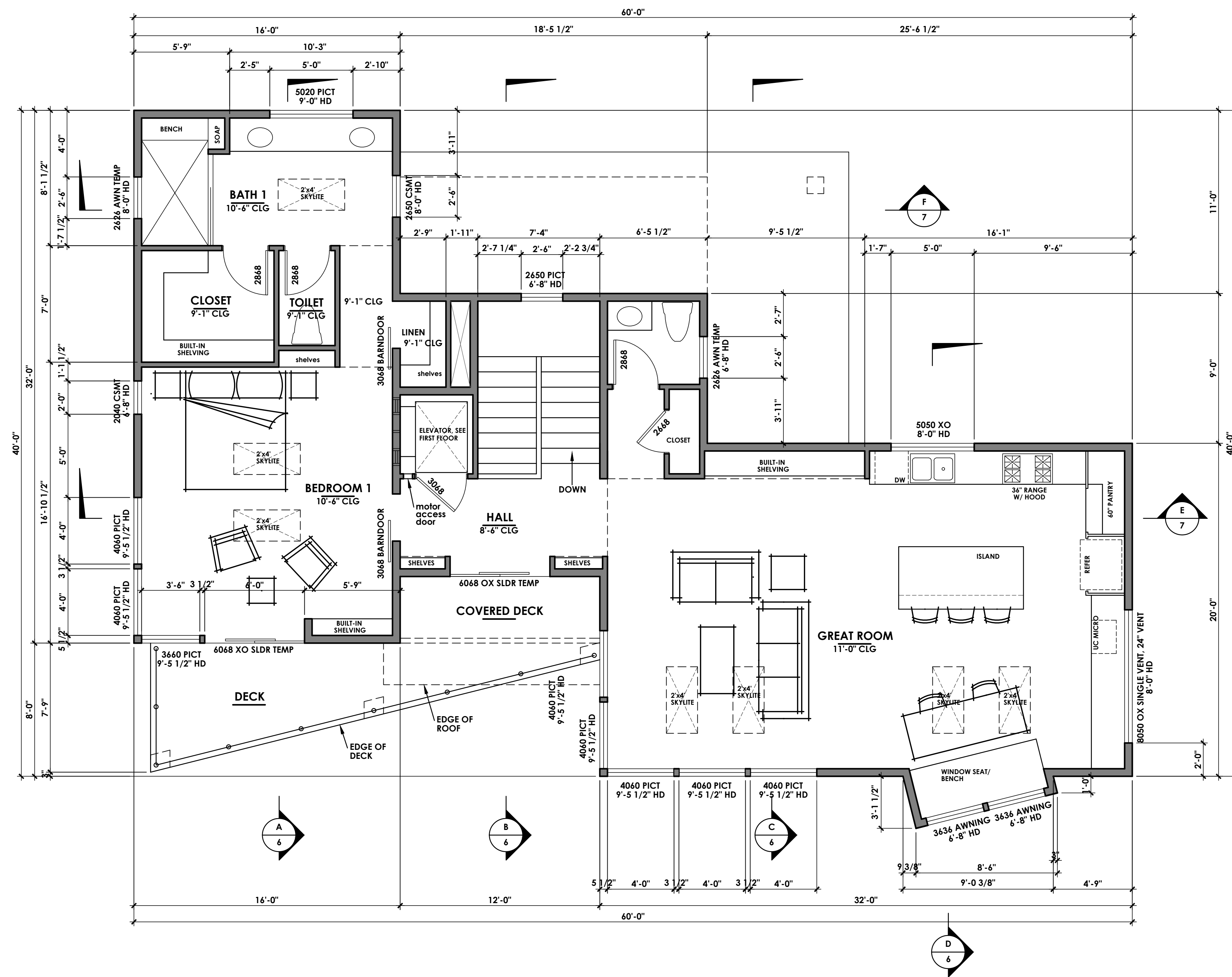
Lubin Residence
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1/4" = 1'-0"

First Floor



- Wall Covering to comply with the 2021 Oregon Residential Specialty Code, Chapter 7
- Exterior Wall Covering to comply with the 2021 Oregon Residential Specialty Code, Section 703
- Interior Wall Covering to comply with the 2021 Oregon Residential Specialty Code, Section 702
- Insulation, Energy Efficiency to comply with the 2021 Oregon Residential Specialty Code, Chapter 11 and 2021 Oregon Energy Efficiency Code.

All construction, materials, products shall comply with the 2021 Oregon Residential Specialty Code, based on the 2018 IRC 2022 Oregon Structural Specialty Code based on the 2021 IBC
 All products and materials shall be installed in accordance with their manufacture's installation instructions/listed approvals.

Lubin Residence
 Tax Lot 404 Rohrer Ave
 Bendon, OR 97411

wd
 william beck design

420 June Ave SE
 Bendon, OR 97411
 541 260 1068

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1/4" = 1'-0"

