

# TILLAMOOK COUNTY PLANNING COMMISSION

## LOCATION

Port of Tillamook Bay Conference Center  
4000 Blimp Boulevard, Tillamook, OR 97141

## HEARING DATE

**June 22, 2023- Beginning at 7:00p.m.**

## VIRTUAL & TELECONFERENCE MEETING INFORMATION

For teleconference access the evening of the hearing, please call 971-254-3149. Conference ID: 887 242 77#. Virtual Meeting Access: <https://www.co.tillamook.or.us/commdev>. Click on Virtual Teams Link. \*Microsoft Teams Meeting Format.

### **I. CALL TO ORDER**

### **II. ROLL CALL**

### **III. OLD BUSINESS:**

**#851-23-000123-PLNG:** Request for conditional use approval for the repair and capacity expansion of an existing facility (Pacific City Transfer Station) for solid waste disposal and recycling, and for the siting of a storage structure for emergency supplies. Located at 38255 Brooten Road, a County road, the subject property is east of the Pacific City/Woods Unincorporated Community, zoned Small Farm and Woodlot 20-Acre (SFW-20) and is designated as Tax Lot 2400 of Section 32A, Township 4 South, Range 10 West of the Willamette Meridian, Tillamook County, Oregon. Applicant is David McCall, Tillamook County Solid Waste Program Manager. Property Owner is Tillamook County. *Continued to June 22, 2023.*

### **IV. NEW BUSINESS:**

**#851-23-000118-PLNG:** Request for conditional use approval to amend the Planned Development Master Plan for 'Sahhali South'. Located at off Proposal Point Drive, a private road, the subject properties are located within the Neskowin Unincorporated Community, zoned Neskowin Rural Residential (NeskRR), and designated as Tax Lots 2400 and 2500 of Section 24AB, Township 5 South, Range 11 West of the Willamette Meridian, Tillamook County, Oregon. The Applicant is Dustin Capri of Capri Architecture. The property owners are Michael and Janice Shainsky.

### **V. AUTHORIZATION FOR CHAIR TO SIGN APPROPRIATE ORDERS, IF NECESSARY**

### **VI. ADMINISTRATIVE DECISIONS:** Administrative Decisions are available for public review on the Tillamook County Department of Community Development website: <https://www.co.tillamook.or.us/commdev/landuseapps>

### **VII. DISCUSSION OF IN-PERSON ATTENDANCE FOR HEARINGS**

### **VIII. HOUSING COMMISSION UPDATE**

### **IX. DEPARTMENT OF COMMUNITY DEVELOPMENT REPORT**

### **X. ADJOURNMENT**

*The Port of Tillamook Bay Conference Center is accessible to citizens with disabilities. If special accommodations are needed for persons with hearing, visual, or manual impairments that wish to participate in the meeting, please contact 1-800-488-8280x3423 at least 24 hours prior to the meeting in order that appropriate communications assistance can be arranged.*



*Land of Cheese, Trees and Ocean Breeze*

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**CONDITIONAL USE REQUEST #851-23-000123-PLNG  
PACIFIC CITY TRANSFER STATION EXPANSION**

**Planning Commission Hearing Date: June 22, 2023  
Staff Report Date: June 15, 2023**

**Report Prepared by: Sarah Absher, CFM, Director**

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**I. GENERAL INFORMATION:**

**Request:** Request for conditional use approval for the repair and capacity expansion of an existing facility (Pacific City Transfer Station) for solid waste disposal and recycling, and for the siting of a storage structure for emergency supplies (Exhibit B).

**Location:** The subject property is located east of the Unincorporated Community of Pacific City/Woods at 38255 Brooten Road, a County road, and is designated as Tax Lot 2400 in Section 32A of Township 4 South, Range 10 West of the Willamette Meridian, Tillamook County, Oregon (Exhibit A).

**Zone:** Small Farm and Woodlot 20-Acre (SFW-20)

**Applicant:** David McCall, Tillamook County Solid Waste Program Manager, 503 Marolf Loop Road, Tillamook, OR 97141

**Property Owner:** Tillamook County, 201 Laurel Avenue, Tillamook, OR 97141

**II. Property Description:** The subject property encompasses approximately 38.57 acres of densely forested landscape and rugged terrain (Exhibit A). The property is owned by Tillamook County and approximately two (2) acres of the subject property is improved with the Pacific City Transfer Station, a facility for solid waste disposal and recycling (Exhibits A & B). The subject property shares a private drive (easement) with neighboring residential properties for access to the transfer station (Exhibits A and B).



There are no mapped wetlands or mapped riparian features on the subject property (Exhibit A). The subject property is located in FEMA flood zone X, 'areas of minimal flood hazard', as depicted on FEMA FIRM 41057C0870F dated September 28, 2018 (Exhibit A). The subject property is within a mapped area of known geologic hazard (Exhibit A).

The surrounding properties to the north, northeast, west and east are zoned Small Farm and Woodlot 20-Acre (SFW-20) and Farm (F-1) and are dedicated to farm and forest uses (Exhibit A). Properties to the north, south and southwest are devoted to residential uses (Exhibit A).

Applicant is proposing to make repairs to the existing transfer station facility and expand the facility for solid waste disposal and recycling. The proposal also includes siting a storage structure for emergency supplies on the subject property (Exhibit B).

### **III. APPLICABLE ORDINANCE AND COMPREHENSIVE PLAN PROVISIONS:**

The desired use is governed through the following Sections of the Tillamook County Land Use Ordinance (TCLUO). The suitability of the proposed use, in light of these criteria, is discussed in Section IV of this report:

- A. TCLUO Section 3.006: Small Farm and Woodlot 20-Acre (SFW-20) Zone
- B. TCLUO Section 3.004: Forest (F) Zone
- C. TCLUO Section 4.130: Development Requirements for Geologic Hazard Areas
- D. TCLUO Article VI: Conditional Use Procedures and Criteria

### **IV. ANALYSIS:**

#### **A. Section 3.006: Small Farm and Woodlot (SFW-20) Zone**

*PURPOSE: The purpose of the SFW-20 zone is to protect and promote farm and forest uses much in the same way as do the Farm and Forest zones, on lands which have resource value, but which are not suited for the F-1 or the F zones because of smaller parcel size, conflicting adjacent uses, adverse physical features or other limiting factors.*

*(3)(a) PERMITTED USES: Permitted uses in the SFW-20 zone include those permitted in Article 3.002 – Farm (F-1) Zone and Article 3.004 – Forest Zone, subject to the conditions and review described therein.*

**Findings:** Applicant is requesting conditional use approval for the repair and capacity expansion of an existing facility (Pacific City Transfer Station) for solid waste disposal and recycling, and for the siting of a storage structure for emergency supplies (Exhibit B). TCLUO Section 3.004: Forest Zone allows for a disposal site for solid waste approved by the governing body and for which the Oregon Department of Environmental Quality has granted a permit under ORS 459.245, together with equipment, facilities or buildings necessary for its operation. Given the applicant is proposing expansion of an existing disposal site, staff finds the review for expansion of an existing facility is also subject to the provisions of the Forest (F) zone.

The Forest Zone also allows for storage structures for emergency supplies.

#### **B. Section 3.004: Forest (F) Zone**

*PURPOSE: The purpose of the Forest (F) Zone is to protect and maintain forest lands for grazing, and rangeland use and forest use, consistent with existing and future needs for agricultural and forest products. The F zone is also intended to allow other uses that are compatible with agricultural and forest activities, to protect scenic resources and fish and wildlife habitat, and to maintain and improve the quality of air, water and land resources of the county.*

1. **Section 3.004(8):** Utility, Power Generation, Solid Waste Uses lists “Disposal site for solid waste approved by the governing body and for which the Oregon Department of Environmental Quality has granted a permit under ORS 459.245, together with equipment, facilities or buildings necessary for its operation” as Type 3 review, subject to conditional use review and approval.
2. **Section 3.004(7)(a) and (8):** Public and Quasi-public Uses lists “Storage structures for emergency supplies” as a Type 2 review, subject to conditional use review and approval.

**Findings:** Staff finds the proposed expansion of and improvements to the existing transfer station are subject to the Forest Zone Conditional Use Review Criteria found in TCLUO Section 3.004(8) and the Conditional Use Review Criteria contained in TCLUO Article 6. While the storage structure for emergency supplies is listed as a Type 2 administrative review subject to the Conditional Use review criteria contained in TCLUO Article 6, the requests have been consolidated and the highest level of review process applied in accordance with TCLUO Article 10. Additional applicable criteria for the siting of a structure for emergency supplies is also subject to TCLUO Section 3.004(7)(a), and further discussed below.

TCLUO Section 3.004(7)(a) outlines the requirements for siting a storage structure for emergency supplies as follows:

1. *Areas within an urban growth boundary cannot reasonably accommodate the structures;*
2. *The structures are located outside tsunami inundation zones and consistent with evacuation maps prepared by Department of Geology and Mineral Industries (DOGAMI) or the local jurisdiction;*
3. *Sites where the structures could be co-located with an existing use approved under this subsection are given preference for consideration;*
4. *The structures are of a number and size no greater than necessary to accommodate the anticipated emergency needs of the population to be served;*
5. *The structures are managed by a local government entity for the single purpose of providing for the temporary emergency support needs of the public; and*
6. *Written notification has been provided to the County Office of Emergency Management of the application for the storage structures.*

**Findings:** The subject property is not located within or adjacent to an Urban Growth Boundary. The closest cities to the subject property are Lincoln City in Clatsop County and the City of Tillamook. A copy of the DOGAMI TIM-Till-13 map is included in “Exhibit A” and confirms the transfer station location is outside of tsunami inundation zones. Consideration of alternative sites within the vicinity includes the Nestucca Rural Fire District substation in Pacific City/Woods, which is located several miles to the west and within the tsunami inundation zone. The applicant is proposing the siting of one (1) structure at a size no greater than necessary to accommodate the anticipated emergency needs of the population to be served (Exhibit B). The structure will be managed by Tillamook County Emergency Management in partnership with the South Tillamook County Emergency Volunteer Corps (Exhibit B). Written notification by Tillamook County Emergency Manager Randy Thorpe is included in the Applicant’s submittal (Exhibit B).

TCLUO Section 3.004(9): Siting Standards for Dwelling or Structures in the Forest Zone:

- (b) *The minimum front, rear, and side yards shall all be 30 feet.*



**Findings:** Applicant's Site Plan indicates that the proposed location of proposed facilities meets or exceeds the required 30-foot setbacks from property lines (Exhibit B). There are no minimum height requirements for non-residential structures in the Forest (F) Zone. Staff finds that these standards have been met or can be met through the recommended Conditions of Approval

- (d) *Dwellings and structures shall be sited on the parcel so that:*
1. *They have the least impact on nearby or adjoining forest or agricultural lands;*
  2. *The siting ensures that adverse impacts on forest operations and accepted farming practices on the tract will be minimized;*
  3. *The amount of forest lands used to site access roads, service corridors, the dwelling and structures is minimized; and*
  4. *The risks associated with wildfire are minimized.*
- (e) *Siting criteria satisfying Subsection (d) 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.*

**Findings:** Applicant's submittal and site plan confirm all facility improvements are to be located within areas of the subject property already improved and dedicated to the existing transfer station operation (Exhibit B). As shown on various maps included in Exhibits "A" and "B", the existing facility improvements are clustered in the southwestern region of the subject property - away from any forest operations and accepted farming practices that may be taking place on the subject property or adjacent properties (Exhibits A & B). Due to the location of existing and proposed improvements, no additional acreage of forest lands are proposed to be used for the expansion of the transfer station and siting of new facilities, including a storage structure for emergency supplies (Exhibit B). In review of aerial photography and the applicant's submittal, fire breaks are already in place, minimizing risk associated with wildfire (Exhibits A & B). A recommended Condition of Approval is included in this report to ensure compliance with relevant Oregon Department of Forestry fire siting standards for the placement of new structures on the transfer station property.

- (f) *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 sur65b /&face water and not from a Class II stream as defined in the Forest Practices rules (OAR chapter 629).*

**Findings:** A Condition of Approval has been recommended to require an updated water service letter from the Oregon Water Resources Department confirming adequate water supply is available for the proposed transfer station improvements.

- (g) *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.*

**Findings:** Staff finds this requirement does not apply.

**4. Section 3.004(10): Fire Siting Standards for Dwelling and Structures:**

- (c) *The owners of the dwellings and structures shall maintain a primary fuel-free break area 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 the Oregon Department of Forestry and shall demonstrate compliance with Table (10)(c)1*

**Findings:** The project is within the fire protection service area of the Oregon Department of Forestry (Exhibit A). The Oregon Department of Forestry and the US Forest Service were notified of this application and did not provide comments.

TCLUO Article 11 defines a Structure as “*Anything constructed or installed or portable, the use of which requires a location on a parcel of land*”. As a recommended Condition of Approval, the Applicant shall maintain the required fuel-free fire break areas around structures located on the subject property in accordance with TCLUO Section 3.004(10)(c).

2. **Section 3.004(8): Conditional Use Review Criteria:** *A use authorized as a conditional use under this zone may be allowed provided the following requirements or their equivalent are met. These requirements are designed to make the use compatible with forest operations and agriculture and to conserve values found on forest lands. Conditional uses are also subject to Article 6, Section 040.*

1. *The proposed use will not force a significant change in, or significantly increase the cost of, accepted farming or forest practices on agriculture or forest lands.*

**Findings:** Applicant states that the area proposed for development of expanded services and structures is within the existing developed area of the property that operates the Pacific City Transfer Station (Exhibit B).

The subject property is approximately 38.57 acres in size and transfer station improvements are clustered in the southwestern region of the subject property (Exhibit A). Utilizing GIS to measure the area of the subject property utilized for the transfer station operation, Staff finds approximately 2 acres is dedicated to transfer station use- using a conservative measurement approach. The locations of proposed improvements is within an area already developed with the transfer station, including alterations to the property as described in the Applicant’s submittal. Given the location of existing and proposed improvements, Staff finds the proposed expansion should not significant increase the cost of accepted forest practices on forest lands or force a significant change or increase in cost of these practices.

2. *The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel.*

**Findings:** Applicant states the proposed use will not increase fire hazard or place any burden on fire resources (Exhibit B).

The site plan submitted by the Applicant indicates fire breaks are already maintained at the facility (Exhibit B). The Oregon Department of Forestry and the US Forest Service were notified of this application and did not provide comments. Staff recommends a Condition of Approval requiring an updated site plan depicting fire breaks should this request be approved by the Tillamook County Planning Commission.

3. *A written statement recorded with the deed or written contract with the county or its equivalent is obtained from the land owner that recognizes the rights of adjacent and nearby land owners to conduct forest operations consistent with the Forest Practices Act and Rules for uses authorized in OAR 660-006-0025(5)(c).*

**Findings:** Staff finds that this criterion can be met through compliance with Conditions of Approval and has recommended a Condition of Approval to ensure this requirement is satisfied at the time of consolidated



Zoning and Building Permit application submittal should the Planning Commission choose to approve this request.

### C. Article VI Conditional Use Procedures and Criteria

Article VI of the Tillamook County Land Use Ordinance contains the procedures and review criteria for processing a Conditional Use request. These criteria, along with Staff's findings and conclusions, are indicated below.

1. **Section 6.020 Procedure** requires public notice in accordance with TCLUO Section 10.070 which requires notification of the request to be mailed to landowners within 750 feet of the subject property, and at least 28-days prior to the first evidentiary hearing.

**Findings:** Notice of the request was mailed to property owners and agencies on May 11, 2023. Comments received are included in "Exhibit C" of this report. Comments express concerns regarding impacts to surrounding properties as a result of the expansion (increase in garbage, odor, traffic, etc.), including concerns about removing landscape (trees) resulting in greater visibility of the transfer station by surrounding properties. Comments also question why emergency supplies cannot be stored at the fire station and express concerns about impacts to a nearby stream/creek from increased activity as well as potential impacts to ground and well water supplies (Exhibit C).

#### 2. Section 6.040 Review Criteria

1. *The use is listed as a conditional use in the underlying zone, or in an applicable overlying zone.*

**Findings:** Applicant is requesting conditional use approval for the repair and capacity expansion of an existing facility (Pacific City Transfer Station) for solid waste disposal and recycling, and for the siting of a storage structure for emergency supplies (Exhibit B). The proposed improvements to the existing transfer station and addition of a storage structure for emergency supplies are subject to the Forest Zone Conditional Use Criteria contained in TCLUO Section 3.004(8) and the Conditional Use Review Criteria contained in TCLUO Article 6. While the storage structure for emergency supplies is listed as a Type 2 administrative review in the Forest (F) zone, the requests have been consolidated and the highest level of review process applied.

2. *The use is consistent with the applicable goals and policies of the comprehensive plan.*

**Findings:** Staff finds that the proposed uses are permitted conditionally in the Tillamook County Land Use Ordinance. The TCLUO is an implementing document of the Comprehensive Plan. In the absence of evidence to the contrary, uses allowed conditionally in the Land Use Ordinance are presumed to be consistent with the Comprehensive Plan.

3. *The parcel is suitable for the proposed use considering its size, shape, location, topography, existence of improvements and natural features.*

**Findings:** As discussed above, the subject property encompasses approximately 38.57 acres of densely forested landscape and rugged terrain (Exhibit A). The property is owned by Tillamook County and approximately two (2) acres of the subject property is improved with the Pacific City Transfer Station, a facility for solid waste disposal and recycling (Exhibits A & B). The subject property shares a private drive (easement) accessing the developed area of the subject property where the transfer station facility is sited (Exhibits A and B).

There are no mapped wetlands or mapped riparian features on the subject property (Exhibit A). The subject property is located in FEMA flood zone X, 'areas of minimal flood hazard', as depicted on FEMA FIRM 41057C0870F dated September 28, 2018 (Exhibit A).

The surrounding properties to the north, northeast, west and east are zoned Small Farm and Woodlot 20-Acre (SFW-20) and Farm (F-1) and are dedicated to farm and forest uses (Exhibit A). Properties to the north, south and southwest are devoted to residential uses (Exhibit A).

The subject property is located within an area of known geologic hazard (Exhibit A). The existing improvements for the transfer station located in the roughly 2-acre region in the southwest portion of the subject property is relatively flat (Exhibit A). Staff also finds this area has been cleared of vegetation and impacts on undisturbed regions of the subject property are minimal based upon the Applicant's proposal (Exhibit B).

Applicant's submittal includes geotechnical assessment of the project location (Exhibit B). Given the size of the property and relatively flat location where improvements are proposed to be sited, Staff finds a Geologic Hazard Assessment is not required for siting of the proposed facility and emergency supply storage structures as per the provisions outlined in TCLUO Section 4.130: Development Requirements for Geologic Hazard Areas. Geologic Hazard assessment may be required for the new "Z" wall system and Staff recommends a Condition of Approval that ensures all development complies with relevant standards of TCLUO Section 4.130.

Staff finds the transfer station facility improvements and storage structure for emergency supplies will be sited in an area developed for public utility facility services, wholly located within the subject property boundaries and will not encroach into surrounding areas dedicated to residential, farm or forest use (Exhibit B). Applicant states the proposed site is suitable for the proposed use considering its size, topography, lack of natural features and existing road access (Exhibit B).

4. *The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs or prevents the use of surrounding properties for the permitted uses listed in the underlying zone.*

**Findings:** The subject property and surrounding area is mixed use with uses predominantly rural residential and forest (Exhibit A). Applicant states all improvements and activities necessary for maintenance and operation will continue to take place within the property boundaries, and that the proposed improvements will not substantially limit, impair or prevent the use of surrounding properties (Exhibit B).

As discussed above, Staff finds that the proposed use will not substantially limit or impair surrounding forest uses nor increase fire hazard risk. Given the location of the transfer station facility improvements, Staff finds that the request will impact adjacent farm and forest uses.

As mentioned previously in this report, public comments received outline concerns related to impacts to surrounding properties as a result of the expansion (increase in garbage, odor, traffic, etc.), including concerns about removing landscape (trees) resulting in greater visibility of the transfer station for surrounding properties. Comments also question why emergency supplies cannot be stored at the fire station and express concerns about impacts to the stream/creek from increased activity as well as potential impacts to ground and well water supplies (Exhibit C).

The transfer station borders residential properties to the west and south (Exhibit A). Dense vegetation buffers the perimeter of the transfer station and serves as a buffer between the facility and adjacent



residential properties. Utilizing GIS, Staff also finds that the nearest residential property line is located approximately 100-feet from the transfer station, and the dwelling on this property is roughly 200-feet from the transfer station. Similarly, other residential improvements on adjacent properties are also located at least 200-feet from the driveway entering into the transfer station.

Staff and the Applicant will be prepared to address public comments at the hearing. As mentioned previously, the subject property is densely vegetated, and serves as a buffer between transfer station activities and adjacent residential properties (Exhibit A). In review of the site plan, Staff finds the improvements will be sited within the approximate 2-acre area already dedicated to transfer station use. No natural features were identified on the subject property and the potential location of any wetlands are at least two hundred feet south of the subject property (Exhibit A).

A stormwater management plan is included with the Applicant's submittal. Improvements include a stormwater infiltration swale (Exhibit B).

Given the location and proximity of surrounding residential properties, staff the proposed transfer station improvements, expansion of the transfer station and siting of a storage structure for emergency supplies will not alter the character of the surrounding area in a manner which substantially limits, impairs or prevents the use of surrounding properties for the permitted uses listed in the underlying zone.

5. *The proposed use will not have a detrimental effect on existing solar energy systems, wind energy conversion systems or wind mills.*

**Findings:** The applicant states that there are no solar energy systems, wind energy conversion systems or wind mills in the area (Exhibit B). Tillamook County records do not indicate that any such devices have been installed on the subject property or in the immediate vicinity.

6. *The proposed use is timely, considering the adequacy of public facilities and services existing or planned for the area affected by the use.*

**Findings:** The proposed site is accessed via an existing private drive that connects to Brooten Road, a County road (Exhibit B). No new roads are proposed or needed to accommodate the proposed development on the subject property. Applicant states that the proposed improvements enable greater operating efficiency and provide better control of waste materials (Exhibit B).

Staff finds there are existing public facilities and services in this area, including emergency response services, fire service and other services such as Tillamook People's Utility District.

## **V. RECOMMENDED CONDITIONS OF APPROVAL:**

Sections 6.070: COMPLIANCE WITH CONDITIONS, and 6.080: TIME LIMIT requires compliance with approved plans and conditions of this decision, and all other ordinance provisions. Failure to comply with the Conditions of Approval and ordinance provisions could result in nullification of this approval.

1. Applicant/Owner shall obtain all required Federal, State, and Local permits.
2. Applicant/Owner shall obtain an approved consolidated Zoning and Building Permit from the Tillamook County Department of Community Development prior to development of the subject property.

3. A site plan, drawn to scale, illustrating the proposed setbacks and fire breaks shall be provided at the time of consolidated Zoning and Building Permit application submittal. Applicant/Owner shall maintain the primary fuel-free break area surrounding all structures 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 the Oregon Department of Forestry.
4. A letter from the Oregon Department of Forestry confirming fire control service to the site is required at the time of consolidated Zoning and Building Permit application submittal.
5. An updated water letter from the Oregon Water Resources Department confirming water availability is required at the time of consolidated Zoning and Building Permit application submittal.
6. Development of the property shall adhere to relevant development standards in TCLUO Section 3.004: Forest (F) Zone, TCLUO Section 3.006: Small Farm and Woodlot 20-Acre (SFW-20) Zone, and the relevant standards contained in TCLUO Section 3.140: Development Requirements for Geologic Hazard Areas.
7. In accepting this Approval, the Applicant/Owner understands intensive farm or forest practices may be conducted upon adjacent or nearby land zoned for farm or forest use. Applicant/Owner hereby acknowledges that practices may involve but are not limited to the application of herbicides or fertilizers (including aerial spraying), road construction, changes in view, noise, dust, odor, traffic, and other impacts related to a farm zone. Applicant/Owner acknowledges use of this property may be impacted by such activities and is accepting of that fact. In the event of conflict, Applicant/Owner understands preference will be given to farm and forest practices.
8. This approval shall be void on June 22, 2025, unless construction of approved plans has begun, or an extension is requested from, and approved by this Department.

## **VI. EXHIBITS**

All Exhibits referred to herein are, by this reference, made a part hereof:

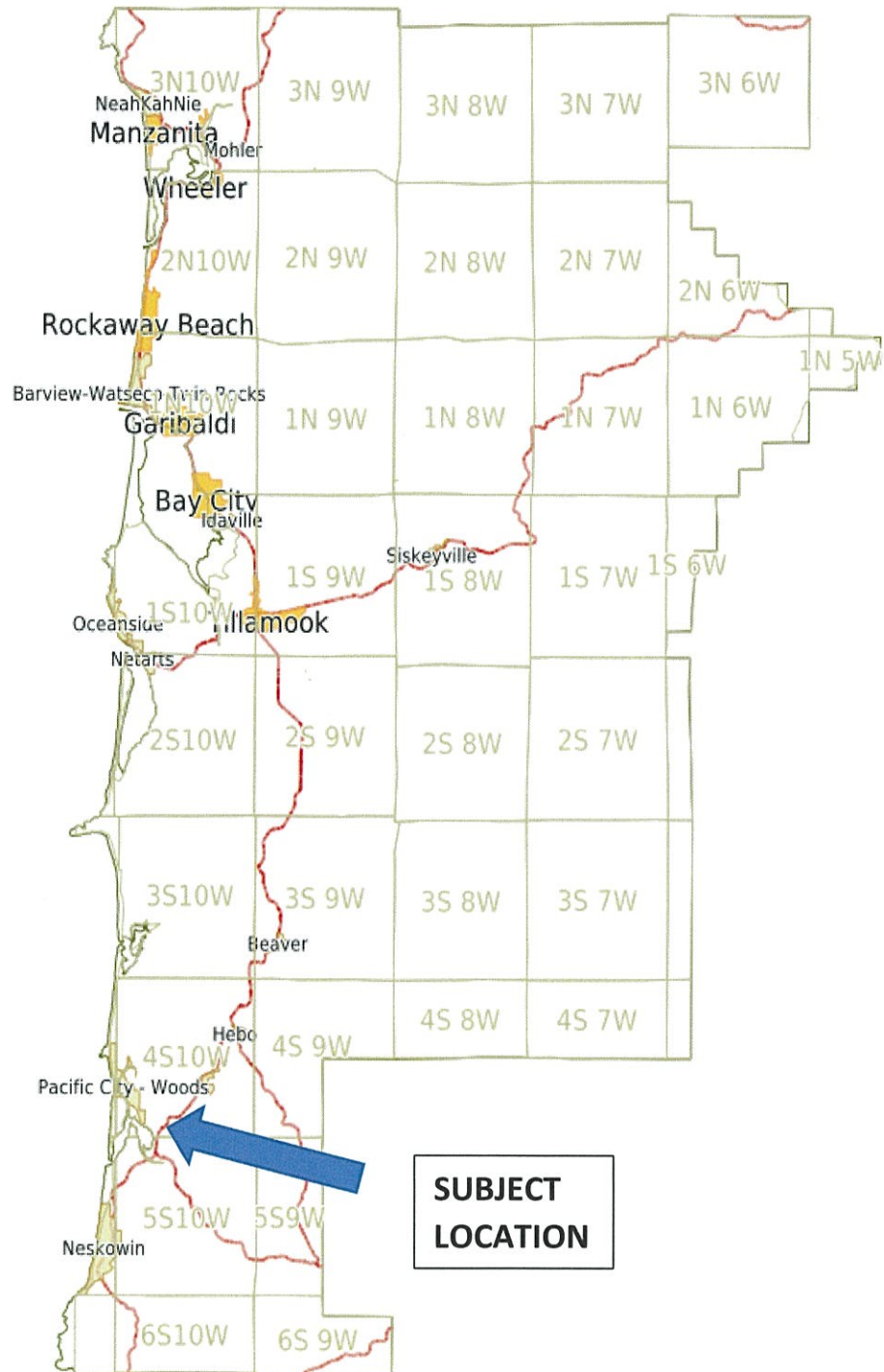
- A. Location map, Assessor map, Zoning map, Aerial imagery, Assessor's Summary Report
- B. Applicant's submittal
- C. Public/Agency Comments



**EXHIBIT**

**A**

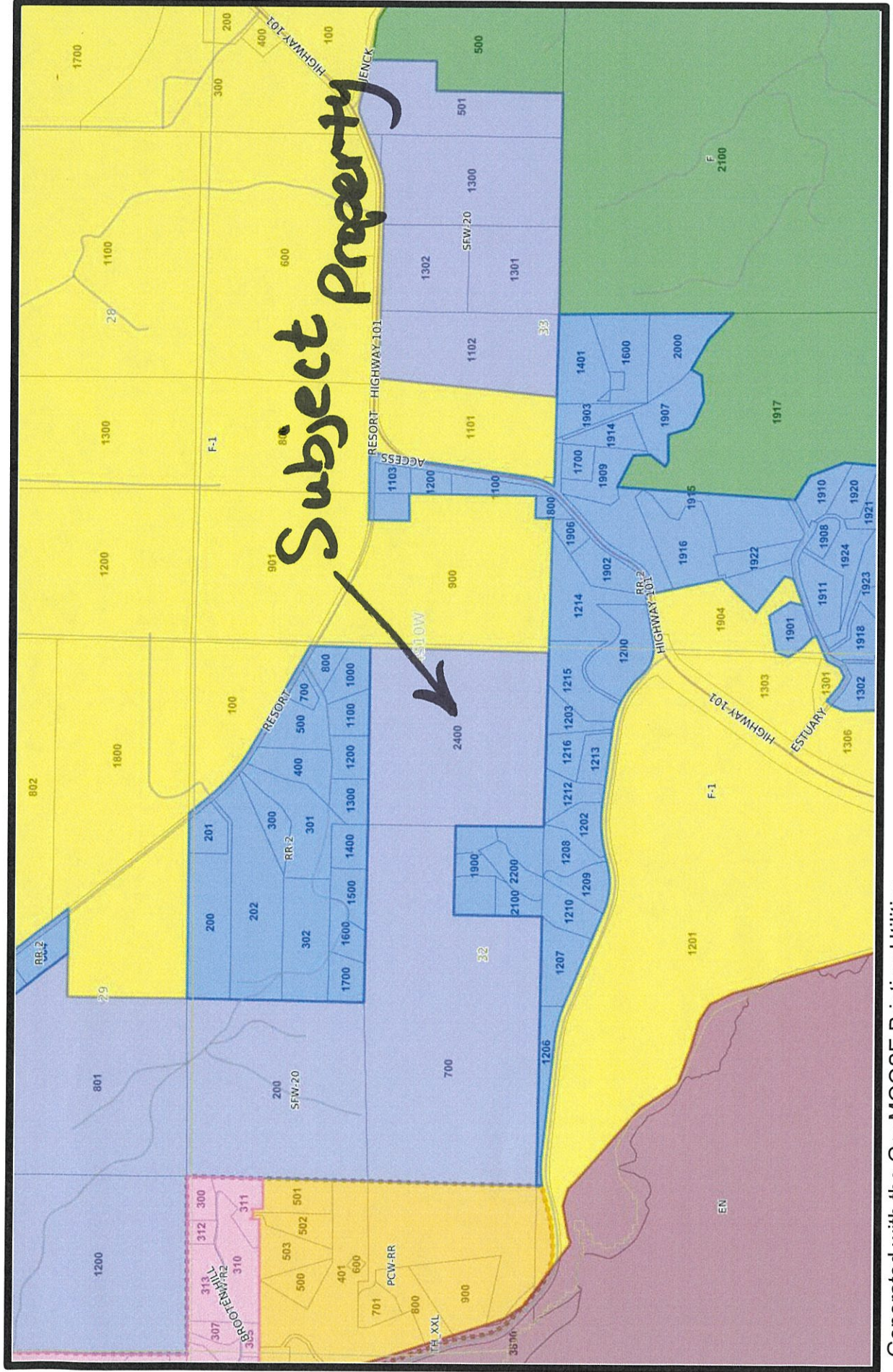
# VICINITY MAP



#851-23-000123-PLNG  
PACIFIC CITY TRANSFER STATION

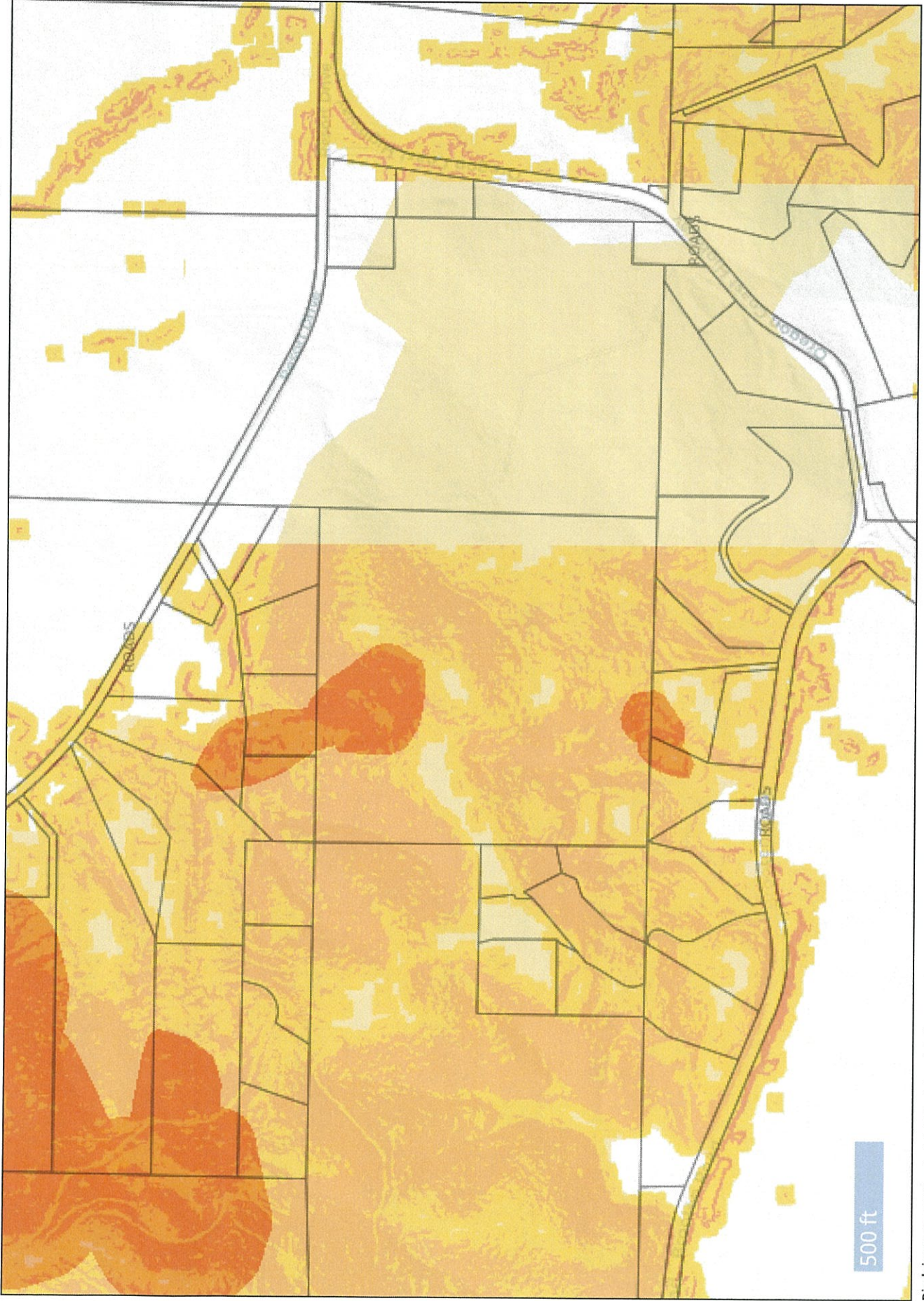


# Map





# Pacific City Transfer Station

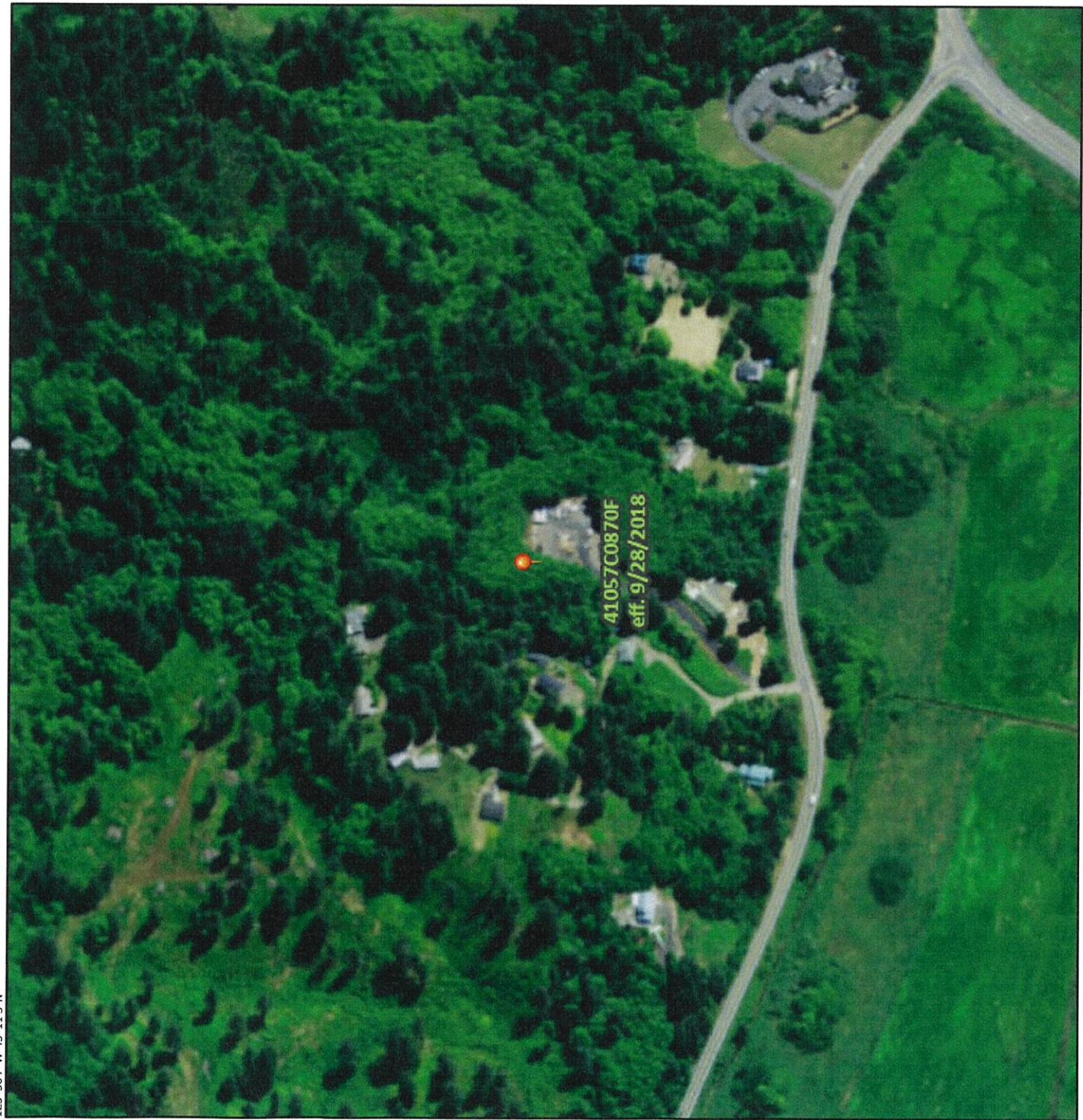


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# National Flood Hazard Layer FIRMette

123°56'7"W 45°11'5"N



123°55'30"W 45°10'40"N

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**

- Without Base Flood Elevation (BFE)  
*Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**

- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

**OTHER AREAS**

- Area of Minimal Flood Hazard *Zone X*
- Effective LOMRS
- Area of Undetermined Flood Hazard *Zone*

**GENERAL STRUCTURES**

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**

- Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**

- Digital Data Available
- No Digital Data Available
- Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