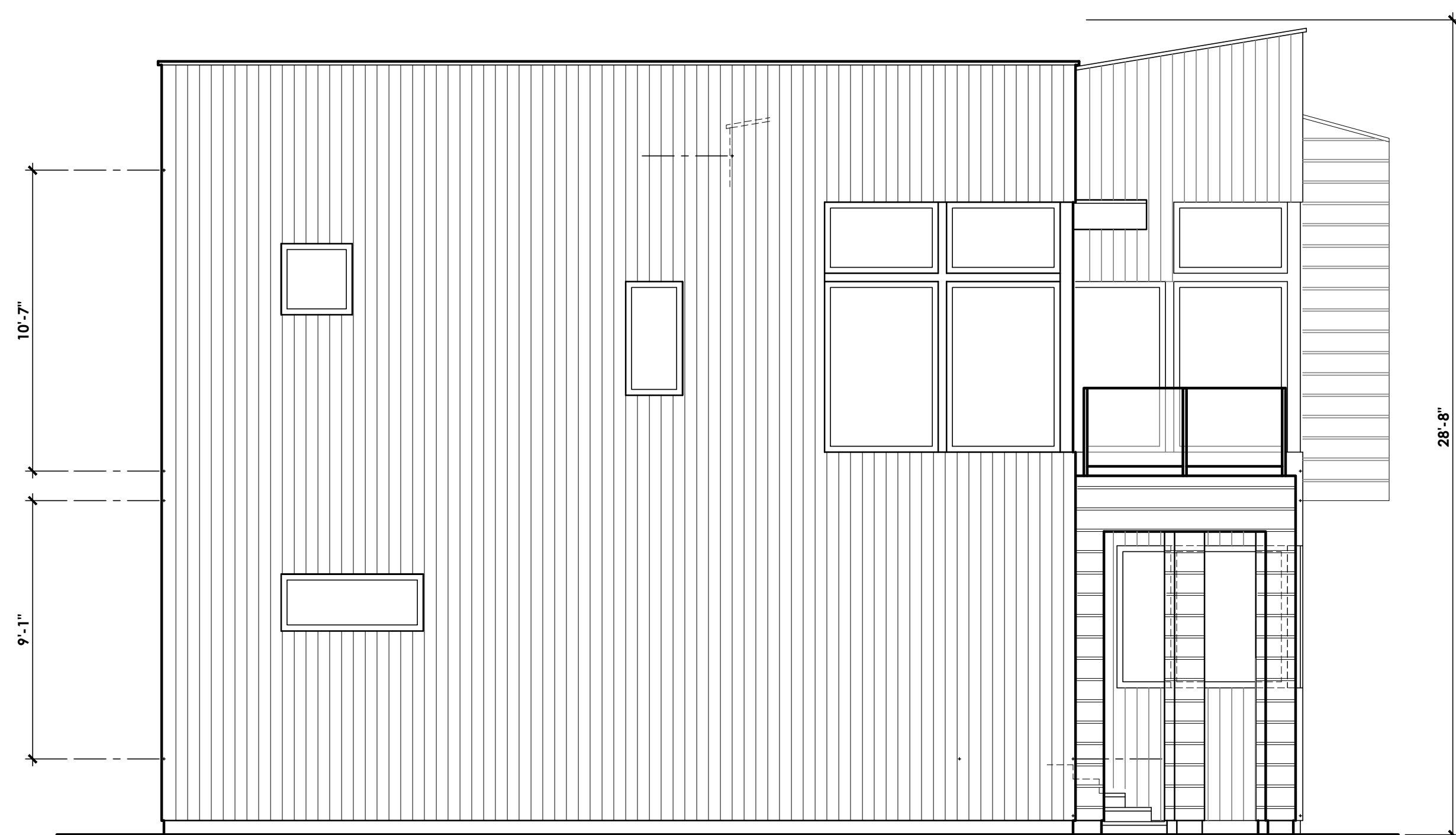
Second Floor



south



east



north



west

Lubin
Residence
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Bandon, OR 97411

wd
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- △ 07-23-23
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- △ 00-00-00
- △ 00-00-00
- △ 00-00-00

1/4" = 1'-0", UNO

Exteriors



THIS SPACE RESERVED FOR RECORDER'S USE

After recording return to:
Lubin Fasnacht Revocable Living Trust Dated
October 1, 2018
2507 Corona Drive
Davis, CA 95616

Coos County, Oregon **2022-08548**
\$91.00 Pgs=2 09/15/2022 02:00 PM
eRecorded by: AMERITITLE - ROSEBURG
Diris D. Murphy, Coos County Clerk

Until a change is requested all tax statements shall be sent to the following address:
Lubin Fasnacht Revocable Living Trust Dated
October 1, 2018
2507 Corona Drive
Davis, CA 95616
File No. 553904AM

STATUTORY WARRANTY DEED

Charles Wallace Ebeling and Sandra Catherine Wilson, fka Sandra Catherine Ebeling, Co-Successor-Trustees of The Ebeling Trust dated November 2, 1990,

Grantor(s), hereby convey and warrant to

Christopher D. Fasnacht and Lori M. Lubin, Trustees of the Lubin Fasnacht Revocable Living Trust Dated October 1, 2018,

Grantee(s), the following described real property in the County of Coos and State of Oregon free of encumbrances except as specifically set forth herein:

Lots 16 through 18, inclusive, Block 3, Sunset City, Coos County, Oregon.

TOGETHER WITH any portion of the vacated alley, vacated by Vacation No. 508, Recorded November 4, 1993, bearing Instrument No. 93-11-0265, Records of Coos County, Oregon.

“FOR INFORMATIONAL PURPOSES ONLY, THE FOLLOWING IS INCLUDED”

29-15W-01CB-00404

FOR INFORMATION PURPOSES ONLY, THE MAP/TAX ACCT #(S) ARE REFERENCED HERE:

29-15W-01CB-00404 2895204

The true and actual consideration for this conveyance is \$315,000.00.

The above-described property is free of encumbrances except all those items of record, if any, as of the date of this deed and those shown below, if any:

2022-2023 Real Property Taxes, a lien not yet due and payable



THIS SPACE RESERVED FOR RECORDER'S USE

After recording return to:
Lubin Fassnacht Revocable Living Trust Dated
October 1, 2018
2507 Corona Drive
Davis, CA 95616

This document has been recorded electronically. Please see the attached copy to view the County Recorder's stamp as it now appears in the public record.