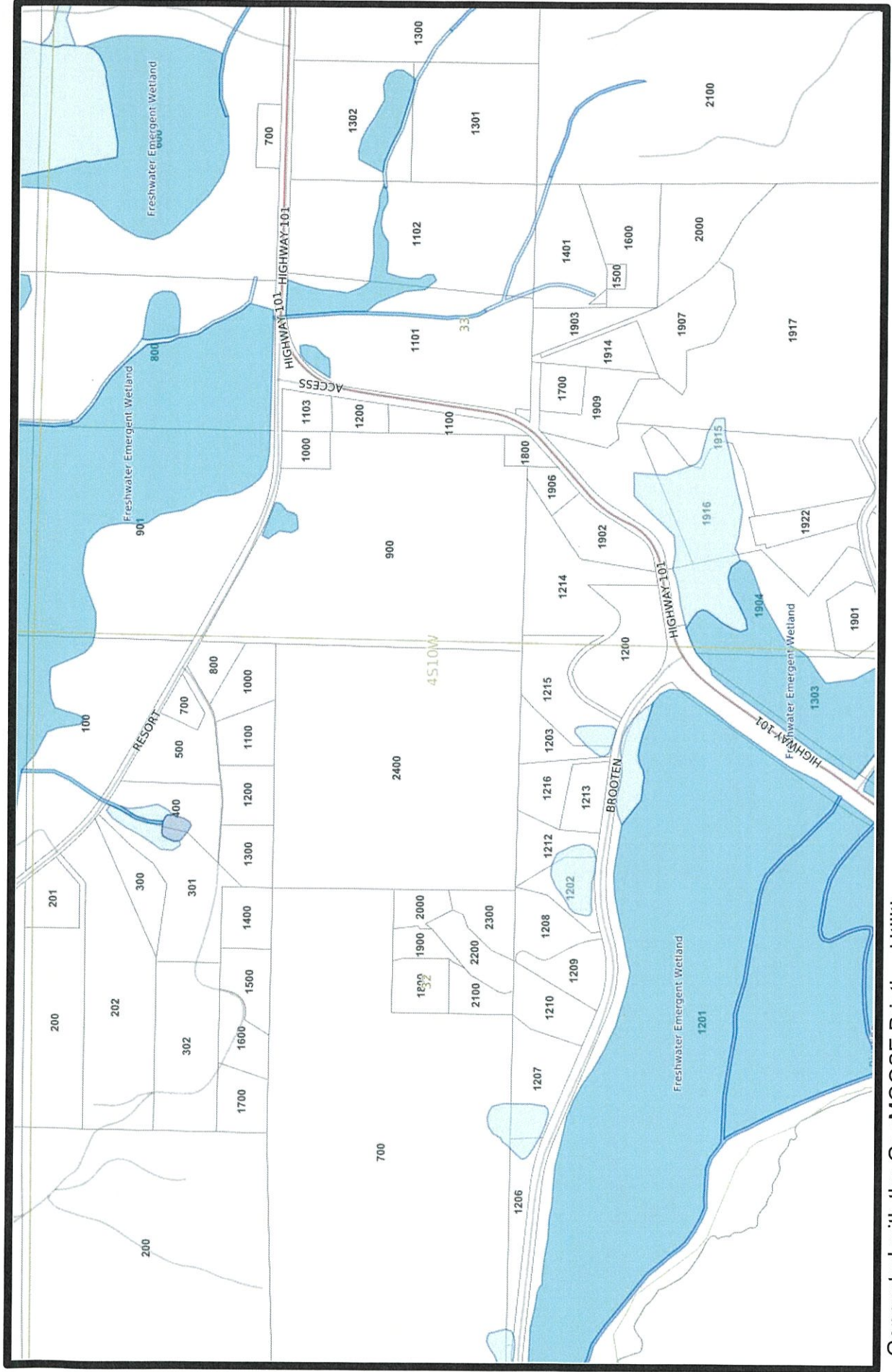
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **6/15/2023 at 3:05 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

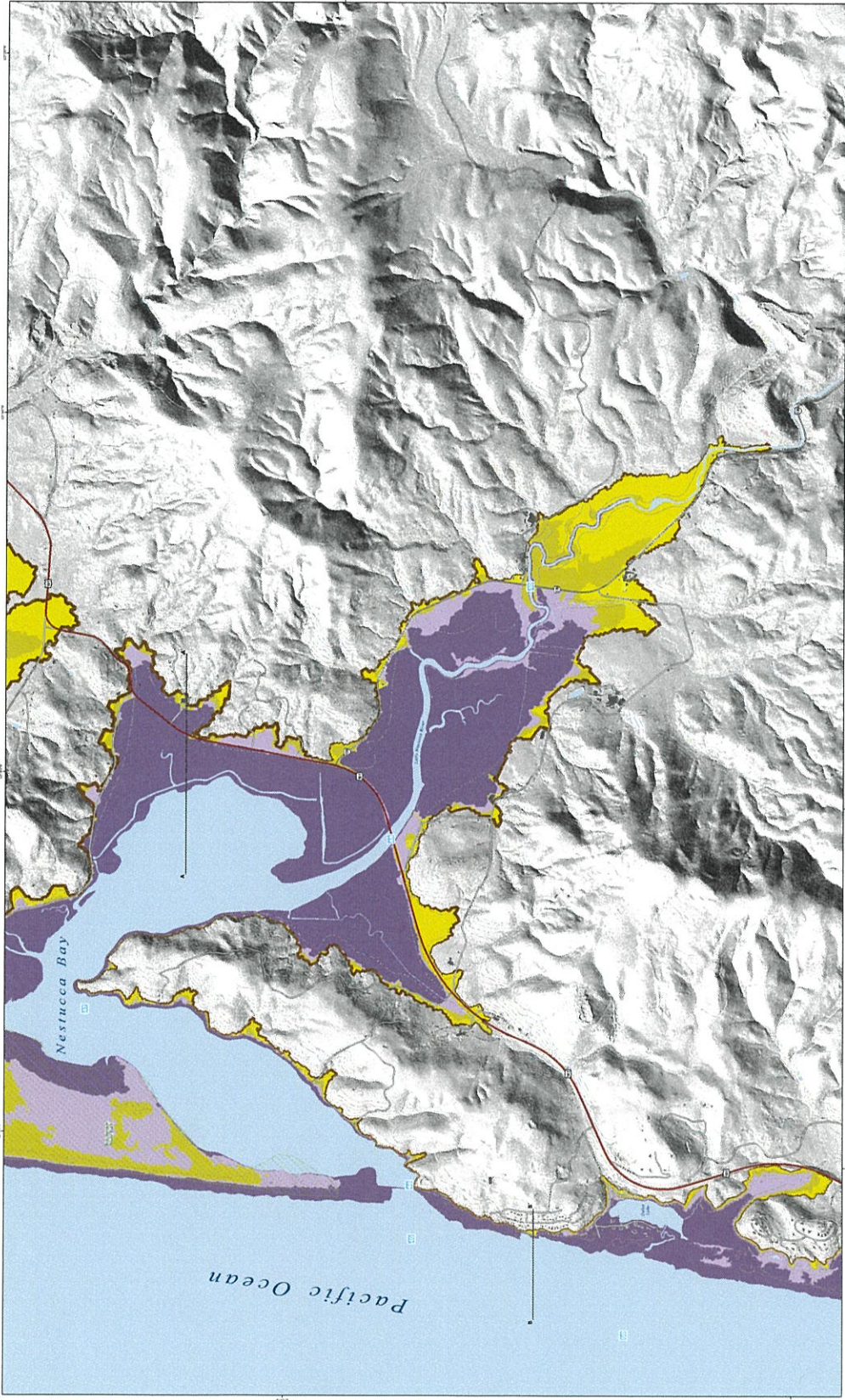


# Map





# Local Source (Cascadia Subduction Zone) Tsunami Inundation Map Nestucca Bay, Oregon



**Introduction**

The purpose of this map is to show the potential inundation areas from a tsunami originating in the Cascadia Subduction Zone (CSZ) near Nestucca Bay, Oregon. This map is part of a series of maps showing the potential inundation areas from a tsunami originating in the CSZ near various locations along the Oregon coast.

**Map Population**

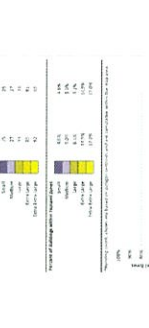
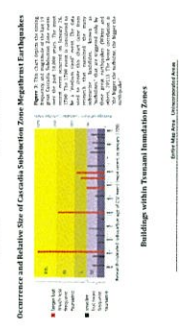
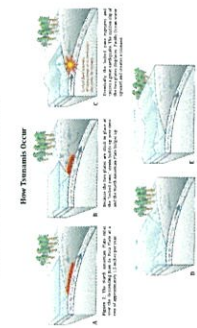
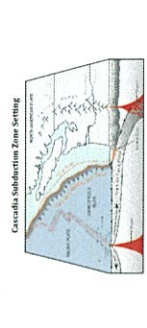
The population of the area shown on this map is approximately 10,000 people. The population is concentrated in the town of Nestucca, Oregon, and the surrounding areas.

**Map Scale**

The map scale is 1:50,000. This means that 1 inch on the map represents 50,000 inches (approximately 1,267 meters) on the ground.

**Map Symbols**

The map uses various symbols to represent different features. The inundation zones are shown in purple, yellow, and green. The Pacific Ocean is shown in blue. The land is shown in light gray. The map also shows roads, rivers, and other geographical features.



**Data References**

USGS National Earthquake Information Center (NEIC) Catalog of Earthquakes (1973-Present)  
 USGS National Earthquake Information Center (NEIC) Catalog of Earthquakes (1973-Present)  
 USGS National Earthquake Information Center (NEIC) Catalog of Earthquakes (1973-Present)

**Legend**

Inundation Zone: 1-2m, 2-3m, 3-4m, 4-5m, 5-6m, 6-7m, 7-8m, 8-9m, 9-10m, 10-11m, 11-12m, 12-13m, 13-14m, 14-15m, 15-16m, 16-17m, 17-18m, 18-19m, 19-20m, 20-21m, 21-22m, 22-23m, 23-24m, 24-25m, 25-26m, 26-27m, 27-28m, 28-29m, 29-30m, 30-31m, 31-32m, 32-33m, 33-34m, 34-35m, 35-36m, 36-37m, 37-38m, 38-39m, 39-40m, 40-41m, 41-42m, 42-43m, 43-44m, 44-45m, 45-46m, 46-47m, 47-48m, 48-49m, 49-50m, 50-51m, 51-52m, 52-53m, 53-54m, 54-55m, 55-56m, 56-57m, 57-58m, 58-59m, 59-60m, 60-61m, 61-62m, 62-63m, 63-64m, 64-65m, 65-66m, 66-67m, 67-68m, 68-69m, 69-70m, 70-71m, 71-72m, 72-73m, 73-74m, 74-75m, 75-76m, 76-77m, 77-78m, 78-79m, 79-80m, 80-81m, 81-82m, 82-83m, 83-84m, 84-85m, 85-86m, 86-87m, 87-88m, 88-89m, 89-90m, 90-91m, 91-92m, 92-93m, 93-94m, 94-95m, 95-96m, 96-97m, 97-98m, 98-99m, 99-100m, 100-101m, 101-102m, 102-103m, 103-104m, 104-105m, 105-106m, 106-107m, 107-108m, 108-109m, 109-110m, 110-111m, 111-112m, 112-113m, 113-114m, 114-115m, 115-116m, 116-117m, 117-118m, 118-119m, 119-120m, 120-121m, 121-122m, 122-123m, 123-124m, 124-125m, 125-126m, 126-127m, 127-128m, 128-129m, 129-130m, 130-131m, 131-132m, 132-133m, 133-134m, 134-135m, 135-136m, 136-137m, 137-138m, 138-139m, 139-140m, 140-141m, 141-142m, 142-143m, 143-144m, 144-145m, 145-146m, 146-147m, 147-148m, 148-149m, 149-150m, 150-151m, 151-152m, 152-153m, 153-154m, 154-155m, 155-156m, 156-157m, 157-158m, 158-159m, 159-160m, 160-161m, 161-162m, 162-163m, 163-164m, 164-165m, 165-166m, 166-167m, 167-168m, 168-169m, 169-170m, 170-171m, 171-172m, 172-173m, 173-174m, 174-175m, 175-176m, 176-177m, 177-178m, 178-179m, 179-180m, 180-181m, 181-182m, 182-183m, 183-184m, 184-185m, 185-186m, 186-187m, 187-188m, 188-189m, 189-190m, 190-191m, 191-192m, 192-193m, 193-194m, 194-195m, 195-196m, 196-197m, 197-198m, 198-199m, 199-200m, 200-201m, 201-202m, 202-203m, 203-204m, 204-205m, 205-206m, 206-207m, 207-208m, 208-209m, 209-210m, 210-211m, 211-212m, 212-213m, 213-214m, 214-215m, 215-216m, 216-217m, 217-218m, 218-219m, 219-220m, 220-221m, 221-222m, 222-223m, 223-224m, 224-225m, 225-226m, 226-227m, 227-228m, 228-229m, 229-230m, 230-231m, 231-232m, 232-233m, 233-234m, 234-235m, 235-236m, 236-237m, 237-238m, 238-239m, 239-240m, 240-241m, 241-242m, 242-243m, 243-244m, 244-245m, 245-246m, 246-247m, 247-248m, 248-249m, 249-250m, 250-251m, 251-252m, 252-253m, 253-254m, 254-255m, 255-256m, 256-257m, 257-258m, 258-259m, 259-260m, 260-261m, 261-262m, 262-263m, 263-264m, 264-265m, 265-266m, 266-267m, 267-268m, 268-269m, 269-270m, 270-271m, 271-272m, 272-273m, 273-274m, 274-275m, 275-276m, 276-277m, 277-278m, 278-279m, 279-280m, 280-281m, 281-282m, 282-283m, 283-284m, 284-285m, 285-286m, 286-287m, 287-288m, 288-289m, 289-290m, 290-291m, 291-292m, 292-293m, 293-294m, 294-295m, 295-296m, 296-297m, 297-298m, 298-299m, 299-300m, 300-301m, 301-302m, 302-303m, 303-304m, 304-305m, 305-306m, 306-307m, 307-308m, 308-309m, 309-310m, 310-311m, 311-312m, 312-313m, 313-314m, 314-315m, 315-316m, 316-317m, 317-318m, 318-319m, 319-320m, 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520-521m, 521-522m, 522-523m, 523-524m, 524-525m, 525-526m, 526-527m, 527-528m, 528-529m, 529-530m, 530-531m, 531-532m, 532-533m, 533-534m, 534-535m, 535-536m, 536-537m, 537-538m, 538-539m, 539-540m, 540-541m, 541-542m, 542-543m, 543-544m, 544-545m, 545-546m, 546-547m, 547-548m, 548-549m, 549-550m, 550-551m, 551-552m, 552-553m, 553-554m, 554-555m, 555-556m, 556-557m, 557-558m, 558-559m, 559-560m, 560-561m, 561-562m, 562-563m, 563-564m, 564-565m, 565-566m, 566-567m, 567-568m, 568-569m, 569-570m, 570-571m, 571-572m, 572-573m, 573-574m, 574-575m, 575-576m, 576-577m, 577-578m, 578-579m, 579-580m, 580-581m, 581-582m, 582-583m, 583-584m, 584-585m, 585-586m, 586-587m, 587-588m, 588-589m, 589-590m, 590-591m, 591-592m, 592-593m, 593-594m, 594-595m, 595-596m, 596-597m, 597-598m, 598-599m, 599-600m, 600-601m, 601-602m, 602-603m, 603-604m, 604-605m, 605-606m, 606-607m, 607-608m, 608-609m, 609-610m, 610-611m, 611-612m, 612-613m, 613-614m, 614-615m, 615-616m, 616-617m, 617-618m, 618-619m, 619-620m, 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820-821m, 821-822m, 822-823m, 823-824m, 824-825m, 825-826m, 826-827m, 827-828m, 828-829m, 829-830m, 830-831m, 831-832m, 832-833m, 833-834m, 834-835m, 835-836m, 836-837m, 837-838m, 838-839m, 839-840m, 840-841m, 841-842m, 842-843m, 843-844m, 844-845m, 845-846m, 846-847m, 847-848m, 848-849m, 849-850m, 850-851m, 851-852m, 852-853m, 853-854m, 854-855m, 855-856m, 856-857m, 857-858m, 858-859m, 859-860m, 860-861m, 861-862m, 862-863m, 863-864m, 864-865m, 865-866m, 866-867m, 867-868m, 868-869m, 869-870m, 870-871m, 871-872m, 872-873m, 873-874m, 874-875m, 875-876m, 876-877m, 877-878m, 878-879m, 879-880m, 880-881m, 881-882m, 882-883m, 883-884m, 884-885m, 885-886m, 886-887m, 887-888m, 888-889m, 889-890m, 890-891m, 891-892m, 892-893m, 893-894m, 894-895m, 895-896m, 896-897m, 897-898m, 898-899m, 899-900m, 900-901m, 901-902m, 902-903m, 903-904m, 904-905m, 905-906m, 906-907m, 907-908m, 908-909m, 909-910m, 910-911m, 911-912m, 912-913m, 913-914m, 914-915m, 915-916m, 916-917m, 917-918m, 918-919m, 919-920m, 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1016-1017m, 1017-1018m, 1018-1019m, 1019-1020m, 1020-1021m, 1021-1022m, 1022-1023m, 1023-1024m, 1024-1025m, 1025-1026m, 1026-1027m, 1027-1028m, 1028-1029m, 1029-1030m, 1030-1031m, 1031-1032m, 1032-1033m, 1033-1034m, 1034-1035m, 1035-1036m, 1036-1037m, 1037-1038m, 1038-1039m, 1039-1040m, 1040-1041m, 1041-1042m, 1042-1043m, 1043-1044m, 1044-1045m, 1045-1046m, 1046-1047m, 1047-1048m, 1048-1049m, 1049-1050m, 1050-1051m, 1051-1052m, 1052-1053m, 1053-1054m, 1054-1055m, 1055-1056m, 1056-1057m, 1057-1058m, 1058-1059m, 1059-1060m, 1060-1061m, 1061-1062m, 1062-1063m, 1063-1064m, 1064-1065m, 1065-1066m, 1066-1067m, 1067-1068m, 1068-1069m, 1069-1070m, 1070-1071m, 1071-1072m, 1072-1073m, 1073-1074m, 1074-1075m, 1075-1076m, 1076-1077m, 1077-1078m, 1078-1079m, 1079-1080m, 1080-1081m, 1081-1082m, 1082-1083m, 1083-1084m, 1084-1085m, 1085-1086m, 1086-1087m, 1087-1088m, 1088-1089m, 1089-1090m, 1090-1091m, 1091-1092m, 1092-1093m, 1093-1094m, 1094-1095m, 1095-1096m, 1096-1097m, 1097-1098m, 1098-1099m, 1099-1100m, 1100-1101m, 1101-1102m, 1102-1103m, 1103-1104m, 1104-1105m, 1105-1106m, 1106-1107m, 1107-1108m, 1108-1109m, 1109-1110m, 1110-1111m, 1111-1112m, 1112-1113m, 1113-1114m, 1114-1115m, 1115-1116m, 1116-1117m, 1117-1118m, 1118-1119m, 1119-1120m, 1120-1121m, 1121-1122m, 1122-1123m, 1123-1124m, 1124-1125m, 1125-1126m, 1126-1127m, 1127-1128m, 1128-1129m, 1129-1130m, 1130-1131m,



# TILLAMOOK County Assessor's Summary Report

## Real Property Assessment Report

FOR ASSESSMENT YEAR 2022

June 15, 2023 1:12:31 pm

**Account #** 307493  
**Map #** 4S1032A002400  
**Code - Tax #** 2201-307493

**Tax Status** NONASSESSABLE  
**Acct Status** ACTIVE  
**Subtype** NORMAL

**Legal Descr** See Record

**Mailing Name** COUNTY

**Deed Reference #** See Record

**Agent**

**Sales Date/Price** See Record

**In Care Of**

**Appraiser** KARI FLEISHER

**Mailing Address** 201 LAUREL AVE  
 TILLAMOOK, OR 97141

**Prop Class** 951      **MA**   **SA**   **NH**   **Unit**  
**RMV Class** 201      07   01   300   5424-1

Situs Address(s)	Situs City
ID# 1 38255 BROOTEN RD	COUNTY

Code Area	RMV	MAV	Value Summary AV	RMV Exception	CPR %
2201 Land	393,770			Land	0
Impr.	0			Impr.	0
<b>Code Area Total</b>	393,770	0	0		0
<b>Grand Total</b>	393,770	0	0		0

Code Area	ID#	RFPD	Ex	Plan Zone	Value Source	Land Breakdown			Trended RMV
						TD%	LS	Size	
2201	1	<input checked="" type="checkbox"/>		SFW20	Market	116	A	5.00	66,460
2201	2	<input type="checkbox"/>		SFW20	Market	116	A	35.00	327,310
<b>Grand Total</b>								40.00	393,770

Code Area	ID#	Yr Built	Stat Class	Description	Improvement Breakdown		Total Sq. Ft.	Ex% MS Acct #	Trended RMV
					TD%				
2201	1	1900	474	Warehouses - Distribution	116		10		0
<b>Grand Total</b>							10		0

Exemptions / Special Assessments / Potential Liability									
<b>Code Area 2201</b>									
<b>EXEMPTIONS (AV):</b>									
■ COUNTY GOVERNMENT 307.090					<b>Amount</b>	0			
<b>FIRE PATROL:</b>									
■ FIRE PATROL NORTHWEST					<b>Amount</b>	58.03	<b>Acres</b>	37.8	<b>Year</b> 2022
■ FIRE PATROL SURCHARGE					<b>Amount</b>	47.50			<b>Year</b> 2022

**Comments:** 10/28/09 Added RMV PCA. Updated RMV. So. County Transfer Station. KF 10/20/10 Added back 2010 trends. KF 05/14/20 Added fire patrol per department of forestry.ef



**EXHIBIT**

**B**





Tillamook County Department of Community Development  
 1510-B Third Street, Tillamook, OR 97141 | Tel: 503-842-3408 Fax: 503-842-1819  
[www.co.tillamook.or.us](http://www.co.tillamook.or.us)

## PLANNING APPLICATION

**Applicant**  (Check Box if Same as Property Owner)

Name: David McCall Phone: 503.815.3975  
 Address: 503 Marolf Loop Rd  
 City: Tillamook State: OR Zip: 97141  
 Email: dmccall@co.tillamook.or.us

### Property Owner

Name: Tillamook County Phone: 503.815.3975  
 Address: 201 Laurel Ave  
 City: Tillamook State: OR Zip: 97141  
 Email: dmccall@co.tillamook.or.us

OFFICE USE ONLY
Date Stamp
<b>RECEIVED</b> APR 20 2023
<input type="checkbox"/> Approved <input type="checkbox"/> Denied
Received by:
Receipt #:
Fees: 1900 IFT
Permit No: 851-23-000123PLNG

Request: Repair and capacity expansion of existing facility for solid waste disposal and recycling

Type II	Type III	Type IV
<input type="checkbox"/> Farm/Forest Review	<input type="checkbox"/> Appeal of Director's Decision	<input type="checkbox"/> Appeal of Planning Commission Decision
<input type="checkbox"/> Conditional Use Review	<input type="checkbox"/> Extension of Time	<input type="checkbox"/> Ordinance Amendment
<input type="checkbox"/> Variance	<input type="checkbox"/> Detailed Hazard Report	<input type="checkbox"/> Large-Scale Zoning Map Amendment
<input type="checkbox"/> Exception to Resource or Riparian Setback	<input checked="" type="checkbox"/> Conditional Use (As deemed by Director)	<input type="checkbox"/> Plan and/or Code Text Amendment
<input type="checkbox"/> Nonconforming Review (Major or Minor)	<input type="checkbox"/> Ordinance Amendment	
<input type="checkbox"/> Development Permit Review for Estuary Development	<input type="checkbox"/> Map Amendment	
<input type="checkbox"/> Non-farm dwelling in Farm Zone	<input type="checkbox"/> Goal Exception	
<input type="checkbox"/> Fore-dune Grading Permit Review		
<input type="checkbox"/> Neskowin Coastal Hazards Area		

### Location:



Site Address: 38255 Brooten Road, Pacific City

Map Number:	4S	10W	32A	2400
	Township	Range	Section	Tax Lot(s)

Clerk's Instrument #: \_\_\_\_\_

### Authorization

This permit application does not assure permit approval. The applicant and/or property owner shall be responsible for obtaining any other necessary federal, state, and local permits. The applicant verifies that the information submitted is complete, accurate, and consistent with other information submitted with this application.

	4/20/23
Property Owner Signature (Required)	Date
	4/19/23
Applicant Signature	Date





## Tillamook County Public Works

503 Marolf Loop Road, Tillamook, OR 97141  
County Road Phone: 503-842-3419  
Solid Waste Phone: 503-815-3975  
Email: [pubwks@co.tillamook.or.us](mailto:pubwks@co.tillamook.or.us)  
TTY Oregon Relay Service

*Land of Trees, Cheese, and Ocean Breeze*

March 29<sup>th</sup>, 2023

David McCall  
Solid Waste Department  
503 Marolf Loop Road  
Tillamook, OR 97141

RE: Pacific City Transfer Station Improvements  
Brooten Road; Tillamook County Road #887  
T04S R10W Sec. 32A, Tax Lot #2400

Dear David:

The design submitted for improvements to the Pacific City Transfer Station has been reviewed by Tillamook County Public Works engineering staff. The proposed improvements appear to represent no significant change to the volume or character of traffic presently accessing the site from Brooten Road. As such, Tillamook County Public Works has no objection to this project moving forward.

Sincerely,

Jasper J. Lind  
Engineering Technician





## NESTUCCA RURAL FIRE PROTECTION DISTRICT

30710 Highway 101 S

Cloverdale, Oregon

503-392-3313

March 31, 2023

To: Tillamook County Solid Waste

Attn: David McCall

Subject: South County collection site

After reviewing the plot map for the proposed new structure. The District see no problems with the proposal. When approved a water access form will need to be filled out and submit to the District. The structure would need to fallow the Oregon Fire Code 2022.

James Oeder

  
Fire Chief



## Tillamook County



*Land of Cheese, Trees and Ocean Breeze*

### **Randy B. Thorpe, Director**

Emergency Management  
201 Laurel Avenue  
Tillamook, Oregon 97141  
Phone (503) 842-3412 x3309  
Mobile (503) 812-8523

March 28, 2023

To Whom it may concern,

I am writing this letter of support for the proposed upgrades to the Pacific City Transfer Station (38255 Brooten Road). By including a sitting for a container that will housing the need emergency supply in cast of a disaster will greatly improve the Counties ability to respond in times of need.

I have in conjunction with the South Tillamook Emergency Volunteer Corps been looking for a suitable site to place a storage container. David McCall, Solid Waste Program Manager said that the County would be upgrading the transfer station in Pacific City and they would be able to include a sitting area for an Emergency Preparedness Container. This is a great option to house the necessary supplies. It will provide a secure site in the south county area.

I am in full support of this opportunity to increase the Counties response efforts in south county area.

Best regards,

*Randy B. Thorpe*

Randy B. Thorpe, Director

## Info for Planning for PCTS Upgrade

Use as a Solid Waste Disposal Facility, under DEQ Permit #343, with an area for the storage of emergency supplies

### Conditional Use Review Criteria

- (1) Yes, 3.004
- (2) Yes
- (3) The total size of the site is 40 acres, and less than 1 acre of that is used for the purposes of the transfer station. It is located approx. 2 miles outside of the unincorporated community of Pacific City, which is the largest community in the area. Access to the site is off of Brooten Road, which is one of the main arterials to Pacific City. The site is predominantly hilly, forested land, which a flat section that serves the purposes of the transfer station. The terrain and trees provide a barrier to nearby areas, such that the transfer station is virtually invisible to passersby. The existing Z-walls were built into the topography to integrate the old, closed landfill into the functional structure of the facility.
- (4) This project, and the continued operation of the transfer station, will not limit, impair, or present the use of surrounding properties. This site was a public open burning dump and a sewage sludge dump until it was closed and converted in 1981 to a transfer station for self-haulers of small loads of trash and recycling. The site is currently open to the public three days a week (Thursday, Friday, Monday) throughout the year, and an additional day (Sunday) during the six summer months. As a result of this project, the site will be able to operate more efficiently, and serve the public's disposal (both trash and recycling) needs not only for the present, but likely for the upcoming 20 years. This will all be done within the existing footprint, or with minimal expansion in a direction opposite of the nearest residential uses. The steps taken with this project are consistent with the desire to insulate neighbors from the transfer station, which has been here longer than most neighboring houses. Tree barriers on all sides of the transfer station provide an insular barrier for sound, dust, and other potential issues.
- (5) No, there are no existing solar or wind energy systems in the area, and this would not have an impact on them if there were.
- (6) The capacity of this facility is at its limits, and this project will alter the structure of the facility, enabling greater operating efficiency, and better preventing contamination of the environment through a controlled acceptance of waste materials. While remaining within the same footprint, the capacity will increase through better positioning of infrastructure, and more efficient handling and storage of recyclable materials.
  - a. Water is not required for this facility. Water for operations is collected on site and/or trucked in.



- b. Sewer is not required for this facility. A porta-potty is stationed on site, and is regularly serviced by the contracted service provider.
- c. Road access is from Brooten Road, via an internal paved and maintained road over an easement. See attached letter from Public Works.
- d. This project will enable the provision of internal security cameras to augment security measures beyond the locking of the gate at the access point (just off of Brooten Road). This will not hinder, but support local law enforcement services.
- e. See attached letter from the Fire District.
- f. See attached letter from Emergency Manager

### Forest Zone Criteria

#### (8) Conditional Use Review Criteria

- 1. The project will not affect or change farming, forest practices, or agriculture on forest lands.
- 2. The project will not significantly increase fire hazard or place any burden on fire resources.

#### (9) Siting Standards

See site plan



**Tillamook County**  
**PUBLIC WORKS DEPARTMENT**  
*Department of Solid Waste*  
*Waste Prevention and Recycling*



503 Marolf Loop Road  
Tillamook, Oregon 97141  
PH (503) 815-3975  
FAX (503) 842-6473

Email: [recycle@co.tillamook.or.us](mailto:recycle@co.tillamook.or.us)  
[www.co.tillamook.or.us/solid-waste](http://www.co.tillamook.or.us/solid-waste)

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*Land of Cheese, Trees and Ocean Breeze*

March 31, 2023

Tillamook County Department of Community Development

RE: Pacific City Transfer Station permit requests

Tillamook County is the owner of the Pacific City Transfer Station, located at 38255 Brooten Rd, which operated as an open burn site, a landfill, and has operated as a municipal solid waste (MSW) transfer station and recycling facility since 1981. The transfer station had been operated by various contracted/franchised entities but since January 2016 Tillamook County's own Solid Waste Department has operated the facility.

The site operates under DEQ Solid Waste Disposal Site Permit #343.

As has been reported to the Solid Waste Advisory Committee and the Tillamook County Board of Commissioners, traffic to this site and the quantities of materials collected there has steadily increased over the years, reflecting the increasing population in the area. Various methods to increase efficiency and accommodate the increasing volumes of materials has been worked on during the past several years. The long-term projection was disrupted by a very significant increase in traffic and volumes during the COVID-19 pandemic, which saw a 28% increase in MSW quantities alone. This fortunately coincided with our work to plan for increasing capacity and maintain operating services.

Over a decade ago traffic improvements were introduced, enabling traffic to travel counter-clockwise through the facility, avoiding cross-traffic. All areas where customers travel or park are fully paved.

There are no permanent structures on this site, other than a set of "Z-walls" constructed when the site was converted to a transfer station in 1980-81. These Z-walls were constructed using wooden timber walls, and while they have served well, they necessitate repair. The quantity of MSW collected at this site has exceeded the capacity of the original Z-walls.

The need for waste diversion through a separate collection of yard debris, as well as the anticipated collection of additional materials covered under the Recycling Modernization Act (RMA), results in the need for additional collection, storage and Z-wall space. The need for improved recycling services and conditions is apparent, and necessary if this site is to comply with expectations for statewide improvements consistent with the RMA, set to become effective July 1, 2025.



There are concerns with safety with the current timber-constructed Z-walls. We would like to use this opportunity to not just repair the existing Z-walls, but realign the newly constructed Z-walls to provide additional capacity, thanks to improved operational logistics.

With this in mind, we have submitted a proposal for the designed construction of five Z-walls, all located on the southern end of the property, near the west end, staggered to enable improved logistics on both the incoming and outgoing ends. This project would provide not only additional capacity for MSW and yard debris, but also additional space for the public to access both MSW and yard debris disposal services, as well as a building in which recycling would be collected in an organized manner, and not subjected to the elements. This would occur within the current footprint of the site.

There is currently an office shed/shack on site, which would be replaced with an office area inside the new building.

The collection of recycling materials currently occurs in bags and containers, which are then stored in various containers and trailers until they are shipped off site. The result of this improvement project would be a building in which recycling is stored, as well as an organized set of containers along the southern edge of the property. This will more effectively separate customer vs logistics traffic flow, and allow for the elimination of some of the on site storage that currently occurs in trailers. This addition will occur primarily within the current footprint of operations, with a slight expansion away from residential property neighbors.

On the east side of the new building we plan on preparing an area which could be used to house a storage structure for emergency preparedness purposes. The storage structure would most likely be a 20' or 40' container, but could potentially be a constructed shed. Whatever the eventual structure, it would not require a larger footprint than a 40' shipping container, which would be located away from the area of the site used, and away from residential property neighbors.

Electrical access to the site is planned to be diverted into an underground system, with the addition of on-site generation of power through solar panels, to provide for sustainable and safe power.

A current site plan can be found in the documentation we are providing.

This site currently operates under a No Exposure Certification and does not require a NPDES permit. The engineered plans anticipate that at some point a NPDES 1200-Z permit may be required, and thus the plans include stormwater collection, diversion and potential locations for infiltration and/or outfall sampling, should that become a requirement in the future.

I hope that I have addressed any questions or concerns you may have in this and the attached documents. Please do not hesitate to contact me if you have any questions, or

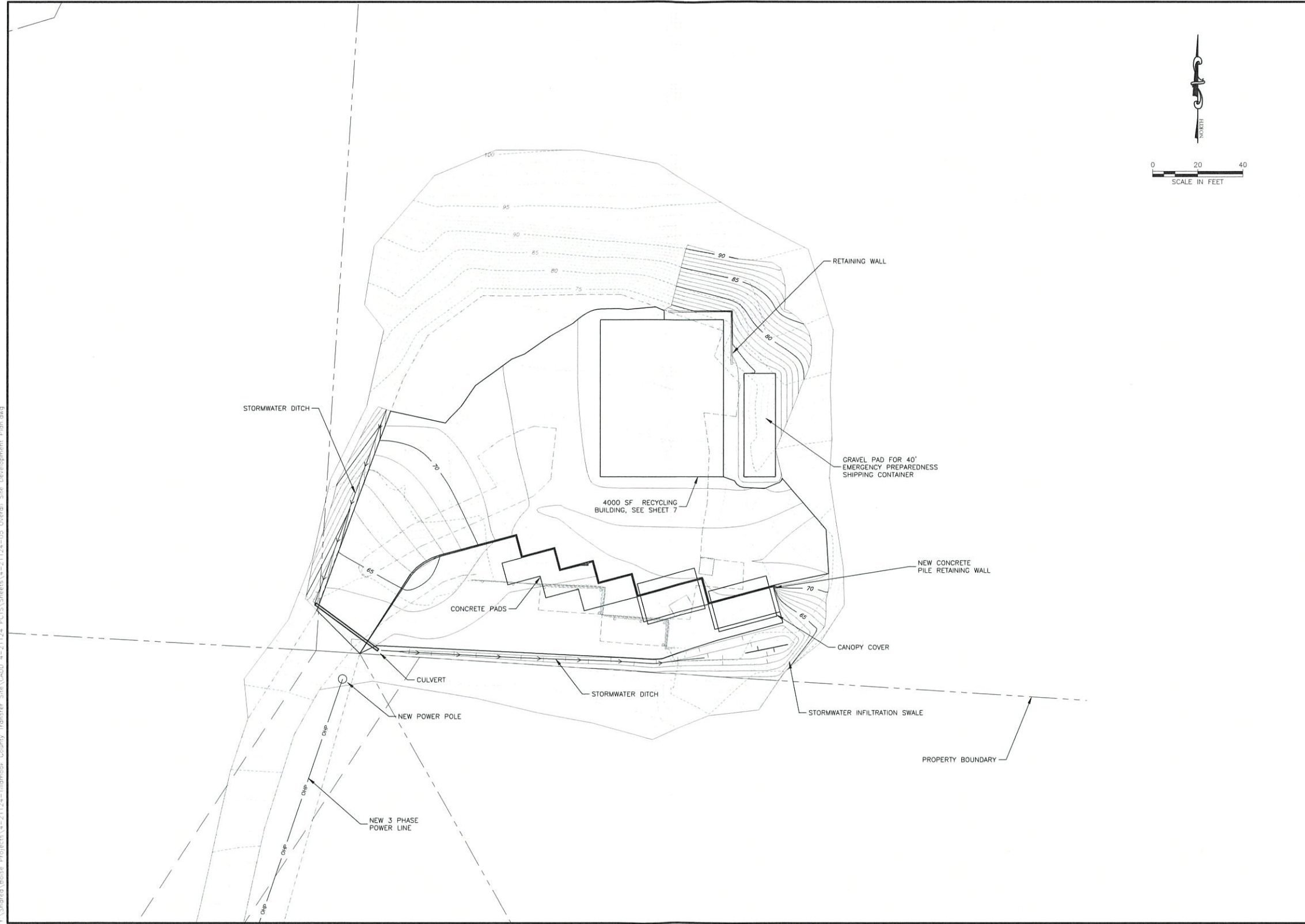
if you would like further information or clarification. I am also happy to meet with you on site and provide clarity for any questions you may have.

Thank you,

David McCall  
Solid Waste Program Manager



Y:\Shared\Boise Projects\4-21124-Tillamook County Transfer Site\CADD\_4-21124\_PCS\Sheets\4-21124-05 Overall Site Development Plan.dwg



PROJECT: 4-21124		NO.	REVISION DESCRIPTION	BY	DATE
DESIGNED: MLL		▲			
DRAWN: DAG		▲			
CHECKED: TAP		▲			
APPROVED: MLL		▲			
DATE: DECEMBER 2022					

 <p>3550 N. LANE BOISE, ID 83725 (208) 576-6648</p>	
<p><b>TILLAMOOK COUNTY</b>  <b>PACIFIC CITY TRANSFER STATION</b>  <b>IMPROVEMENTS</b>  OVERALL SITE DEVELOPMENT PLAN</p>	
<p>SHEET NO.  <b>5</b>  OF 12</p>	



# PACIFIC CITY TRANSFER STATION



Reference: ©2021 Google Earth. No Scale Intended.

# PROJECT UNDERSTANDING

**Existing Site Conditions and Proposed Construction**  
 The Pacific City Transfer Station is located just east of Pacific City, Oregon and is accessed from a private drive extending from Brooten Road. The transfer station comprises a recycling drop off area, recycling storage containers, and an area for 3 garbage transfer bins behind a timber pile retaining wall. A small attendant building also exists with overhead power and an underground telephone line. The majority of the existing ground surface is asphalt paved. Pacific City personnel reports a historic landslide may have impacted the immediate area, but has since been repaired. GPI's recent exploration did not suggest evidence of ongoing landslide activity in the locations or depths explored.

Tillamook County (County) is constructing a new, pre-engineered metal building to help facilitate their recycling processes at the existing transfer station. The overall structure will be approximately 4,000 square feet (sf) with concrete slabs-on-grade to support relatively high equipment and storage slab loads. Helical piers bearing on mudstone will provide vertical support to foundations to penetrate existing fill and reduce over-excavation. Structural loads range from 25 to 50 kips per columns with less than 2 kips per linear foot along perimeter grade beams. Below grade spaces and loading docks are not currently planned. However, the existing timber pile wall on the south end of the site is showing signs of distress and a new, steel soldier pile wall will be constructed immediately north of the existing wall to accommodate several new garbage transfer containers and improve access. The 2 easternmost containers will also receive a canopy cover. Additionally, a cast-in-place concrete retaining wall will be constructed in the northeast corner of the building to accommodate a level pad for the building.

The majority of grades will remain essentially unchanged, except in the northeast corner of the site where 5- to 10-foot cuts are planned to level the site for building construction. Site stormwater will be collected in roof gutters and conveyed to a stormwater infiltration swale in the southeast corner of the site. The majority of the existing asphalt will be removed and replaced for parking areas, approach driveways, and concrete aprons for building access. Utilities will extend from existing connection points on site.