Instrument No.: 2022-08548

Date: 9/15/2022 Submitted by AmeriTitle
RSBG

Until a change is requested all tax statements shall be sent to the following address:
Lubin Fassnacht Revocable Living Trust Dated
October 1, 2018
2507 Corona Drive
Davis, CA 95616
File No. 553904AM

STATUTORY WARRANTY DEED

Charles Wallace Ebeling and Sandra Catherine Wilson, fka Sandra Catherine Ebeling, Co-Successor-Trustees of The Ebeling Trust dated November 2, 1990,

Grantor(s), hereby convey and warrant to

Christopher D. Fassnacht and Lori M. Lubin, Trustees of the Lubin Fassnacht Revocable Living Trust Dated October 1, 2018,

Grantee(s), the following described real property in the County of Coos and State of Oregon free of encumbrances except as specifically set forth herein:

Lots 16 through 18, inclusive, Block 3, Sunset City, Coos County, Oregon.

TOGETHER WITH any portion of the vacated alley, vacated by Vacation No. 508, Recorded November 4, 1993, bearing Instrument No. 93-11-0265, Records of Coos County, Oregon.

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The above-described property is free of encumbrances except all those items of record, if any, as of the date of this deed and those shown below, if any:

2022-2023 Real Property Taxes, a lien not yet due and payable

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.

Dated this 13th day of August, 2022

The Ebeling Trust dated November 2, 1990

[Signature]
By: Charles Wallace Ebeling, Co-Successor Trustee

[Signature]
By: Sandra Catherine Wilson, Co-Successor Trustee

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

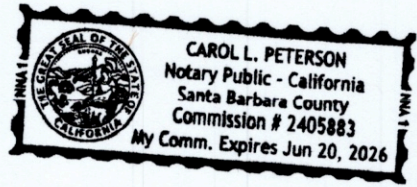
State of California *[Signature]*
County of *[Signature]*

On August 13 2022, before me, CAROL L. PETERSON, NOTARY PUBLIC
(Insert name and title of the officer)

personally appeared Charles Wallace Ebeling and Sandra Catherine Wilson, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.
Signature *[Signature]* (Seal)





CITY OF BANDON

P.O. BOX 67
BANDON, OREGON 97411

Public Service...We Take It Seriously

July 13, 2023

Lubin Fassnacht Revocable Living Trust 10-01-2018
Christopher D Fassnacht, Trustee
Lori M Lubin, Trustee
2507 Corona Drive
Davis, CA 65616

RE: Request for Water Service Outside Bandon City Limits for Coos County Map Number 29S-15W-01CB, Parcel No: 404; Property Owner: Lubin Fassnacht Revocable Living Trust 10-01-2018; Christopher D Fassnacht and Lori M Lubin, Trustees

Dear Christopher and Lori,

Because main lines exist adjacent to the above-described property, one residential water service is available to serve the parcel. Services would be subject to all policies and requirements outlined in Chapter 13.10 Water and Sewer Service Extension Outside City Limits, of the Bandon Municipal Code.

Please note the City of Bandon will not install a water meter until a house has been approved.

Your next steps are:

1. Complete, sign and record with the Coos County Clerk's Office, the Service and Annexation Agreement Waiver of Remonstrance and Addendum "A", Waiver of Annexation Limitation (Attached).
2. Sign the Policies for Out-of-City Water Connections form (Attached).
3. Pay all applicable fees.

Please let me know if you have any questions.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Dan Chandler', is written over a horizontal line.

Dan Chandler
City Manager/Director of Utilities
City of Bandon

Bandon is an equal opportunity employer including individuals with disabilities

Phone (541) 347-2437 Fax (541) 347-1415 www.cityofbandon.org

Cascadia Geoservices, Inc.

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PO Box 1026
Port Orford, Oregon 97465
D. 541-332-0433
C. 541-655-0021
Email: info@cascadiageoservices.com
www: CascadiaGeoservices.com



Geotechnical Site Evaluation

Rohrer Avenue
Bandon, Oregon 97444
Tax Lot 404 29S15W01CB
CGS Project No. 23015

Prepared for:

Ms. Lori Lubin
2507 Corona Drive
Davis, CA 95616
Sent via email: l.lubin@sbcglobal.net

May 31, 2023
CGS Project No. 23015

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INTRODUCTION

Cascadia Geoservices, Inc. (CGS) is pleased to provide you with this Geotechnical Site Evaluation report which summarizes our evaluation of a portion of your property located on Rohrer Avenue near Bandon, Oregon (see Figure 1, Location Map). The area which was evaluated for this report is the homesite (site), which was staked out by you and is shown on Figure 2, Site Map. We understand that you are proposing to develop the site with a residential structure and are requesting that CGS evaluate the subject property and provide you with geotechnical recommendations for development. 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 September 16, 2022, and with your design consultant, Mr. Bill Beck, beginning March 30, 2023. Our understanding is further based on several preliminary site visits to the property beginning September 2022. And our understanding is based on a site visit on April 11, 2023, at which time a geologic reconnaissance of the site was done and four exploratory test pits were completed.

We understand that you are proposing to develop the site with a wood-framed residence. We further understand that the residence will be a two-story structure which will be 2,353 ft². We understand that you have no plans for excavation over 4.0 feet deep, except possibly for utility trenches. We observed that the building site was recently leveled with exotic fill but have no information as to how the fill was placed or compacted. As of the date of this Geotechnical Site Evaluation, CGS has not been provided with construction documents.

COOS COUNTY MUNICIPAL ORDINANCE

Under Coos County's Land Use Ordinance Chapter IV, Beaches and Dunes (Policy 5.10), the site has been classified as having "limited suitability" for development. The sand dunes on the site are classified as older, stabilized dunes, in accordance with USDA findings. This agrees with our site evaluation. We note that the site is within the Sunset City Subdivision and is zoned Controlled Development 10 (CD-10), and that adjoining parcels to the north, west, and east have been developed with residential structures.

Based on our site evaluation and on our experience working in this region, it is our opinion that the proposed development will not have an adverse impact on either the site or adjacent areas. Further, it is our opinion that because the building site is 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. Further, we see no hazards to 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.