**Subsurface Conditions**  
 Exploration was accomplished via 4 soil borings extending approximately 30.9 to 36.5 feet and 1 test pit extending 12.0 feet beneath the existing ground surface. Borings were advanced with a B-58, truck-mounted drill rig equipped with mud rotary drilling and standard penetration test (SPT) sampling equipment and the test pit was advanced with a John Deere 310 backhoe. Exploration locations are shown on sheet GT6. GPI encountered asphalt pavement at the ground surface in each boring ranging from 0.23- to 0.25-feet-thick. Pavement was underlain by base course described as poorly graded gravel that was brown, medium dense, and moist extending 0.75 to 0.90 feet below the ground surface. Topsoil containing vegetation and organics was encountered at the ground surface in test pit TP-21203A-1 comprising silt that was dark brown, soft, and moist extending to 1 foot beneath the ground surface. Outside of pavement, base course sections, and topsoil, GPI encountered the following primary subsurface units:

- **Undocumented Fill: Silty Fine Sand (SM)** - Tan-orange with white, gray, and brown mottling, firm to very stiff, and moist to wet. Undocumented fill was encountered in each boring beneath base course extending 7.0 to 17.5 feet below the ground surface. Undocumented fill likely originated from previous landfill activities.
- **Uncontrolled Fill: Intermittent clay and sand with debris** - Orange-brown, very loose, and moist. Uncontrolled fill was encountered in test pit TP-21203A-1 containing significant debris including metal, glass, and plastic. Uncontrolled fill extended to the termination depth at 12.0 feet below the ground surface where practical refusal occurred due to backhoe limitations.
- **Alluvium: Sandy Silt (ML)** - Tan-orange with white, gray, and brown mottling, stiff to very stiff, and moist to wet. Alluvial sandy silt was encountered in each boring beneath uncontrolled fill extending 18.5 to 35.5 feet below the ground surface.
- **Mudstone: Clay (CL)** - Dark gray with trace orange mottling, medium dense to very dense, and moist. Clay mudstone was encountered in each boring beneath alluvial sand extending to the boring termination depths.

Groundwater was not encountered in the exploration locations and is anticipated around 60 to 70 feet below the ground surface, consistent with sea levels. However, groundwater can be impacted by changes in precipitation, infiltration, irrigation, and developments to the project site.

## REFERENCES

The geotechnical evaluation herein is based on the authorized geotechnical scope dated November 15, 2021, and the latest version of the ASTM International (ASTM) and Standard Methods (SM) standards, Oregon Department of Transportation (ODOT), and other reference standards listed below:

- Field Exploration**
- ASTM D 420 - Guide to site characterization for engineering, design, and construction
  - ASTM D 2487 - Test method for classification of soils for engineering purposes (USCS)
  - ASTM D 2488 - Practice for description & identification of soil (Visual-manual procedure)

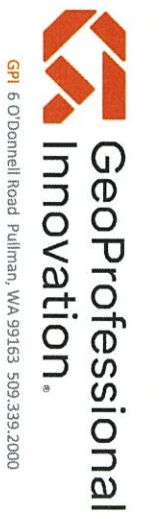
- Laboratory Testing**
- ASTM D2216 - Determination of Moisture Content of Soil and Rock by Mass
  - ASTM D1140 - Determining Material Finer than No. 200 Sieve by Washing
  - ASTM D2937 - Determining In-Place Density of Soil by the Drive Cylinder Method
  - SM 4500-H\* B - Determining pH of soils
  - SM 2510 B - Determining resistivity of soils
  - SM-4500 SO<sub>4</sub> E - Determining total sulfates in soils

## GEOTECHNICAL DESIGN BASIS

- General**
- GPI's field exploration, reference sheets GT6 and GT7
    - o Borings advanced on December 21 and 22, 2021.
  - GPI's laboratory testing, reference sheet GT7
  - International Building Code, 2018
    - o IBC Chapters 16 and 18
  - Frost protection embedment depth: 1-foot (Tillamook County)
  - Seismic Site Class D (Reference IBC Section 1613 and ASCE 7).

- Construction Material Standards**
- Oregon Standard Specifications for Construction 2021 (ODOT Standards)
  - 1993 AASHTO Guide for Design of Pavement Structures (AASHTO 1993)

ISSUED FOR:	DESIGN USE:	REV:	DATE:	DESCRIPTION:	CHECK:	DATE:
REVISION:	REVISION:	1/17/23	90% DRAFT	90% DRAFT	AAK	4/15/22
YOUR APPROVAL:	YOUR APPROVAL:					
CONSTRUCTION:	CONSTRUCTION:					
DESTROY:	DESTROY:					
PREVIOUS PRINTS:	PREVIOUS PRINTS:					
PROJECT:			FILE: MO21203A			
PROJECT:			PACIFIC CITY TRANSFER STATION GEOTECHNICAL ENGINEERING EVALUATION			
PROJECT:			8825 BROOTEN ROAD PACIFIC CITY, OREGON			
DESIGN:			TJV			
DESIGN:			JRM			
PREPARED FOR:			GREAT WEST ENGINEERING			
PREPARED FOR:			500 N LAKE HARBOR LN			
PREPARED FOR:			BOISE, ID 83703			
ATTN:			MRS. TRAVIS PYLE, P.E. & MS. MICHELLE LANGSON			





**4 EARTHWORK**

**Site Preparation**

- Topsoil containing vegetation and organics was encountered in test pit TP-21203A-1 and is evident at the northeast end of the site. Remove soil containing vegetation and organics from proposed improvement areas and stockpile it for use as landscaping or remove it from the site.
- Isolated tree roots and associated landfill material deposits are expected on the north and east sides of the proposed building.
- Isolated thicker topsoil layers are possible and must be removed during site stripping operations. Specifically, surrounding mature trees and vegetation throughout the planned improvement areas.
- Asphalt pavement was encountered at the ground surface in the majority of the planned improvement area.
- Extend site stripping and saw cut asphalt laterally 5-feet outside improvement areas.
- Retain existing base course from stripping and excavation for potential reuse throughout construction.

**Uncontrolled/Undocumented Fill**

- Uncontrolled fill containing significant glass, brick, plastic, and metal was encountered in TP-21203A-1 extending to 12.0 feet below the existing ground surface. Uncontrolled fill may extend to greater depths within the improvement areas.
- Undocumented fill was encountered in each boring extending 7.0 to 17.5 feet below the ground surface.
- The fill's performance cannot be predicted when subjected to new loading or changing drainage patterns. This uncertainty presents risk to the planned construction including, but not limited to, settlement beneath the foundations and pavement support loss due to consolidation of loose or variable fill beneath pavement. Therefore, helical piers are selected to penetrate the fill on site and bear on the dense mudstone at depth.
- The County may elect to leave fill in place beneath interior slabs-on-grade and exterior pavements/hardscapes.
- Where fill is left in place beneath slabs and hardscapes, remediate it to structural fill requirements per the *Subgrading* section herein.

**Subgrading**

- Subgrades beneath helical pier caps and grade beams shall be cut clean with smooth blade equipment.
- A thin layer of *Crushed Surfacing* (CS-1) may be used as a leveling course beneath helical pier cap foundations and shall be compacted to a dense and interlocking condition to create a level bearing surface.
- Subgrades beneath slabs or pavement areas may comprise variable existing fill.
- Prepare subgrades for slabs and pavement by scarifying the exposed soil at least 1-foot, moisture conditioning, and compacting to 95% of the soil's maximum dry density per ASTM D1557.
- Where fill is left in place beneath slabs and hardscapes, over-excavate the subgrade at least 1 foot then line the excavation with geotextile fabric and geogrid reinforcement. Geogrid shall be placed atop the geotextile fabric. Replace the over-excavation with *Granular Structural Fill* per the requirements outlined in Section 5, *Structural Fill*.
- Deeper over-excavations may be required if significant deleterious debris is encountered and shall be determined during construction by the County.
- Subgrades must be reviewed by the project geotechnical engineer retained for construction (GER) to confirm soil suitability prior to foundation, slab, or hardscape construction.

**Over-Excavations**

- If exposed and prepared subgrades are disturbed, saturated, begin to pump or rut, and/or cannot achieve compaction, over-excavate to expose competent material, moisture condition, and recompact at the direction of the GER and the County. To reduce excessive over-excavation, line the subgrade with geotextile fabric and geogrid reinforcement then replace the excavation *Granular Structural Fill* (SF-2) per *Structural Fill* requirements herein.
- Determine soft soil over-excavation criteria during construction with the GER, the earthwork contractor, and the County. Extend over-excavations at least 2-feet below the subgrade and laterally 1/2 the depth.
- Plan a contingency of 180 cubic yards for debris, soft, wet, or otherwise unsuitable soil removal.
- Determine geosynthetic applicability during construction with the GER and the County.

**Excavation Characteristics**

- The on-site soil is excavatable using conventional excavation techniques and equipment.
- Bedrock excavation is not anticipated to achieve the planned subgrades based on exploration to date.
- Temporarily excavate, slope, shore or brace excavations in accordance with the Oregon Occupational Safety and Health Division (Oregon OSHA).
- Site soil typically classifies as Type C soil referencing Oregon OSHA, and must be temporarily sloped back at least 1.5H:1V (horizontal:vertical) for certain configurations.
- Construction vibrations, seepage, or surface loading can cause excavations to slough or cave and shall be avoided.
- The contractor is solely responsible for site safety, excavation configurations, establishing shoring requirements, and maintaining Oregon OSHA-approved personnel for excavation monitoring.
- Plan excavations carefully, allowing water collection points and utilizing conventional sumps and pumps to remove nuisance water from runoff, seeps, springs or precipitation.
- Coordinate construction activities and excavation backfilling as rapidly as possible following excavation to reduce the potential for subgrades to degrade under construction traffic.
- Maintain dewatering systems to facilitate good drainage during construction and reduced over-excavation.

**Wet-Cold Weather/Wet Soil Construction**

- This project may not occur exclusively during dry weather conditions.
- The contractor shall prepare subgrades and stage earthwork noting wet weather and wet soil will exist at certain times of the year. Earthwork may require temporary additional grading and over-excavation to accomplish work according to the geotechnical and contract documents during wet-cold weather/wet soil conditions.
- The site soil is susceptible to pumping or rutting from heavy vehicle and equipment loads when moist conditions persist.
- Accomplish work at or near final subgrade using equipment that imparts low bearing pressures, track-mounted, drum and low tire pressure equipment. Using high bearing pressure equipment such as dump trucks can readily pump and rut the subgrade and their application must be carefully considered.
- Coordinate construction activities and excavation backfilling as rapidly as possible following excavation to reduce the potential for subgrades to degrade under construction traffic.
- Stormwater sheet flow towards or across the site can occur during storm events. Contractors shall expect these conditions and be prepared to install runoff management facilities and to replace wet or disturbed soil with SF-2 as specified in the *Structural Fill* section after moisture conditioning.

**5 STRUCTURAL FILL**

**Material Requirements**

- Existing base course may be reused as *General Structural Fill* (SF-1) provided it meets the requirements outlined in Table 2.1.
- Material requirements for structural fill reference the ODOT Standards and are described in Table G2.1 below.

**Table G2.1: Structural Fill Specifications and Allowable Use**

Material	General Description	Specifications	Allowable Use
SF-1	General Structural Fill	- General site grading, utility trench backfill	- Soil classified as GW, GP, GM, SP, SM, or SW according to the USCS. - Less than 3 percent (by weight) of organics, vegetation, wood, metal, plastic, or other deleterious substances. - Particles no larger than 0.8-feet in diameter. - Coarse granular soil locally know as "shot rock" or "pit run" may also be used as SF-1 outside reinforced zones. - Existing base course may be used as SF-1 provided it meets the requirements herein.
SF-2	Granular Structural Fill	- SF-1 applications - Over-excavations	- Soil meeting requirements stated in Section 2630.10 – Dense Graded Aggregates of ODOT Standards. - 2.5, 2.0 or 1.5-inch nominal aggregate sizes per Table 2630-1 in the ODOT Standards
CS-1	Crushed Surfacing	- Foundation leveling course - Pavement/slab support aggregate - SF-1 applications - SF-2 applications - DA-1 applications	- Soil meeting requirements stated in Section 2630.10 – Dense Graded Aggregates of ODOT Standards. - 1.0 to 0.75-inch nominal aggregate sizes per Table 2630-1
DA-1	Drainage Aggregate	- Foundation/wall drains	- Soil meeting requirements stated in Section 430.11 - Granular Drain Backfill Material of ODOT Standards

**Earthwork Testing**

The firm retained to verify wall subgrade conditions, compaction, and asphalt testing shall become the GER. At a minimum, the following earthwork testing frequencies shall be implemented.

- Project Subgrades* - Must be reviewed by the GER retained for construction to document subgrade conditions consistent with exploration findings and design requirements.
- Helical Pier/Soldier Pile Installation* - Full time monitoring of pier/pile elements to verify design torques and bearing criteria are achieved.
- Foundation Bearing Surfaces* - Bearing surfaces in between piers cut neat with smooth blade equipment or document compaction of CS-1 leveling course.
- Slab, Pavement, and Hardscape Section Subgrades* - 1 compaction test every 1,000 sf, minimum 4 tests per testing event.
- Site Grading/Structural Fill Placement* - 1 compaction test every 2,000 sf, per fill lift, minimum 3 tests per testing event.
- Asphalt Pavement Construction* - 1 compaction test every 1,000 square feet, per paving lift. 1 laboratory test suite on a bulk sample of hot mix asphalt per each day's paving including oil content, gradation and maximum theoretical (Rice) specific gravity.

**Required Compaction**

Subgrades and all fill used on this project shall be compacted to the structural fill requirements presented in Table G2.2 below.

**Table G2.2: Required Structural Fill Products for Designated Project Areas**

Project Area	Required Structural Fill Product	Compaction Requirement <sup>A</sup>
Pier and grade beam subgrades	Existing soil	N/A <sup>B</sup>
All other subgrades	Existing soil	95%
Site grading	SF-1, CS-1	95%
Slab & pavement support aggregate, foundation leveling course	CS-1	95%
Landscape areas sloped flatter than 5H:1V	Landscape Fill, Topsoil	85%

Table G2.2 Notes:  
A. Relative compaction requirement compared to the maximum dry density of the soil as estimated by Modified Proctor.  
B. Soil cut neat with smooth blade equipment need not be compacted.

- Structural fill shall not contain particles of frozen soil, mud, snow, or ice. Structural fill shall not be placed on frozen subgrades.
- Structural fill products must be moisture conditioned to near optimum moisture content, placed and compacted in maximum 1-foot-thick, loose lifts, provided compaction equipment weighs a minimum of 5 tons.
- If smaller or lighter compaction equipment is provided, reduce the lift thickness to meet the compaction requirements presented herein.

**Coarse Fill**

- Any material with greater than 30 percent retained above the ¾-inch sieve is too coarse for Modified Proctor density testing. Coarse fill must be compacted using a "method specification" developed during construction that is based on the material characteristics and the contractor's means and methods.
- Method specifications will be developed during construction specific to the materials, compaction equipment, and conditions encountered.
- At a minimum, place all oversize material in maximum 1.5-foot-thick lifts and compact with 5 complete passes of a minimum 10-ton, vibratory or grid roller.
- Vibratory rollers shall have a dynamic force of at least 30,000 pounds per impact per vibration and at least 1,000 vibrations per minute. Coarse fill must be compacted to a dense, interlocking, and unyielding surface. Vibratory rollers can negatively impact nearby structures and must be used with caution.

REV	DATE	DESCRIPTION	CHECK: AIA
1	4/15/22	30% DRAFT	FILE: M021203A
2	1/17/23	90% DRAFT	PROJECT: PACIFIC CITY TRAFFER STATION GEOTECHNICAL ENGINEERING EVALUATION 3825 BROOKTON ROAD PACIFIC CITY, OREGON
3			DRAWN: JBM
4			DESIGN: TW
5			PREPARED FOR: GREAT WEST ENGINEERING 608 N JAKES HARBOR LN BOISE, ID 83709
6			ATTN: MR. TRAVIS PYLE, P.E. & MS. MICHELLE LANGDON



GRI 6 O'Donnell Road Pullman, WA 99163 509.339.2000



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6

**FOUNDATION DESIGN**

**Helical Pier Foundations**

Helical pier foundation support systems shall be installed to refusal on mudstone for building foundation support. Design and construct helical pier foundations according to the following requirements. See Figure G3.1 for typical helical pier foundation schematic and *Helical Pier Specifications* on sheet GT5 for product details.

Perimeter footings and interior columns:

- Minimum installation torque: 5,000 foot-pounds.
  - Ultimate vertical compression capacity: 50 kips
  - Safety factor on vertical pier capacity: 2.0
  - Allowable design compression load: 25 kips
- Minimum helical pier size: A.B. Chance SS-5 with minimum 8-10-12-inch-diameter helix configuration, round corner square (RCS) lead section.
- Minimum installation depth: Lead helix must extend to practical refusal on mudstone, estimated at 18 to 20 feet below the proposed building foundations.
- Vertical load carrying capacity may be increased by 33 percent for short-term loads such as wind or seismic accelerations.
- Pier spacing: Structural design shall specify pier spacing with respect to the estimated loading conditions and structural capacity of the planned grade beams and pier caps.
- Pier spacing shall not be less than 3 times the maximum lead helix diameter (i.e., 24-inches for an 8-inch diameter helix).
- Estimated settlement for vertical piers bearing on mudstone:
  - Less than 0.75 inches total and 0.5 inches differential settlement within a 30-foot span.
- The GER retained for construction shall review the pier contractor's installation plan, equipment, any proposed alternate materials and the proposed configuration prior to initiating construction.
- The contractor shall have equipment and materials available at the time of installation to achieve the design capacity of each pier through additional helices or extending additional depth.
- A.B. Chance piers are manufactured by Hubbell, Inc. and should review the helical pier design and qualify the contractor prior to allowing construction.
- Prior to bidding, contractors must accomplish a test pier installation at the site, to assess pier installation conditions and expected depths. During production installation, dial gauge or in-line digital hydraulic torque measurements shall be available on piers. Load testing shall be required for at least 1 pier. Pier construction specifications are provided in the *Helical Pier Specifications* on sheet GT5.

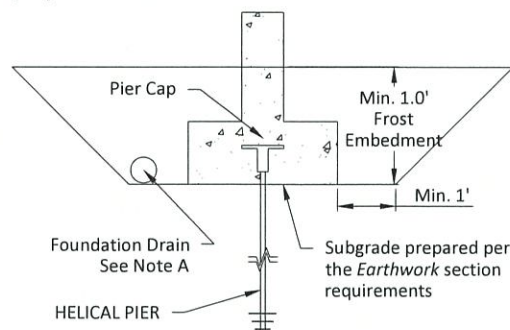


Figure G3.1: Helical Pier Foundation Schematic

Note:

A. Construct footing drains with 0.3-foot-diameter, perforated PVC or ADS pipe, wrapped in non-woven geotextile fabric. Adjust foundation drain pipe elevation to lowest possible elevation that maintains gravity drainage. Reference *Site Drainage - Foundation/Wall* section on sheet GT4 for additional drain requirements.

**Grade Beam & Pier Cap Design Criteria**

- Perimeter grade beams and pier caps shall be structurally designed to span between helical piers as vertical point loads. Vertical piers must not be relied on for resisting lateral loads. Lateral loads may be resisted by passive resistance from soil placed against the grade beam or pier cap sides. Friction on pier caps or grade beams should not be relied on to resist lateral loads.
- Exterior grade beam frost protection embedment depth: 1.0 foot below finished exterior surface.
- Grade beam lateral load resistance:
  - Equivalent fluid weight: 550 pcf assumes granular backfill (SF-2/CS-1).
  - Requires 3/4-inch lateral movement to mobilize full resistance.
- Maintain at least 0.3 feet of soil cover between top of grade beam or pier caps and the bottom of the concrete slab.
- Due to their propensity for reflective cracking, incorporating grade beams into monolithic slab placements should be avoided.

**Seismicity**

- Site geology correlates to a seismic site soil profile Class D.
- Seismic design shall reference the parameters provided in Table G3.1. based on the soil conditions and project location.
- The risk-targeted maximum considered earthquake (MCER) spectral response acceleration parameters provided have been modified from a Site Class B to a Site Class D.
- The design spectral acceleration parameters provided in Table G3.1 are equal to 67 percent of the Risk Targeted MCER acceleration parameters.

Table G3.1: Seismic Response Criteria (ASCE 7-22)<sup>1,2</sup>

Period (seconds)	Standard Acceleration Coefficients for Site Class B (g) <sup>3</sup>	MCER Spectral Acceleration Parameters for Site Class D (g)	Design Spectral Acceleration Parameters for Site Class D (g)
0.0 (Peak)	-	PGA <sub>M</sub> = 0.550	-
0.2 (Short)	S <sub>s</sub> = 0.93	S <sub>M5</sub> = 1.22	S <sub>D5</sub> = 0.82
1.0	S <sub>1</sub> = 0.41	S <sub>M1</sub> = 0.88	S <sub>D1</sub> = 0.58

- Values for location Latitude: 44.265016°N, Longitude: 123.170709°W.
- Values for an ASCE Risk Category III.
- Acceleration based on 2% probability of exceedance in 50 years.

**Liquefaction Potential**

- Liquefaction is commonly a concern for loose, fine-grained sand that is saturated.
- The subsurface geology exhibited relatively high blow counts, no consistent static groundwater level, and the soil overlying mudstone primarily comprises silty fine sand with a high fines content.
- Therefore, liquefaction potential is low at the site.
- Fill settlement due to seismic activity should be expected.

**Soil Corrosivity**

- Corrosion of buried metallic structures is an electrochemical process and is dependant on many factors, including type of metal or alloy, galvanic effects, and soil properties such as resistivity, pH, and oxygen content. Average laboratory test results for these parameters are presented below:
  - pH = 4.8, Resistivity = 7,735 ohms-cm, sulfates = 22.7 ppm
- Test results correspond to a high corrosion potential.
- Maintain maximum clearances for concrete reinforcing.
- Consider the application of galvanized materials or other corrosion protection parameters in steel applications.
- Site soil is suitable for Types I/II cement.

7

**LATERAL EARTH PRESSURES**

**Lateral Earth Pressures (LEP)**

Design cast-in-place retaining walls to resist lateral earth pressures from the retained soil adjacent to the structure. Also, lateral surcharge loads from equipment or vehicles adjacent to the walls must be accounted for in structural wall design. Structural design shall apply the lateral earth pressures for wall design using the equivalent fluid unit weights (EFW) from Table G3.1.

Table G3.1: Equivalent Fluid Unit Weights (EFW)		
On-site soil backfill (SF-1) (Φ = 28°)	Static EFW	Dynamic EFW
	Lateral Earth Pressure Case	
At-rest (no wall movement)	65 pcf	+25 pcf
Active (wall movement away from soil mass)	45 pcf	+5 pcf
Passive (wall movement toward soil mass) <sup>1</sup>	325 pcf	-250 pcf
Granular backfill (SF-2, CS-1) (Φ = 40°)	Static EFW	Dynamic EFW
	Lateral Earth Pressure Case	
At-rest (no wall movement)	50 pcf	+28 pcf
Active (wall movement away from soil mass)	30 pcf	+8 pcf
Passive (wall movement toward soil mass) <sup>1</sup>	550 pcf	-285 pcf

Table G3.1 Notes:

- Passive case assumes 3/4 inch lateral movement to fully mobilize passive resistance.

- The above equivalent fluid weights assume fully drained conditions, no hydrostatic forces, and horizontal backfill.
- Retaining walls shall be constructed with adequate drainage systems specified by Great West to reduce the potential for ponding behind the wall and developing hydrostatic pressures. This can be accomplished by including weepholes or other drainage features. However, these features do not preclude the need for foundation drainage as shown in Figure G3.1.
- For walls that cannot tolerate movement, structurally design walls utilizing at-rest equivalent earth pressures.
- Lateral surcharge pressures due to traffic, equipment, storage loads, etc., are not included in the above lateral earth pressure recommendations. Use a lateral earth pressure coefficient of 0.5, acting over the entire wall height to estimate the lateral surcharge loads from traffic and other surcharges behind and above walls.
- Figures G3.2 and G3.3 below illustrate the equivalent fluid pressure distributions for the anticipated wall backfill materials (EFW values are in Table G3.2) for static and dynamic conditions, respectively.

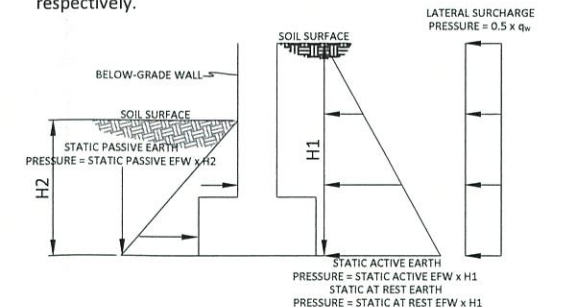


Figure G3.2: Static Lateral Earth Pressure Diagram

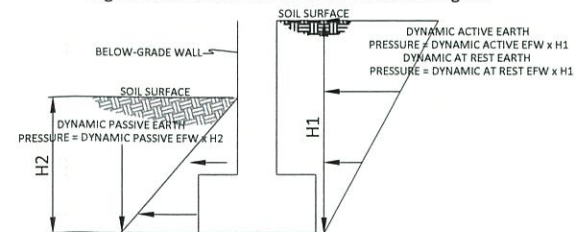


Figure G3.3: Dynamic Lateral Earth Pressure Diagram

8

**SOLDIER PILE WALL CRITERIA**

REV	DATE	DESCRIPTION	CHECK: JAM	DRAWN: JAM
1	4/15/22	90% DRAFT	FILE: M021202A	DESIGN: TW
2	1/17/23	90% DRAFT	PROJECT: PACIFIC CITY TRANSFER STATION FOUNDATIONAL ENGINEERING EVALUATION 3825 BROOKER ROAD PACIFIC CITY, OREGON	PREPARED FOR: GREAT WEST ENGINEERING 8050 LANT HARBOR LN BOISE, ID 83703 ATTN: MR. TRAVIS PYLE, P.E. & MS. MICHELLE LANGDON





9

**PAVEMENT**

**General**

The following pavement design is provided referencing the American Association of State Highway and Transportation Officials (AASHTO) Guide for Design of Pavement Structures (1993). Traffic loads are estimated based on data provided by the County. Pavement design parameters are based on typical pavement design criteria in northwest Oregon, results from laboratory testing, and the subsurface conditions encountered from exploration. Tables G4.1 and G4.2 present the design parameters and references, as well as resulting section design for flexible asphalt pavement. Differential pavement performance shall be expected in areas where uncontrolled/undocumented fill is left in place.

**Flexible Pavement**

Table G4.1: Pavement Design Parameters		
Design Parameter	Value Used	Reference
Reliability (R)	85%	Assumed
Standard Deviation (S)	0.45	AASHTO 1993
Initial Serviceability (P <sub>o</sub> )	4.2	AASHTO 1993
Terminal Serviceability (P <sub>t</sub> )	2.2	Typical northwest Oregon area value for local roadway
Traffic Loading	85,000 ESALS <sup>1</sup>	Estimated Traffic Loading: - 50 passenger vehicles (6,000 lb gross vehicle weight, GVW) per day - 2 Refuse trucks (64,000 lb GVW) per day - 2 Delivery/Service trucks (12,000 lb GVW) per week - 1 Semi-trailer truck (80,000 GVW) per week
Design Life	20 years	Typical northwest Oregon local roadway design life
Resilient Modulus (Mr)	5,000 psi <sup>2</sup>	Based on Mr correlations of site soil
Asphalt Layer Coefficient (a <sub>1</sub> )	0.42	Figure 2.5 AASHTO 1993
Top Course Layer Coefficient (a <sub>2</sub> )	0.12	Figure 2.6 AASHTO 1993
Top Course Drainage Coefficient (m <sub>2</sub> )	0.8	Table 2.4 AASHTO 1993 for "fair" drainage, > 25 percent saturation

Table G4.1 Notes:  
1. Equivalent Single Axle Loads (ESALs)  
2. Pounds per square inch (psi)

Table G4.2 provides pavement thickness design for constructing new flexible pavement sections and Figure G4.1 illustrates the typical pavement section. Figure G4.1 is not a structural detail.

Table G4.2: Asphalt Pavement Section Thickness		
Pavement Section Material	Section Thickness (feet)	Material Specifications
Asphalt Pavement	0.38 <sup>1</sup>	Hot-mix asphalt (HMA) conforming to Section 00744, latest ODOT Standards edition
CS-1	0.83	Meeting CS-1 requirements in Table G3.1 on sheet GT3
Non-woven geotextile fabric	Required	Meeting requirements in Table 02320-4, latest ODOT Standards

1. Requires 2 separate lifts of pavement.



Figure G4.1: Asphalt Pavement Section Thickness

**Pavement Drainage and Maintenance**

Accomplish crack and surface maintenance on all pavement surfaces every 3 to 5 years to reduce the potential for surface water infiltration into the underlying pavement subgrade, according to the following:

- Crack Cleaning:** Ensure that cracks are thoroughly clean, dry, and free of all loose and foreign material when filling with crack sealant material. Use a hot compressed air lance to dry and warm the pavement surfaces within the crack immediately prior to filling a crack with the sealant material. Do not overheat pavement. Flame dryers are not allowed.
- Sand Slurry:** For cracks greater than 1 inch in width, fill with sand slurry by thoroughly mixing the components and pour the mixture into the cracks until full. Add additional CS-1 cationic emulsified asphalt to the sand slurry as needed for workability to ensure the mixture will completely fill the cracks. Strike off the sand slurry flush with the existing pavement surface and allow the mixture to cure. Do not place the HMA overlay until the slurry has fully cured.
- Hot Poured Sealant:** For cracks less than 1 inch in width, fill with hot poured sealant by applying the material in accordance with these requirements and the manufacturer's recommendations. Confine hot poured sealant material within the crack. Clean any overflow of sealant from the pavement surface.
- Surface and subgrade drainage are extremely important to the performance of the pavement section. Therefore, the subgrade, CS-1, and pavement surfaces shall slope aggressively towards stormwater drain inlets.
- Avoid inverted crowns in all pavement locations. Accomplish grading to avoid ponding at the subgrade and surface elevations.
- The pavement's life will be dependent on achieving adequate drainage throughout the section and especially at the subgrade. Water that ponds at the pavement subgrade surface can induce heaving during the freeze-thaw process, which can readily damage pavement.

10 **CONCRETE SLABS-ON-GRADE**

**Slab Substrate**

- Support concrete slabs with at least 1.0-foot of CS-1 meeting Table G2.1 requirements, placed over compacted subgrades prepared per the Earthwork section requirements.
- Compact CS-1 below slabs to Structural Fill requirements.
- Concrete slabs and supporting base section thicknesses must be structurally designed for the anticipated use and loading conditions.
- Where high or heavy racking is planned or equipment is expected to impose point loads, additional substrate support may be necessary and shall be evaluated by structural design.
- Dynamic loading and vibrations to slabs from equipment or trucks may induce additional settlement that cannot be readily estimated.
- Concrete slab design may utilize an allowable modulus of subgrade reaction (k) of 190 pounds per cubic inch (pci) for slab sections constructed over compacted subgrade soil and at least 1.0-foot of compacted CS-1, see Figure G4.2.

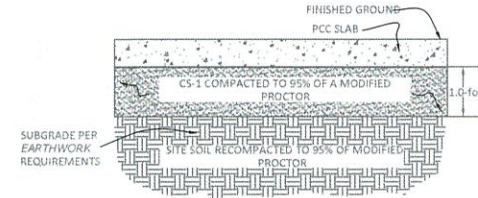


Figure G4.2: Slab Schematic

**Frost Considerations**

- Frost jacking/heaving are rigid slab design concerns, particularly where abrupt changes in soil frost susceptibility occur.
- Abrupt changes may occur where flexible pavements meet rigid hardscapes at building entrances and foundations.
- To accommodate these locations, 1 foot shall be excavated and removed, extending 10 feet laterally from the building or rigid hardscape.
- Line the excavations with a non-woven geotextile fabric and replace the excavations with SF-2 or CS-1 compacted to the Structural Fill, Section 5 requirements on sheet GT3.
- Reference Figure G4.3.

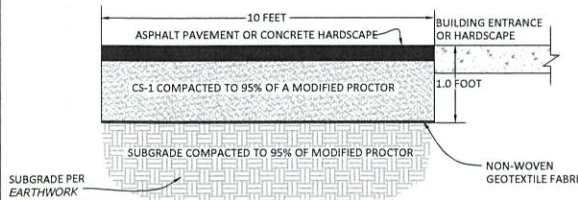


Figure G4.3: Reduced Frost Heave Section

**Transfer Container Slab Considerations**

- Transfer slabs near the new soldier pile wall shall be structurally designed for the anticipated traffic and impact loads.
- Support transfer container slabs with at least 1 foot of CS-1.
- Extend concrete slabs for transfer containers at least 10 feet in front of the container to support the truck axle closest to the container.

11 **GEOSYNTHETICS**

Geosynthetic uses and material requirements are provided in Table G4.3.

Table G4.3: Geosynthetic Specifications		
Geosynthetic Type	Applicable Use	Material Specifications
Non-woven Geotextile Fabric	Foundation and wall drains, pavement section separation fabric	- Must meet Separation Geotextile Property Requirements in ODOT Standards Table 02320-4. - Min. 113 pound grab tensile strength. - Min. 223 pound puncture strength.
Biaxial or Triaxial Geogrid	Extremely soft subgrade conditions	- 93 percent junction efficiency (GRI-GG2-05) - 6.5 m-N/degree Torsional Rigidity @ 20kg-cm (GRI-GG9) - Punched and drawn polypropylene Minimum Radial Stiffness of 15,400 lb/ft at 0.5% Strain (ASTM D6637), applies only to triaxial geogrid

**Geosynthetics**

- Geosynthetics which do not meet the requirements in Table G4.3 above may be used only if approved by the Engineer.
- Geotextile fabrics are applicable around foundation drains, wall drains, and beneath pavement sections, as separation fabrics.
- Geotextile fabrics are recommended over flexible pavement subgrades as they will improve long term pavement subgrade performance.
- Where geosynthetics are utilized, apply them directly on approved subgrades, taut, free of wrinkles, and over-lapping at least 1-foot.
- Consult GPI to review geosynthetic applications or other subgrade improvement alternatives.
- Geogrid is not expected to be required unless extremely soft subgrades are exposed or compaction cannot be achieved at the subgrade.

12 **SITE DRAINAGE**

**Foundations/Walls**

- Construct foundation drains along the foundation alignments as illustrated in Figure G3.1 on sheet GT3.
- Construct wall drains along cast-in-place retaining walls in a similar fashion.
- Footing drain and weephole elevations can be modified at Great West's election to the lowest elevation possible to maintain gravity drainage.
- Divert water collected in wall/foundation drains and dispose at least 50 feet away and 1 foot downgradient from new foundations.
- Do not daylight stormwater onto finished slopes.

**Exterior Grading & Stormwater Disposal Considerations**

- New impervious areas will be created as part of this project.
- Site grading design and construction must allow for positive drainage of surface runoff water away from pavement surfaces and do not allow pavement subgrades to become saturated.
- Slope paved surfaces at least 2 percent away from the planned structure, walls, and existing structures to reduce the risk of water ponding.
- Convey runoff or water migrating along the ground surface away through existing drainage paths or by an appropriately designed series of ditches or swales.
- Do not allow water to infiltrate into existing fill on site.
- On-site sandy silt has a moderate stormwater treatment capacity and is appropriate for biofiltration treatment swales.
- Groundwater was not encountered during exploration and no other vertical limiting layer was observed in the upper 10 feet during exploration.

REV	DATE	DESCRIPTION	CHECK: AUA	DESIGN: JMW
A	4/15/22	30% DRAFT		
1	1/17/23	90% DRAFT		

ISSUED FOR:  
 DESIGN USE  
 PRELIMINARY  
 REVIEW  
 REVISIONS  
 REFERENCE  
 CONSTRUCTION  
 DESTROY  
 PREVIOUS PRINTS

PROJECT:  
 PACIFIC CITY TRANSFER STATION GEOTECHNICAL INVESTIGATION  
 3855 BROOKTON ROAD  
 PACIFIC CITY, OREGON

PREPARED FOR:  
 GREAT WEST ENGINEERING  
 3050 N LAKE HARBOR LN  
 BOISE, ID 83709

ATTN:  
 MR. TRAVIS PYLE, P.E. &  
 MS. MICHELLE LANGDON

FILE: M0212023A



GPI 6 O'Donnell Road Pullman, WA 99163 509.339.2000

**GeoProfessional  
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GT4 of 7



# HELICAL PIER SPECIFICATIONS

## PART 1 - GENERAL

### SUMMARY

1. Includes installing helical piers in the locations shown on the plans prepared by Great West Engineering to the following ultimate and allowable strengths:
  - a. SS-5 Pier - compression: 50 kips ultimate, 25 kips allowable; minimum installation torque = 5,000 ft.-lbs
  - b. A factor of safety of 2.0 shall be provided for vertical piers.
2. Piers are estimated to extend approximately 16 to 18 feet below proposed building foundations to bear on mudstone bedrock. Bedrock depth may extend deeper or vary and pier bid depth shall include a 10 percent variance.
3. Installation must include all necessary equipment to install piers to achieve the required load carrying capacity and accomplish at least 1 load test.

### SUBMITTALS

1. Product Data: For each type of product indicated, include manufacturer's acknowledgment of the application and loading of helical pier products and that the contractor is an approved installer.
2. Installer Qualifications: Submit as listed in *Quality Assurance*.
3. Shop Drawings: Indicating specific shaft and helix sizes or the estimated pier configuration to achieve capacity, and include manufacturer's catalog cuts and data sheets.
4. Welding certificates.
5. Record drawings at project closeout according to project specifications.

### QUALITY ASSURANCE

1. Installer Qualifications: Installation shall be done by the helical pier manufacturer's (A.B. Chance) authorized installation contractor. Proof of current certification with the steel helical pier manufacturer shall be submitted to the Architect during the submittals period.
2. A representative of the Geotechnical Engineer-of-Record (GER) retained for construction shall be present during installation of the helical piers.
3. Welding: Meet requirements of AWS "Structural Welding Code," D1.1, latest edition. All welders shall be AWS certified.
4. Steel Helical Piers as specified shall be manufactured by a facility whose quality control systems comply with ISO (International Organization for Standardization) 9001 requirements. Certificates of Registration denoting ISO Standards Number shall be presented upon request to the owner or their representative.
5. Survey Work: Engage a qualified land surveyor or professional engineer to perform surveys, layouts, and measurements for piers. Before excavating, lay out each helical pier to lines and levels required.
6. Record actual measurements of each pier's location, shaft diameter, bottom and top elevations, deviations from specified tolerances, torque, and other specified data.
7. Preinstallation Meeting: Schedule and conduct conference prior to installing piers at Project site. Representatives from the Owner, General Contractor, and the GER retained for construction shall be notified of the meeting 48 hours in advance.

### PROJECT CONDITIONS

1. Existing Utilities: Locate existing underground utilities before installing helical piers. If utilities are to remain in place, provide protection from damage during helical pier installation.
  - a. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, adapt drilling procedure if necessary to prevent damage to utilities. Cooperate with Owner and utility companies in keeping services and facilities in operation without interruption. Repair damaged utilities to satisfaction of utility owner.

## PART 2 - PRODUCTS

### STEEL HELICAL PIERS

1. General: The steel helical pier system shall be ICC listed. The contractor shall furnish evidence to the Structural and GER retained for construction by means of the ICC evaluation report number ER-5110.
2. Steel Helical Piers:
  - a. Basis of Design Product: Piers must be manufactured by A.B. Chance, 210 North Allen Street, Centralia, MO 65240, or a comparable product which must be submitted to design team and Owner for review and approval at least 10 days prior to the Bid Opening.
  - b. Shafts shall conform to the general requirements of ASTM A29 and the following descriptions:
3. High strength low alloy (HSLA), low to medium carbon steel grade (similar to AISI 1530) with improved strength due to fine grain size and structure having a torsional strength rating of 5,000 ft.-lbs.
4. Helix configuration shall be a minimum of 8-10-12-inch-diameter, round corner square (RCS) lead section. Helices shall be carbon steel sheet, strip, or plate formed on matching metal dies to true helical shape and shall conform to ASTM A715 Grade 80.
5. Round shaft (RS) minimum extension size of A.B. Chance RS3500.300 for all extensions above lead section. Requires AB Chance model T107-0808 square shaft to round shaft (SS/RS) coupler if utilized.
6. New pier-to-cap construction connection consisting of A.B. Chance Model #C150-0607
7. Bolts used to connect the helical pier extensions to lead sections or another extension shall conform to ASTM A193 Grade B7.
8. Couplings shall be formed as an integral part of shaft extension material through a forging process.
9. Finish: All material shall have a Class B-1 hot dipped galvanized coating complying with ASTM A153.
10. All piers shall consist of new components.
11. Steel Helical Piers shall extend to refusal on bedrock to achieve the design operating load and associated required torque by drilling with a minimum down force of 2,000 pounds.