SURFACE DESCRIPTION

The site is located within the Klamath Mountain physiographic region of southwestern Oregon and is on an elevated terrace which is a regional landform on the southern Oregon coast. The building site is a cut-fill pad which is 0.18 acres, and which encompasses all of Tax Lot 404. The proposed building site is level and is rectangular in shape, measuring 106.0 feet long (measured east-west) by 75.0 feet wide (measured north-south). The site is bordered on the east by a steep slope which grades up to 75 percent. The slope is part of an older, stabilized, vegetated sand dune.

The site is in an area which consists of developed and undeveloped residential lots. The western border of the site is 271.0 feet east of an actively eroding sea cliff known locally as the Bandon Bluff. The site is not impacted by erosion on the sea cliff. The site was densely vegetated prior to being cleared and filled, which we infer was due to near-surface groundwater and/or poor drainage. Hydric plants were observed on the east side of the site, along the steep slope.

The subject property appeared stable at the time of our site visit; however, the native soils were buried beneath the exotic fill, and visual appearance of stability could not be ascertained prior to excavation of test pits.

Based on mapping done by others,^{1,2} soils at the site consist of sandy loam soil (Bullards Sandy Loam, 0 to 7 percent slopes). The soil is described as well drained and is derived from mixed eolian and marine deposits. These overlie surficial sediments of Quaternary marine terrace deposits, which consist of sands, silts, clays, and gravels. As discussed, the site is overlain by 1.0 to 2.0 feet of exotic fill. Bedrock was not observed in surface outcrop or in our test pits.

SUBSURFACE EXPLORATIONS

In order to analyze the soils at the site, CGS observed the excavation of four test pits during our on-site visit. The test pits were excavated by Natural Origins LLC of Coos Bay, Oregon, using a track-mounted mini excavator. The test pits were excavated to a depth of up to 6 feet below ground surface (bgs) at four locations. 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 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 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

The material encountered in the test pits showed similarities in soil and depth.

All four test pits encountered 1.5 to 2.0 feet of soft, brown, organic silty clay with wood and gravel. We interpret this to be fill which was used to elevate and level the site.

Below this in test pits TP-1 and TP-2, to a depth of 3.0 feet bgs, we encountered medium-stiff, fine sandy silt. We interpret this as sandy loam topsoil. Below the topsoil, beginning at from 1.5 to 3.0 feet bgs in all four test pits, we encountered medium-dense

¹ United States Department of Agriculture (USDA). Natural Resource Conservation Service Web Soil Survey, viewed at <http://websoilsurvey.nrcs.usda.gov/app>

² Walker, G. W. and MacLeod, N. S. (1991). Geologic map of Oregon: U.S. Geological Survey, scale 1:500,000.

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.

fine sand that was moist and weakly cemented. We interpret this as Quaternary marine terrace deposits.

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

Fill: Encountered from 0.0 to 3.0 feet bgs in test pits TP-1 and TP-2. Consists of soft, dark-brown, organic silty clay, with wood and gravel, and is moist (fill).

Topsoil (Sandy Loam Soils): From 1.5 to 3.0 feet bgs in test pits TP-1 and TP-2, we encountered medium-stiff, tan-brown, fine, sandy, silty clay that was moist, medium plasticity, and medium toughness of thread. We interpret this as topsoil based on mapping by others.

Surficial Deposits (Marine Terrace Deposits): Beginning at from 1.5 to 3.0 feet bgs in all four test pits, we encountered medium-dense, orange-brown sand with iron, weakly cemented, which became moist and moderately cemented at depth. We infer that these sediments are Quaternary marine terrace deposits as identified by others.

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 ⁴
SS-1	2.0	Sandy silty clay	32	61	SM-SC
SS-5	4.0	Fine sand	13	11	SP
SS-7	2.0	Fine sand	18	24	SP
SS-11	4.0	Fine sand	13	6	SP

⁴ Classification symbols are estimated based on visual observation.

Our lab analysis indicates that some of the sandy soils have a significant percentage of fines. The high water content in the sandy, silty clay soils is due to the cohesive soils' intrinsic water-holding capacity. These soils, which are exotic fill, were determined in the field to be low plasticity and non-swelling.

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

Table 2: Physical Properties of Soil

Type of Soil	Depth below Surface (feet)	N-Value	Effective Unit Weight (pcf), Drained	Drained Friction Angle, ϕ' (degrees)	Drained Cohesion, c' (kPa ⁵)
SM-SC	1.0 to 2.0	4 to 7	80 to 130	33	50
SP	1.0 to 6.0	6 to 8	95 to 125	37	

GROUNDWATER

Groundwater was not encountered in any of our test pits. Further, there was no seepage or caving detected. However, streaks of iron sands indicate the presence of shallow groundwater, which may occur seasonally. Our review of water-well cards for the area⁶ indicates that groundwater levels are typically shallow, ranging between 20 and 30 feet bgs. 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 west towards the beach.

GEOLOGIC HAZARDS

A review of the State Landslide Inventory Database (Oregon HazVu)⁷ indicates that the slope east of the building site has a high susceptibility to future landslides. The base of

⁵ kPa (kilopascal) is the most common unit of pressure and, even in the United States, is often used in favor of pounds per square inch (psi). One kPa is equal to 0.14503774 pounds per square inch.

⁶ Oregon Water Resources Department well report query, viewed online at <https://www.oregon.gov/owrd>.

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

the slope is approximately 230 feet east of the eastern boundary of the residence and as such, in our opinion, will not pose a threat to the residence.

A review of LIDAR mapping for the area⁸ indicates the site has been leveled and is bordered to the east by a north-northwest-aligned ridge. The ridge is a linear feature which is aligned parallel to the coast, which is indicative of an ancient sand dune being formed by wind which also parallels the coast. Based on our LIDAR review, there are no anomalous landforms associated with geologic hazards, including landslides, on the site.