## PART 3 - EXECUTION

### PREPARATION

1. Protect existing structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, vibration, and other hazards created by pier installation operations.

### EQUIPMENT

1. Installation Equipment:
  - a. Shall be a rotary type motor with equal forward and reverse torque capabilities. This equipment shall be capable of continual adjustment of the torque drive unit's revolutions per minute (RPM's) during installation. Percussion drilling equipment will not be allowed.
  - b. Shall be capable of applying installation torque equal to the torque required to meet the pier loads.
  - c. Equipment shall be capable of applying down pressure and torque simultaneously.
2. Torque Monitoring Devices:
  - a. The torque being applied by the installing units shall be monitored throughout the installation by the installer. The torque monitoring device shall either be a part of the installing unit or an independent device in-line with the installing unit. Calibration for either unit shall be available for review by the owner's representatives. Hydraulic gauges may be utilized by the contractor to measure torque providing at least 1 shear pin torque measurement correlation is accomplished for each pier installed.
3. Testing equipment:
  - a. The necessary beams, additional piers, jacking device and dial gauges necessary to provide at least 1 load test must be provided by the pier installer.

### INSTALLATION PROCEDURES

1. Advancing Sections:
  - a. Engage and advance the Helical Pier sections in a smooth, continuous manner with the rate of pier rotation in the range of 5 to 20 RPM.
  - b. Apply sufficient down pressure to uniformly advance the helical sections to approximately 3-inches per revolution. The rate of rotation and magnitude of down pressure must be adjusted for different soil conditions and depths in order to maintain the penetration rate.
2. Termination Criteria:
  - a. The torque as measured during the installation shall not exceed the torsional strength rating of the steel helical lead and extension sections.
  - b. Extend vertical piers below foundations to refusal on mudstone bedrock.
  - c. Pier refusal shall be defined as less than 1 inch of downward movement after 3 minutes of continuous rotation and full downward pressure by the installation equipment. Terminate the installation after encountering pier refusal only with the approval of the GER retained for construction.
3. Documentation
  - a. The installer shall keep a written installation record for each helical pier. This record shall include the following information:
    - Project name and location.
    - Name of authorized and certified dealer and installer.
    - Name of installer's foreman or representative witnessing the installation.
    - Date of installation.
    - Location drawing of each Helical Pier.
    - Description of lead section including number and diameter of helices and extensions used.
    - Overall depth of installation from foundation subgrade.
    - Installation torque at termination of pier.
    - Refusal or bedrock depth.

### FIELD QUALITY CONTROL

1. Testing Agency: The helical pier system is a critical component of foundation support. The GER retained for construction shall be retained by the Owner to observe and document, perform tests, and submit reports during installation of helical piers.
2. A helical pier report shall be prepared by the GER retained for construction for each pier as follows:
  - a. Actual top and bottom elevations.
  - b. Estimated bedrock bearing elevation.
  - c. Estimated termination depth below footing elevation.
  - d. Description, location, and dimensions of obstructions.
  - e. Final top centerline location and deviations from requirements.
  - f. Variation of shaft from plumb.
  - g. Design and tested bearing capacity.
  - h. Description, diameter, and top and bottom elevations of permanent casings (if used).
  - i. Remarks, unusual conditions encountered, and deviations from requirements.

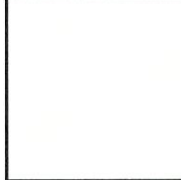
### LOAD TEST

1. Load test 1 pier 24 or more hours after installation. A load test shall be provided and performed by the pier installer, and observed by the GER retained for construction.
2. The pier shall be loaded in 25% increments of the allowable design load to 150% of design in accordance with Table G5.1 below.
3. Testing equipment shall have been calibrated within 6 months of installation and capable of holding the test load without bleed off for at least 1 hour.
4. An acceptable test results when vertical movement of the pier results in less than 0.5 inches between one log cycle (6 to 60 minutes) under the test load.
5. A failing pier shall be corrected prior to continuing remaining pier installation.
6. If a failing pier test results, 2 additional piers shall be tested, as determined by the GER retained for construction.
7. The following table outlines the minimum data to be obtained during installation, including load and time increments:

**Table G5.1: Pier Load Test Information**

Load Increment	Hold Time (min.)	Time of Reading
0.00DL	0	None
0.25DL	5	5
0.50DL	5	5
0.75DL	5	5
1.00DL	5	5
1.25DL	5	5
1.50DL	60	1
--	--	2
--	--	3
--	--	4
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<input type="checkbox"/> ISSUED FOR DESIGN USE					
<input type="checkbox"/> PRELIMINARY					
<input type="checkbox"/> YOUR APPROVAL					
<input type="checkbox"/> REFERENCE					
<input type="checkbox"/> CONSTRUCTION					
<input type="checkbox"/> DESTROY					
<input type="checkbox"/> PREVIOUS PRINTS					
REV	DATE	DESCRIPTION	CHECK: AJA	DESIGN: JMW	DRAWN: JMW
A	4/15/22	30% DRAFT	FILE: M021202A		
A	1/17/23	90% DRAFT	PROJECT:		
			PACIFIC CITY TRANSFER	PREPARED FOR:	GREAT WEST ENGINEERING
			38255 BROOKTON ROAD		808 N LAKE HARBOR LN
			PACIFIC CITY, OREGON		BOSE, ID 83703
				ATTN:	MR. TRAVIS PYLE, P.E. & MS. MICHELLE LANGDON



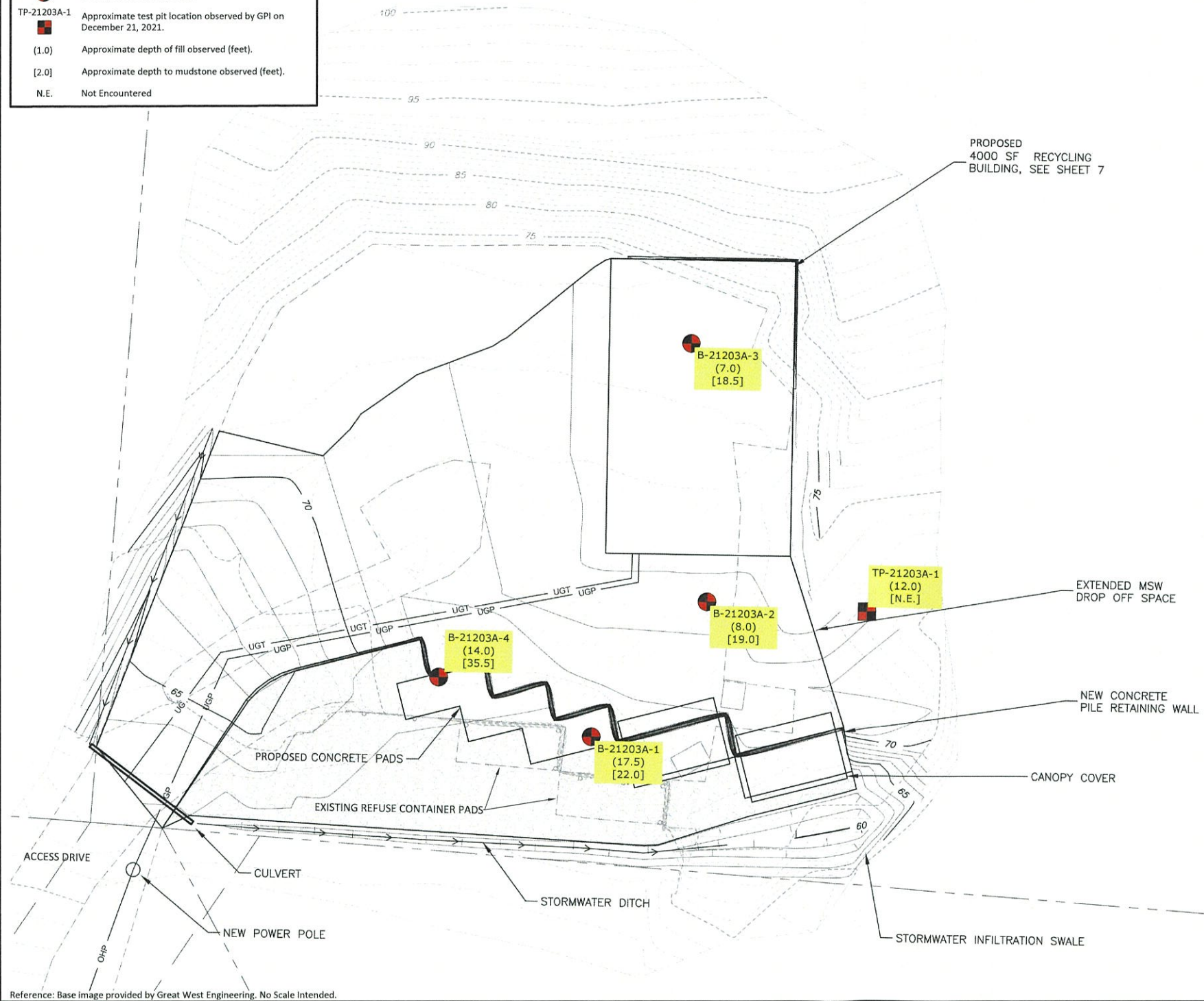
**GeoProfessional**  
**Innovation**  
GPI 6 O'Donnell Road Pullman, WA 99163 509.339.2000



### EXPLORATION MAP

**LEGEND**

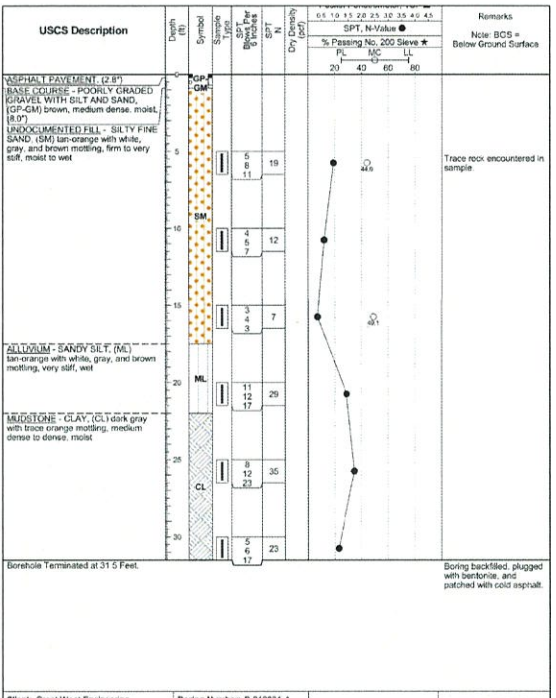
- B-21203A-1 Approximate boring location observed by GPI on December 21 and 22, 2021.
- TP-21203A-1 Approximate test pit location observed by GPI on December 21, 2021.
- (1.0) Approximate depth of fill observed (feet).
- [2.0] Approximate depth to mudstone observed (feet).
- N.E. Not Encountered



### USCS & EXPLORATION LOGS

**UNIFIED SOIL CLASSIFICATION SYSTEM**

MAJOR DIVISIONS	GRAPHIC SYMBOL	GROUP SYMBOL	TYPICAL NAMES		
COARSE GRAINED SOIL	GRAVEL	GW	WELL-GRADED GRAVEL, GRAVEL-SAND MIXTURES		
	CLEAN GRAVEL	GP	POORLY-GRADED GRAVEL, GRAVEL-SAND MIXTURES		
	GRAVEL WITH FINES	GM	SILTY GRAVEL, GRAVEL-SAND-SILT MIXTURES		
		GC	CLAYEY GRAVEL, GRAVEL-SAND-CLAY MIXTURES		
SAND	CLEAN SAND	SW	WELL-GRADED SAND, GRAVELLY SAND		
		SP	POORLY-GRADED SAND, GRAVELLY SAND		
	SAND WITH FINES	SM	SILTY SAND, SAND-SILT MIXTURES		
		SC	CLAYEY SAND, SAND-CLAY MIXTURES		
FINE GRAINED SOIL	SILT AND CLAY LIQUID LIMIT LESS THAN 50%	ML	INORGANIC SILT, SANDY OR CLAYEY SILT		
		CL	INORGANIC CLAY OF LOW TO MEDIUM PLASTICITY, SAND OR SILTY CLAY		
		CL-ML	INORGANIC MIXED CLAY AND SILT		
		DL	INORGANIC SILT AND CLAY OF LOW PLASTICITY		
		MH	INORGANIC SILT, MICA-CIOUS SILT, PLASTIC SILT		
		CH	INORGANIC CLAY OF HIGH PLASTICITY, FAT CLAY		
		OH	ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY		
		PT	PEAT, MUCK AND OTHER HIGHLY ORGANIC SOILS		
	<b>BORING LOG SYMBOLS</b>			<b>TEST PIT LOG SYMBOLS</b>	<b>GROUNDWATER SYMBOLS</b>
	STANDARD 2 INCH O.D. SPLIT SPOON SAMPLE			GRAB BAG SAMPLE	GROUND WATER AFTER 24 HOURS
CALIFORNIA MODIFIED 3 INCH O.D. SPLIT SPOON SAMPLE			BULK SAMPLE	GROUND WATER AT TIME OF DRILLING	
ROCK CORE			RING SAMPLE	GROUND WATER AT THE END OF DRILLING	
SHELBY TUBE 3 INCH O.D. UNDISTURBED SAMPLE					



REV	DATE	DESCRIPTION	CHECK: JAK	DRAWN: BRM
1	4/15/22	30% DRAFT	FILE: M021203A	DESIGN: TW
2	1/17/23	90% DRAFT	PROJECT: PACIFIC CITY TRAMWAY	PREPARED FOR: GREAT WEST ENGINEERING
			PROJECT: PACIFIC CITY TRAMWAY	DESIGN: JAK
			PROJECT: PACIFIC CITY TRAMWAY	DESIGN: JAK
			PROJECT: PACIFIC CITY TRAMWAY	DESIGN: JAK
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			PROJECT: PACIFIC CITY TRAMWAY	DESIGN: JAK

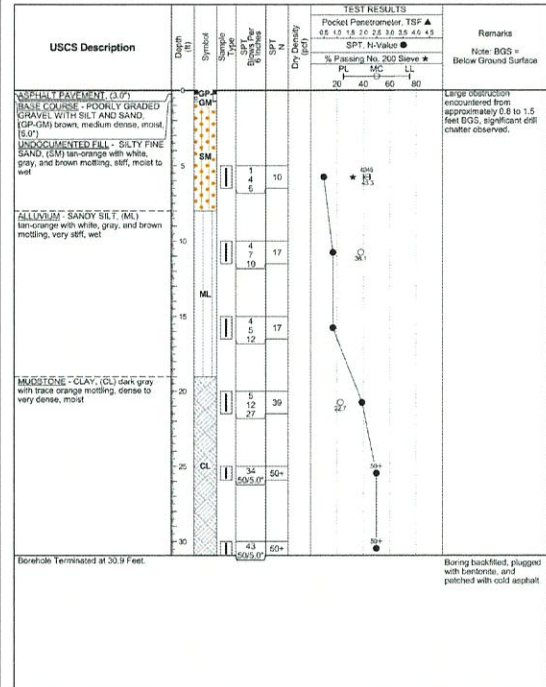
MR. TRAVIS PYLE, P.E. & MS. MICHELLE LANGDON

GeoProfessional Innovation  
6 O'Donnell Road Pullman, WA 99163 509.339.2000

GT6 of 7

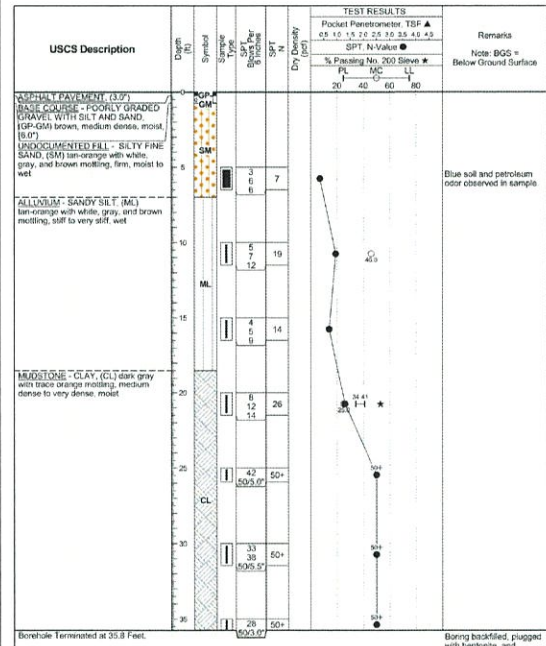


EXPLORATION LOGS



Client: Great West Engineering Boring Number: B-21203A-2  
 Project: MO21203A Date Drilled: 12-21-2021  
 Drill Rig: B-58 Borehole Diameter: 4"  
 Depth to Groundwater: N.E. Logged By: JDM

**EXPLORATORY BORING LOG**  
 Sheet 1 of 1



Client: Great West Engineering Boring Number: B-21203A-3  
 Project: MO21203A Date Drilled: 12-21-2021  
 Drill Rig: B-58 Borehole Diameter: 4"  
 Depth to Groundwater: N.E. Logged By: JDM

**EXPLORATORY BORING LOG**  
 Sheet 1 of 1

LABORATORY TEST RESULTS

Boring	Depth (feet)	Lab Number	Description (U.S.C.S. Classification)	In-Situ Moisture, %	In situ Dry Density, pcf	Atterberg Limits Liquid Limit	Plasticity Index	#200 Sieve Passing, %	pH	Resistivity Ω-cm	Sulfates ppm
B-21203A-1	5.0-6.5	12219	Silty fine Sand (SM)	44.0	-	-	-	-	-	-	-
B-21203A-1	15.0-16.5	12220	Silty fine Sand (SM)	49.1	-	-	-	-	-	-	-
B-21203A-1	20.0-21.5	12255-2	Sandy Silt (ML)	-	-	-	-	-	4.6	7,140	9.3
B-21203A-2	5.0-6.5	12221	Silty fine Sand (SM)	43.3	-	45	5	32	-	-	-
B-21203A-2	10.0-11.5	12222	Sandy Silt (ML)	38.1	-	-	-	-	-	-	-
B-21203A-2	20.0-21.5	12223	Sandy Silt (ML)	22.7	-	-	-	-	-	-	-
B-21203A-3	10.0-11.5	12224	Sandy Silt (ML)	46.0	-	-	-	-	-	-	-
B-21203A-3	20.0-21.5	12225	Sandy Silt (ML)	25.0	-	41	7	53	-	-	-
B-21203A-4	5.0-6.5	12226	Silty fine Sand (SM)	38.0	-	-	-	-	-	-	-
B-21203A-4	10.0-11.5	12227	Silty fine Sand (SM)	25.8	105.0	-	-	-	-	-	-
B-21203A-4	15.0-16.5	12255-1	Sandy Silt (ML)	-	-	-	-	-	5.0	8,330	36.0
B-21203A-4	20.0-21.5	12228	Sandy Silt (ML)	30.4	-	-	-	-	-	-	-
B-21203A-4	30.0-31.5	12229	Sandy Silt (ML)	25.9	-	47	17	52	-	-	-

Moisture contents include a 15% correction (reduction) based on the mud rotary drilling technique.

REV	DATE	DESCRIPTION	CHECK: AJM
1	4/15/22	30% DRAFT	
2	1/17/23	90% DRAFT	

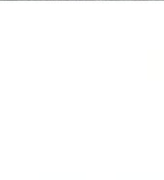
ISSUED FOR:  
 DESIGN USE  
 PRELIMINARY  
 YOUR APPROVAL  
 REFERENCE  
 CONSTRUCTION  
 DESTROY  
 PREVIOUS PRINTS

PACIFIC CITY TRANSFER  
 3050 N LAKE HARBOR LN  
 ENGINEERING EVALUATION  
 3825 BROODEN ROAD  
 PACIFIC CITY, OREGON

PREPARED FOR:  
 GREAT WEST ENGINEERING  
 BOB N LAKE HARBOR LN  
 BOSS, ID 97103

ATTN:  
 MR. TRAVIS PYLE, P.E. &  
 MS. MICHELLE LANGDON

DESIGN: TWJ  
 DRAWN: JBM





# **EXHIBIT**

**C**



## Lynn Tone

---

**From:** Blanca Nelson <spanishlattesncookies@gmail.com>  
**Sent:** Tuesday, June 6, 2023 7:54 AM  
**To:** Lynn Tone  
**Subject:** EXTERNAL: Repair and Expansion of Transfer Station in Pacific City

[**NOTICE:** This message originated outside of Tillamook County -- **DO NOT CLICK** on **links** or open **attachments** unless you are sure the content is safe.]