Based on a review of U.S. Geological Survey maps,⁹ there are no geologically young fault systems within 0.5 miles of the site. 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

The subject property is 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/SEI 7-22 Seismic Design Parameters, are summarized in Table 3 below.

Table 3: ASCE/SEI 7-22 Seismic Design Parameters

Seismic Design Parameters	Short Period	1 Second
Maximum Credible Earthquake Spectral Acceleration	$S_s = 2.66 \text{ g}$	$S_1 = 1.03 \text{ g}$
Site Class	D = Stiff Soil	
Adjusted Spectral Acceleration	$S_{MS} = 3.01 \text{ g}$	$S_{M1} = 2.07 \text{ g}$
Design Spectral Response Acceleration Parameters	$S_{DS} = 2.01 \text{ g}$	$S_{D1} = 1.38 \text{ g}$
Peak Ground Acceleration	PGA = 1.42 g	

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>

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. Lateral spread occurs when earthquake shaking causes a mass of soil to lose cohesion and move relative to the surrounding soil. Lateral movement can be entirely horizontal and occur on flat ground, but it is more likely to occur on or around sloping ground, such as adjacent to hillsides and waterways. Liquefaction potential was assessed based on the information obtained from our test pits and using the parameters suggested in Idriss & Boulanger, 2008.¹⁰ According to our seismic analysis, the site will experience a peak ground acceleration (PGA) of 1.42 g during a design seismic event. Further, groundwater was not observed in any test pits. Based on the observed depth of groundwater and the general consistency of the soils encountered in our test pits, it is our opinion that the liquefaction potential for the site is low to moderate.

Tsunamis

Based on recent mapping and modeling done by the state of Oregon,¹¹ the site is within the Tsunami Inundation Zone and may be inundated during a tsunami generated by a local source (Cascadia Subduction Zone) moment magnitude (Mm) earthquake of 9.1 or greater. 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 Center¹² for current information regarding tsunami preparedness and emergency procedures.

DISCUSSION AND RECOMMENDATIONS

Based on our surface and subsurface investigation, it is our opinion that the subject property is suitable to site a single-family residence, provided it is developed in accordance with our recommendations. Further, it is our opinion that the site can be supported on a conventional shallow foundation.

¹⁰ Idriss, I. M. & Boulanger, R. W. (2008). Soil Liquefaction During Earthquakes, MNO-12, EERI.

¹¹ Local-source (Cascadia Subduction Zone) Tsunami Inundation Map. State of Oregon Department of Geology and Mineral Industries online at <http://www.oregongeology.org>

¹² Viewed online at www.oregongeology.org

In that the composition of the fill and how it was compacted are unknown, we recommend that the fill and the underlying medium-stiff, tan-brown, fine, sandy, silty clay topsoil encountered to a depth of 3.0 feet below ground surface (bgs) be removed from under the building and for 5 feet around the building and that the foundation be set on the underlying medium-dense, orange-brown, native sand encountered at 3.0 feet bgs or on approved, mechanically compacted structural fill which is set on the sand. Recommendations for the type of fill and for placement of the fill are included later in this report.

DESIGN

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 0.25 when calculating resistance to sliding. For footings in contact with gravel, use a coefficient of friction equal to 0.35 when calculating resistance to sliding.

Based on CGS's estimates, total post-construction settlement is estimated to be less than one (1) inch, with post-construction differential settlement of less than 0.5 inches over a 50-foot span.

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.

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 200 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.

All surfaces with building foundations or pavement areas should be prepared in accordance with our **Site Preparation** recommendations.

Floor Slabs

Satisfactory subgrade support for reinforced building floor slabs can be obtained from the subgrade prepared in accordance with our site-preparation recommendations. A minimum of 12.0 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.

DRAINAGE

We recommend that the site be graded to provide positive drainage away from the structure.

CONSTRUCTION

Site Preparation

As discussed, we recommend that the soft soils and fill encountered to a depth of 3.0 feet bgs in our test pits be removed from beneath the proposed structure, including 5.0 feet around the building footprint, and be replaced with approved, mechanically compacted structural fill. The fill used to rebuild the pad should meet the specifications of Selected Granular Backfill in accordance with Oregon Standard Specifications for Construction.¹³ The imported granular material should be crushed rock, or crushed gravel and sand, or approved sand that is fairly well graded between coarse and fine sand and contains no deleterious materials. The native soil and fill at the site do not meet these criteria and should be disposed of off-site. 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. Please contact our office for additional assistance with this.

A CGS engineering geologist (or their representative) should confirm suitable bearing conditions and evaluate all footing subgrades. Observations should also confirm that

¹³ Oregon Standard Specifications for Construction, 2021. Oregon Department of Transportation. Viewed online at <https://www.oregon.gov>

loose or soft materials, organics, unsuitable fill, and old topsoil zones are removed. Localized deepening of footing excavations may be required to penetrate any deleterious materials.

Probing

Following site preparation and prior to forming the foundation, 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.

Excavation

Subsurface conditions at the project site show that the upper soil is predominantly soft clayey silt. Excavations in these soils may be readily accomplished with conventional earthwork equipment.

Trench cuts in native materials should stand vertical to a depth of approximately 4 feet, provided no groundwater seepage is present in the trench walls, with the understanding that some sloughing may occur. The trenches should be flattened to 1.5H:1V if excessive sloughing occurs or seepage is present.

Groundwater was not encountered in our test pits. If shallow groundwater is observed during construction, use of a trench shield (or other approved temporary shoring) is recommended for cuts that extend below groundwater seepage or if vertical walls are desired for cuts deeper than 4 feet. If shoring or dewatering is used, CGS recommends that the type and design of the shoring and dewatering systems be the responsibility of the contractor, who is in the best position to choose systems that fit the overall plan of operation. These excavations should be made in accordance with applicable Occupational Safety and Health Administration and State regulations.

Wet-Weather/Wet-Soil Conditions

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.

The soils at the site may be 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 warranted 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, 2024

PHOTOS

FIGURES

Figure 1, Location Map

Figure 2, Site Map

ATTACHMENTS

Attachment 1 – Summary Test Pit Logs

Attachment 2 – Lab Analysis Reports


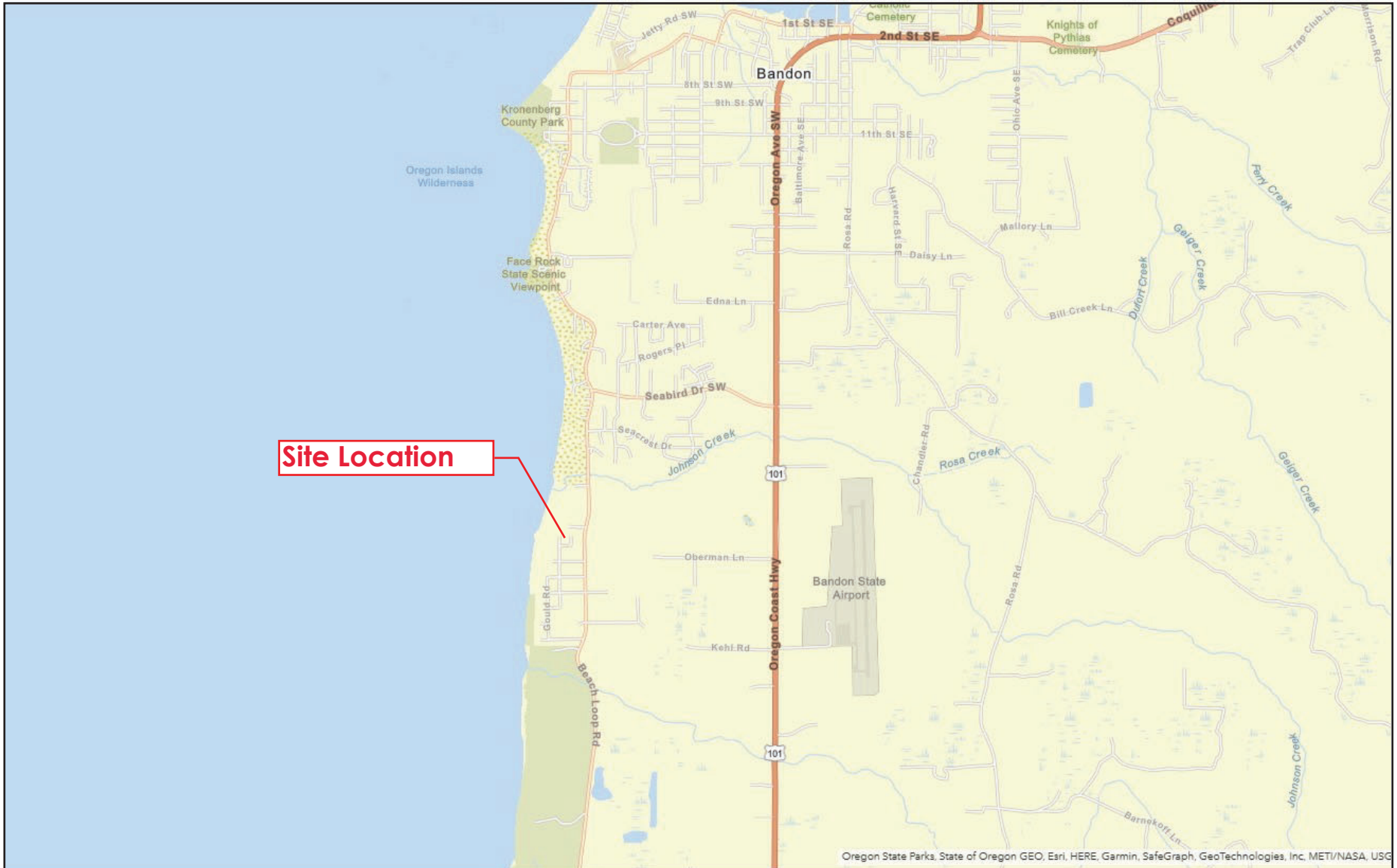
	Rohrer Avenue Bandon, Oregon 97444	Photographic Log Cascadia Geoservices, Inc. Project No: 23015
	Date: May 2023	

Photo No:	1
Direction Photo is Taken: South	
Photo Description:	
<p>The building site is a level cut-fill pad which is 0.18 acres which encompasses all of Tax Lot 404</p>	



Photo No:	2
Direction Photo is Taken:	
Photo Description:	
<p>The test pits encountered 1.5 to 2.0 feet of fill over sandy silt topsoil over medium dense native fine sand.</p>	





Prepared for Ms. Lori Lubin



Project: 23015

May 2023

Location Map
 Rohrer Avenue
 Bandon, Oregon 97444

Figure
1



Prepared for Ms. Lori Lubin



Project: 23015

May 2023

Site Map
Rohrer Avenue
Bandon, Oregon 97444

Figure
1

**TABLE 1
FIELD CLASSIFICATIONS**

SOILS



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 1/2-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	3/4" – 3"	3/4" – 3"
	fine	#4 – 3/4"	4.75 mm (0.19") – 3/4"
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, cobbly, bouldery	30 – 50%	secondary
	silty, clayey*	15 – 50%	secondary
	with (gravel, sand, cobbles, boulders)	15 – 30%	secondary
	with (silt, clay)*	5 – 15%	additional
	trace (gravel, sand, cobbles, boulders) trace (silt, clay)*	<5%	additional
Fine grained	CLAY, SILT*	>50%	PRIMARY
	silty, clayey*	30 – 50%	secondary
	sandy, gravelly	15 – 30%	secondary
	with (sand, gravel, cobbles, boulders)	15 – 30%	secondary
	with (silt, clay)*	5 – 15%	additional
	trace (sand, gravel, cobbles, boulders) trace (silt, clay)*	5 – 15%	additional
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
FIELD CLASSIFICATIONS

SOILS

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	
 rounded 	 Angular 
 subrounded 	 Subangular 

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 ft ³) moderate (1-3 ft ³) Severe (>3 ft ³)

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.

TABLE 2
KEY TO TEST PIT AND BORING LOG SYMBOLS



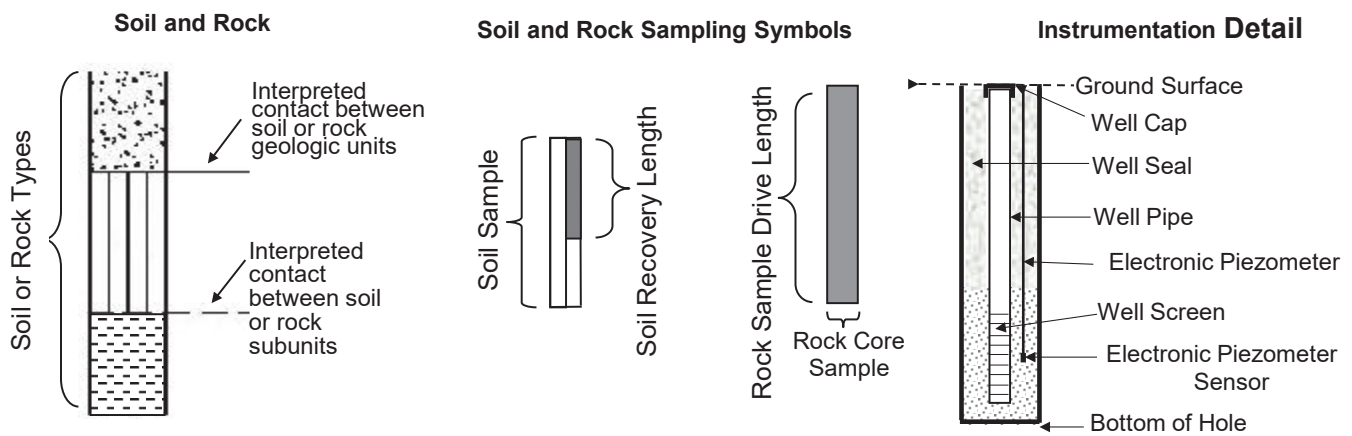
SAMPLE NUMBER ACRONYMS/WATER SYMBOLS

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




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	PPM	Parts Per Million
MS	Moderate Sheen		

TEST PITS: TP-1, TP-2	LORI LUBIN PROPERTY 87052 VESTA LANE BANDON, OREGON 97411	Cascadia Geoservices, Inc. 190 6th Street Port Orford, OR 97465 D. 541-332-0433 C. 541-655-0021
CASCADIA GEOSERVICES PROJECT NO: 23015		

DEPTH IN FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE/ SAMPLE ID	◆ DYNAMIC PENETROMETER (DP or DCP) ▣ STATIC PENETROMETER (SP) ● MOISTURE CONTENT (%) ○ INDEX PROPERTIES (IP) ○ NUCLEAR DENSITY (ND) ○ DRY DENSITY (DD) ○ SIEVE (SIEV)	COMMENTS
TP-1 SURFACE CONDITIONS: Moist 0 25 50 TP-1							
0.0	[Hatched Box]	Soft, dark brown, organic silty CLAY with wood and gravel; moist (FILL)	0.0				
1.0	[Dashed Box]	Medium stiff, tan-brown, fine sandy silty CLAY; moist, medium plasticity, medium toughness of thread (TOPSOIL)	1.5	P200	[Box with X] 33-1	●	P200 = 61% W% = 32.0%
2.0	[Dotted Box]	Medium dense, orange-brown, fine SAND with iron; moist, weakly cemented	3.0	P200	[Box with X] 33-2	●	P200 = 13% W% = 20.0%
3.0	[Dotted Box]	becomes moderately cemented; moist					
4.0	[Dotted Box]	QUATERNARY MARINE TERRACE DEPOSITS					
5.0	[Dotted Box]	becomes dense, tan-brown, fine SAND; moist, well cemented	6.0	P200	[Box with X] 33-3	●	P200 = 1% W% = 11.0%
6.0	[Dotted Box]	Final depth 6.0 feet bgs; test pit backfilled with uncompacted excavated material					No seepage or caving observed to the depth explored
7.0							
8.0							
9.0							

Location: Lat: 43.089520 Long: -124.432481

Date Completed: 4/11/2023

TP-2 SURFACE CONDITIONS: Moist 0 25 50 TP-2							
0.0	[Hatched Box]	Soft, dark brown, organic silty CLAY with wood and gravel; moist (FILL)	0.0				
1.0	[Dashed Box]	Medium stiff, tan-brown, fine sandy silty CLAY; moist, medium plasticity, medium toughness of thread (TOPSOIL)	1.5	P200	[Box with X] 33-4	●	P200 = 46% W% = 24.0%
2.0	[Dotted Box]	Medium dense, orange-brown, SAND with iron, weakly cemented	3.0	P200	[Box with X] 33-5	●	P200 = 11% W% = 13.0%
3.0	[Dotted Box]	becomes moist, moderately cemented					
4.0	[Dotted Box]	QUATERNARY MARINE TERRACE DEPOSITS					
5.0	[Dotted Box]	becomes moist to wet	6.0	P200	[Box with X] 33-6	●	P200 = 7% W% = 14.0%
6.0	[Dotted Box]	Final depth 6.0 feet bgs; test pit backfilled with uncompacted excavated material					No seepage or caving observed to the depth explored
7.0							
8.0							
9.0							

Location: Lat: 43.089521 Long: -124.432381

Date Completed: 4/11/2023

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

LOGGED BY: E. Oberbeck

ALL EXPLORATIONS-2 PER PAGE CGS_LORILUBINPROP_TP1-4_041523.GPJ PRINT DATE 05/08/23

TEST PITS: TP-3, TP-4

LORI LUBIN PROPERTY
87052 VESTA LANE
BANDON, OREGON 97411

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



CASCADIA GEOSERVICES
PROJECT NO: 23015

DEPTH IN FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE/SAMPLE ID	◆ DYNAMIC PENETROMETER (DP or DCP) ▣ STATIC PENETROMETER (SP) ● MOISTURE CONTENT (%) ○ INDEX PROPERTIES (IP) ○ NUCLEAR DENSITY (ND) ○ DRY DENSITY (DD) ○ SIEVE (SIEV)	COMMENTS
<p>TP-3 SURFACE CONDITIONS: Moist</p>							
0.0		Soft, dark brown, organic silty CLAY with wood and gravel; moist (FILL)	0.0				
1.5		Medium dense, orange-brown, fine SAND with iron; moist, weakly cemented	1.5	P200	SS-7	●	P200 = 24% W% = 18.0%
4.0		QUATERNARY MARINE TERRACE DEPOSITS	4.0	P200	SS-8	●	P200 = 5% W% = 14.0%
6.0		becomes dense, moderately cemented	6.0	P200	SS-9	●	Hard digging at 5.0 feet bgs P200 = 3% W% = 13.0%
6.0		Final depth 6.0 feet bgs; test pit backfilled with uncompacted excavated material	6.0				No seepage or caving observed to the depth explored

Location: Lat: 43.089426 Long: -124.432333

Date Completed: 4/11/2023

DEPTH IN FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE/SAMPLE ID	◆ DYNAMIC PENETROMETER (DP or DCP) ▣ STATIC PENETROMETER (SP) ● MOISTURE CONTENT (%) ○ INDEX PROPERTIES (IP) ○ NUCLEAR DENSITY (ND) ○ DRY DENSITY (DD) ○ SIEVE (SIEV)	COMMENTS
<p>TP-4 SURFACE CONDITIONS: Moist</p>							
0.0		Soft, dark brown, organic silty CLAY with wood and gravel; moist (FILL)	0.0				
2.0		Medium stiff, dark brown, fine sandy silty CLAY; moist, medium plasticity, medium toughness of thread	2.0	P200	SS-10	●	P200 = 55% W% = 33.0%
4.0		QUATERNARY MARINE TERRACE DEPOSITS	4.0	P200	SS-11	●	P200 = 6% W% = 13.0%
6.0		Dense, orange-brown, fine SAND; moist, well cemented	6.0	P200	SS-12	●	P200 = 7% W% = 19.0%
6.0		Final depth 6.0 feet bgs; test pit backfilled with uncompacted excavated material	6.0				No seepage or caving observed to the depth explored

Location: Lat: 43.089330 Long: -124.432514

Date Completed: 4/11/2023

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

LOGGED BY: E. Oberbeck

ALL EXPLORATIONS-2 PER PAGE CGS LORILUBINPROP_TP1-4_041523.GPJ PRINT DATE 05/08/23

CASCADIA GEOSERVICES, INC.

MATERIAL LABORATORY

PO Box 1026

Sixes, Oregon 97476

P.541-332-0433



Project No.: Lubin-23015
 Testing Date: April 21, 2023
 Tests Performed: Water Content, Soil Finer Than 75 μ m
 Standards Followed: D2216, D1140
 Performed By: C. Cowan

**Water Content (D2216)**

Sample Name	SS1	SS2	SS3	SS4	SS5	SS6	SS7	SS8	SS9	SS10	SS11	SS12	
Pan Letter	A	B	C	D	E	F	G	H	I	J	K	L	
M_c = Mass of Container, g	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
M_{cms} = Mass of Container and Moist Specimen, g	22.50	27.01	24.86	28.56	22.90	26.40	26.17	24.87	22.74	21.18	24.48	25.48	
$M_{c ds}$ = Mass of Container and Dry Specimen, g	17.49	22.84	22.60	23.41	20.40	23.40	22.54	22.11	20.29	16.42	21.79	21.75	
M_s = Mass of Oven Dry Specimen = $M_{c ds} - M_c$, g	15.64	20.99	20.75	21.56	18.55	21.55	20.69	20.26	18.44	14.57	19.94	19.90	
M_w = Mass of Water = $M_{c ms} - M_{c ds}$, g	5.01	4.17	2.26	5.15	2.50	3.00	3.63	2.76	2.45	4.76	2.69	3.73	
w = Water Content = $M_w / M_s \times 100\%$	32%	20%	11%	24%	13%	14%	18%	14%	13%	33%	13%	19%	

% Finer Than 75 μ m (D1140)

Sample Name	SS1	SS2	SS3	SS4	SS5	SS6	SS7	SS8	SS9	SS10	SS11	SS12	
Pan Letter	A	B	C	D	E	F	G	H	I	J	K	L	
M_c = Mass of Container, g	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
$M_{c rs}$ = Mass of Container and Retained Specimen, g	7.88	20.20	22.34	13.50	18.34	21.93	17.65	21.06	19.75	8.45	20.63	20.39	
M_s = Mass of Oven Dry Specimen = $M_{c ds} - M_c$, g	15.64	20.99	20.75	21.56	18.55	21.55	20.69	20.26	18.44	14.57	19.94	19.90	
M_r = Mass of Retained Specimen = $M_{c rs} - M_c$, g	6.03	18.35	20.49	11.65	16.49	20.08	15.80	19.21	17.90	6.60	18.78	18.54	
% Finer Than 75 μ m = $(M_s - M_r) / M_s \times 100\%$	61%	13%	1%	46%	11%	7%	24%	5%	3%	55%	6%	7%	