Dear Ms. Lynn Tone

Thank you for informing us about the request to repair and EXPANSION of the transfer station in Pacific City. I live behind it, and would NOT like to see its expansion. It's repaired, yes. I and all our neighbors believe it should be close permanent because there are other stations not far away that serve the coastal population and those stations are not near a river or ocean or more important near homes.

We are afraid that we will begin experiencing the odor of decade home garbage and worse it can contaminate our wells' water.

Would you please submit my testimony.

Thank You Ms. Lynn  
Sincerely  
Blanca Nelson



## Lynn Tone

---

**From:** Dawn Baker <garrydawn100@yahoo.com>  
**Sent:** Thursday, June 15, 2023 6:27 AM  
**To:** Lynn Tone  
**Subject:** EXTERNAL: #851-23-000123-PLNG

[NOTICE: This message originated outside of Tillamook County -- **DO NOT CLICK** on links or open attachments unless you are sure the content is safe.]

Hello,

I would like to have my concerns added for review regarding changes to the Pacific City Transfer Station.

I'm worried about any excess garbage odors from garbage collection that may be more obvious after trees and landscape are removed to complete the project and excess noise that will be heard during construction and after as part of normal garbage drop-off and collection.

I haven't seen any studies or explanation regarding runoff into our stream/creek that runs through our property and feeds a neighbor's pond with fish or the effects of anything getting into the ground and affecting plants or the possible effects on our well water.

Also, I've read that the proposed building is for emergency supplies and would like to know what these supplies are and why they cannot be stored on any of the existing fire department properties where the land already appears to be cleared.

Thank you for your time,

Dawn Baker  
37390 Resort Dr  
Cloverdale, OR 97112  
(503)723-9935





# Wetland Land Use Notice Response

## Response Page

Department of State Lands (DSL) WN#\*

WN2023-0377

### Responsible Jurisdiction

<b>Staff Contact</b>	<b>Jurisdiction Type</b>	<b>Municipality</b>
Lynn Tone	County	Tillamook
<b>Local case file #</b>	<b>County</b>	
851-23-000123-PLNG	Tillamook	

### Activity Location

<b>Township</b>	<b>Range</b>	<b>Section</b>	<b>QQ section</b>	<b>Tax Lot(s)</b>
04S	10W	32	A	2400

Street Address

38255 Brooten Rd

Address Line 2

City

Pacific City

Postal / Zip Code

97135

State / Province / Region

OR

Country

Tillamook

**Latitude**

45.181343

**Longitude**

-123.929652

### Wetland/Waterway/Other Water Features

There are/may be wetlands, waterways or other water features on the property that are subject to the State Removal-Fill Law based upon a review of wetland maps, the county soil survey and other available information.

The National Wetlands Inventory shows wetland, waterway or other water features on the property

### Your Activity

A state permit will not be required for the proposed project because, based on the submitted site plan, the project avoids impacts to jurisdictional wetlands, waterways, or other waters.

### Applicable Oregon Removal-Fill Permit Requirement(s)



- ☒ A state permit is required for 50 cubic yards or more of fill removal or other ground alteration in wetlands, below ordinary high water of waterways, within other waters of the state, or below highest measured tide.

## Closing Information



### Additional Comments

A seasonal stream is mapped by the National Hydrography Dataset to the east of the existing transfer station. If this stream carries intermittent flow, it is likely jurisdictional to the state Removal-Fill Law.

Based on the submitted site plan, a proposed building is located on the edge of the slope adjacent to this creek. It does not appear to impact the creek, so a state Removal-Fill permit is not likely required.

**This is a preliminary jurisdictional determination and is advisory only.**

This report is for the State Removal-Fill law only. City or County permits may be required for the proposed activity.

### Contact Information

- For information on permitting, use of a state-owned water, wetland determination or delineation report requirements please contact the respective DSL Aquatic Resource, Proprietary or Jurisdiction Coordinator for the site county. The current list is found at: <http://www.oregon.gov/dsl/ww/pages/wwstaff.aspx>
- The current Removal-Fill permit and/or Wetland Delineation report fee schedule is found at: <https://www.oregon.gov/dsl/WW/Documents/Removal-FillFees.pdf>

### Response Date

6/12/2023

### Response by:

Jessica Salgado

### Response Phone:

541-388-6421





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*Land of Cheese, Trees and Ocean Breeze*

# MEMO

**Date:** June 15, 2023  
**To:** Tillamook County Planning Commission  
**From:** Melissa Jenck, CFM, Senior Planner  
**Subject:** June 22, 2023 Planning Commission Hearing –Conditional Use Request #851-23-000118-PLNG

---


Included is the staff report and associated exhibits for the above-mentioned Conditional Use request to amend a Master Plan for Sahhali South Lots 24 and 25. The proposal includes amendments to setbacks of the above described lots within “Sahhali South”, along with the reduction of density, for properties located within the Unincorporated Community Boundary of Neskowin.

This request is for amendments to the Master Plan approved through the Planned Development (PD) Overlay in Sahhali South, for Lots 24 and 25 only. These changes include amendments to the originally prescribed setbacks, and the originally approved dwelling design and density of Lots 24 and 25.

The applicant is Dustin Capri of Capri Architecture. The property owners are Michael & Janice Shainsky.

Please do not hesitate to contact me if you have any questions.

Thank You,



Melissa Jenck





*Land of Cheese, Trees and Ocean Breeze*

## CONDITIONAL USE REVIEW #851-23-000118-PLNG

Planning Commission Hearing Date: June 22, 2023

Staff Report Date: June 15, 2023

Staff Report Prepared by: Melissa Jenck, CFM, Senior Planner

### I. GENERAL INFORMATION:

**Request:** Conditional Use request to amend the Planned Development Master Plan for ‘Sahhali South’ for Tax Lots 2400 and 2500 (Lot 24 and 25).

**Location:** Located at off Proposal Point Drive, a private road, the subject properties are located within the Neskowin Unincorporated Community, zoned Neskowin Rural Residential (NeskRR), and designated as Tax Lots 2400 and 2500 of Section 24AB, Township 5 South, Range 11 West of the Willamette Meridian, Tillamook County, Oregon

**Zone:** Neskowin Rural Residential (NeskRR) Zone & Planned Development Overlay (PD) Zone

**Applicant:** Dustin Capri – Capri Architecture, 747 SW 13<sup>th</sup> Street, Newport, OR 97365

**Property Owner:** Michael & Janice Shainsky, 4125 SW 48<sup>th</sup> Place, Portland, OR 97221

### Description of Site and Vicinity

The subject properties are Lot 24 and 25 of the Sahhali South subdivision and Planned Development and approximately 0.11-acres and 0.10-acres respectively. The subject properties are located within the Neskowin Unincorporated Community and are zoned Neskowin Rural Residential (NeskRR), with the Planned Development (PD) Overlay. Neskowin Rural Residential (NeskRR) zoned properties surround the properties (Exhibit A).

The subject properties are accessed via Proposal Point Drive, a private road, which abuts their northerly property boundary. Proposal Point Drive intersect Sahhali Drive, a private road, which serves as entry from Highway 101, a State highway, to the east (Exhibit A).

There is existing open space as part of the Sahhali South subdivision abutting the easterly and southerly boundary of the subject properties (Exhibit A). The Sahhali South, Sahhali Shores and Sahhali Shores at Neskowin Subdivisions are located to the north of the properties (Exhibit A).



The properties do not contain wetlands and are located upland from an unnamed creek to the south, and are adjacent to wetlands at the base of the ridge located to the south (Exhibit A). The properties are located within an area of geologic hazard, maintaining susceptibility for shallow & deep landslides as identified in DOGAMI Open File Report O-20-13. The properties are located on an upland area with topography sloping downward to the south with a ridge. The properties are located outside of the area of special flood hazard per FEMA Firm #41057C0865F dated September 28, 2018 (Exhibit A).

Service providers include the Neskowin Water District, Nestucca Rural Fire Protection District, Tillamook PUD, Nestucca School District, and the Tillamook County Sheriff's Office. The subject property maintains an existing community septic system (Exhibit A).

The natural features identified in the area are not included in the list of inventoried protected natural features in the Goal 5: Natural Resources element of the Tillamook County Comprehensive Plan. Development of the subject property shall be in accordance with the development standards of TCLUO Section 4.130: Development Requirements for Geologic Hazard Areas, consistent with the policies outlined in the Goal 7: Hazards element of the Tillamook County Comprehensive Plan.

Tillamook County established an Unincorporated Community Boundary (UCB) around Neskowin based on the procedures and requirements of the Goal 2 exception process. Planning for the unincorporated community of Neskowin was completed in accordance with Goal 14 Urbanization.

Applicants are proposing to amend the Master Plan for the Sahhali South subdivision for Lots 24 and 25, to request a change to the prescribed setbacks and amend the original approval for one (1) townhome per lot to allow for the placement of one (1) dwelling across the two lots (Exhibit B). The Conditional Use review process is required for any changes to the approved Master Plan developed with the Planned Development Overlay.

## **II. APPLICABLE ORDINANCE AND COMPREHENSIVE PLAN PROVISIONS**

The desired use is governed through the following Sections of the Tillamook County Land Use Ordinance (TCLUO). The suitability of the proposed use, in light of these criteria, is discussed in Section III of this report:

- A. TCLUO Section 3.220: Neskowin Rural Residential (NeskRR) Zone
- B. TCLUO Section 3.520: Planned Development (PD) Overlay Zone
- C. Article VI: Conditional Use Procedures and Criteria
- D. TCLUO Section 4.130: Development Requirements for Geologic Hazard Areas

## **III. ANALYSIS:**

- A. Section 3.220 Neskowin Rural Residential (NeskRR) Zone.** This section lists outright and conditionally permitted uses.

**Findings:** The applicant is requesting an amendment to the Master Plan for Sahhali South to reflect the proposed build-out Lots 24 and 25 of Sahhali South, to include an amendment of the prescribed setbacks and amend the density for the two lots (Exhibit B). Section 3.220(3)(a) addresses the issue of Planned Developments as a Conditional Use. Amending the existing Planned Development is subject to Section 3.520 Planned Development Overlay Zone (PD) and requires Conditional Use approval, Article VI.

Staff concludes that the proposed use is allowed in the NeskRR Zone as a Conditional Use as indicated under Section 3.220(3)(a).

- B. Section 3.520 Planned Development Overlay Zone (PD).** This section lists the procedures that shall be observed in applying for and acting on a Planned Development. Section 3.520(i) requires that any changes in the approved Master Plan be approved by the Planning Commission. The Applicant is proposing to amend lot layout for Lots 24 and 25 of Sahhali South, to amend the prescribed setbacks along with request the placement of one (1) single-family



dwelling across the two lots (Exhibit B). Section 3.520(3)(b) addresses the procedure for amending an existing Planned Development. These include:

- (1) *There are special physical conditions or objectives of development which the proposal will satisfy to warrant a departure from the standard ordinance requirements.*

**Findings:** Applicant has proposed to amend the site-specific setbacks established during the Master Plan development of Sahhali South (Exhibit B). Setbacks for Lots 24 and 25 are proposed to allow for one (1) single family dwelling, to amend the zero (0) foot setback from the attached side yard as one building would be spanning the two lots (Exhibit B). The proposal would allow for no setback be prescribed across the separating lot line between Lot 24 and 25. The proposal would not include any change to the prescribed front, rear or side yard setbacks of 10-feet from the proposed exterior property boundaries (Exhibit B). Applicants' proposal includes the reduction of one (1) dwelling unit originally prescribed in the Master Plan, for the placement of one (1) dwelling unit. Applicant states the shape of the property, the small size, and the topographic conditions lend itself to the construction of one (1) single family dwelling (Exhibit B).

Staff find the purpose of a Planned Development Overlay is “...to permit greater flexibility and creativity in the design of land development than is presently possible through the strict interpretation of conventional zoning and land division ordinances. The intent is to encourage development designs that preserve and/or take advantage of the natural features and amenities of a property such as, but not limited to, views water frontage, wetlands, sloping topography, geologic features and drainage areas. A Planned Development should be compatible with the established and proposed surrounding land uses. A Planned Development should accrue benefits to the County and the general public in terms of need, convenience and service sufficient to justify any necessary exceptions to the zoning and land divisions ordinances.”

Staff find the request is to modify an existing Master Plan to adjust setbacks and the prescribed density to two (2) lots contained within the Sahhali South Planned Development (Exhibit B). The flexibility of the Planned Development process allows for dimensional standards and setbacks to be prescribed through the creation of the Master Plan. The setbacks originally prescribed in the Master Plan for Lots 24 and 25 in Sahhali South are front and rear yard setbacks at 10-feet, with attached side yards at zero (0) feet and side yards at 10-feet. The proposed amendment would not alter the general footprint approved, with the reduction of density.

- (2) *Resulting development will not be inconsistent with the comprehensive plan provisions or zoning objectives of the area.*

**Findings:** Applicant states a single-family dwelling is allowed outright in the Neskowin Rural Residential (NeskRR) zone (Exhibit B). Staff find the proposed use of the lots is for a residential structure. This is consistent with the zone and the community plan for Neskowin.

- (3) *The plan can be completed within a reasonable period of time.*

**Findings:** The applicant provided that construction is expected to be completed in 10 to 14 months, once permitting is completed, which is a reasonable period of time for construction (Exhibit B).

- (4) *The streets are adequate to support the anticipated traffic and the development will not overload the streets outside the planned area.*

**Findings:** Applicant provided that the original design accommodated multiple accesses if the properties were both improved with a townhouse (Exhibit B). There are no proposed changes to access or existing roadway systems in the development, other than the proposal one detail one (1) access from Proposal Point Drive (Exhibit B).

No comments were received from Tillamook County Public Works or Nestucca Rural Fire Protection District on this request.



- (5) *Proposed utility and drainage facilities are adequate for the population densities and type of development proposed.*

**Findings:** Sahhali South maintains a community sanitary system as detailed in the Applicants submittal and included an approval letter for connection of the property to the sewer system (Exhibit B). Applicant states these existing facilities were addressed in the Sahhali South Master Plan for the original density. Staff find the proposal would maintain a similar area of development, with a reduction of density.

Water is available through an existing Neskowin community water district (Exhibit B). A service letter from Neskowin Regional Water was included in the Applicants submission (Exhibit B).

- (6) *The parcel is suitable for the proposed use, considering its size, shape, location, topography, existence of improvements, and natural features.*

**Findings:** Lot 24 and 25 are approximately 0.11-acres and 0.10-acres in size, respectively (Exhibit A). The subject properties are located within the Neskowin Unincorporated Community and are zoned Neskowin Rural Residential (NeskRR), with the Planned Development (PD) Overlay. Neskowin Rural Residential (NeskRR) zoned properties surround the properties (Exhibit A). The subject properties are accessed via Proposal Point Drive, a private road, which abuts their northerly property boundary. Proposal Point Drive intersect Sahhali Drive, a private road, which serves as entry from Highway 101, a State highway, to the east (Exhibit A).

The properties do not contain wetlands and are located upland from an unnamed creek to the south, and are adjacent to wetlands at the base of the ridge located to the south (Exhibit A). The properties are located within an area of geologic hazard, maintaining susceptibility for shallow & deep landslides as identified in DOGAMI Open File Report O-20-13. The properties are located on an upland area with topography sloping downward to the south with a ridge. The properties are located outside of the area of special flood hazard per FEMA Firm #41057C0865F dated September 28, 2018 (Exhibit A).

The size of the proposed lots will meet the minimum in the Neskowin Rural Residential zone of 20,000 square feet with the area made up of lot area and area within the common areas. The Planned Development process allows for smaller lot sizes providing all area is accounted for. The proposal would include a reduction of the original approved density, which ensures that the original maximum approved density is not exceeded.

Applicant states the despite the topographic conditions and unique shape of the lots, an adequately sized home can be accommodated on the property (Exhibit B).

Site specific setbacks are proposed through the Planned Development process. These are discussed in this report, above, to include only a change to the zero (0) foot setback from the 'attached' side yard, as the proposal would request one (1) dwelling unit across two lots rather than two (2) dwelling units (Exhibit B). The proposed request is to modify an existing Master Plan for Sahhali South which was approved in 2005. The proposed setback amendments and density reduction are stated by the Applicant to avoid topographic and hazard areas of the existing lots, along with the small size of the property for the original design of two (2) dwellings (Exhibit B).

Staff recommend, in accordance with Department practice, a restrictive covenant which allows for development across a Lot boundary, requiring the properties be conveyed as a single ownership. A recommended covenant has been included in 'Exhibit C'.

- (7) *The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs or prevents the use of surrounding properties for the permitted uses listed in the underlying zone.*

**Findings:** The Sahhali South lots (Lot 24 and 25) located within the Neskowin Unincorporated Community Boundary (UCB) and consists of residential structures (dwellings) on lots with an average density of 2.02 lots per



acre. This includes common space. The area surrounding the Planned Development is predominantly residential, both inside the community boundary and outside. The original Planned Development maintained 1.99 lots per acre (Exhibit B).

Applicant states the Sahhali South architectural Review Board provided approval of the proposed development, with a letter included in their submittal (Exhibit B).

Staff find that the proposed amendment to the Master Plan would not alter the original exterior footprint of the proposed development of Lots 24 and 25 (Exhibit B).

(8) *The proposed use is timely, considering the adequacy of public facilities and services existing or planned for the area affected by the use.*

**Findings:** Applicant states the existing facilities include power, water, stormwater, and electricity which are currently in place on the development (Exhibit B). The applicant's submittal demonstrates that adequate access to roadways with the combination of the lots would be maintained as part of the amendment. Applicant has provided a copy of the approval from Sahhali South HOA for sewer connection to the community system (Exhibit B).

The area is served by Neskowin Regional Water District. No comments were received from the Nestucca Rural Fire Protection District or Tillamook County Public Works.

(9) *Proposed uses which are not otherwise permitted by the underlying zoning on the parcel are accessory uses within the entire development.*

**Findings:** Applicant states the proposal is for a single-family residence, which is allowed in the NeskRR zone (Exhibit B). No other uses have been proposed that are not otherwise permitted outright. The Applicant is proposing redesign of existing lots, along with adjustments to setbacks, to allow for siting of one (1) residential structure.

**C. Article VI Conditional Use Procedures and Criteria.** Article VI of the Tillamook County Land Use Ordinance contains the procedures and review criteria for processing a Conditional Use request. These criteria, along with staff's findings and conclusions are indicated below.

1. **Section 6.020 Procedure** requires notification of the request to be mailed to landowners within 250-feet of the subject property, to allow 14 days for written comment, and requires staff to consider comments received in making the decision.

**Findings:** Notice of the request was mailed to property owners and applicable agencies on May 23, 2023. Newspaper Notice of Public Hearing was published on May 23, 2023 in the Tillamook County Headlight Herald. Notice was provided to Tillamook County Public Works, Oregon Department of State Lands, Nestucca Rural Fire Protection District and Oregon Department of Fish and Wildlife. No comments were received on this request.

2. **Section 6.040 Review Criteria**

1. *The use is listed as a Conditional Use in the underlying zone, or in an applicable overlying zone.*

**Findings:** Section 3.220(3)(a) Neskowin Rural Residential (NeskRR) Zone states Planned Developments are subject to TCLUO Section 3.520, 'Planned Development (PD) Overlay Zone' and will require review against TCLUO Section 6.040 Conditional Use Review Criteria.

2. *The use is consistent with the applicable goals and policies of the comprehensive plan.*



**Findings:** Generally, if a use is allowed outright or conditionally in the LUO, and is in compliance with all other LUO regulations, than it is assumed to be consistent with the applicable goals and policies of the Comprehensive Plan and the Neskowin Community Plan. Planned Development in the community of Neskowin is limited to the uses allowed within the Neskowin zones. Planned Developments for single family dwellings and townhouses are permitted uses.

Applicant identifies the Goal 10 Housing element, recognizing that residential improvements are recognized as a need in the Comprehensive Plan. Applicant has prepared a Geologic Hazard Report prepared by Oregon Geotechnical Services dated November 14, 2021.

The Planned Development Overlay (PD) zone allows for greater flexibility in the siting of structures, the protection of areas that are sensitive and the overall use of the property. For all of its flexibility it can be a protective mechanism.

The property is eligible for development providing that all requirements of the Planned Development Ordinance, the Tillamook County Land Use Ordinance and the goals and policies of the Comprehensive Plan have been adequately and appropriately addressed.

The natural features identified on the subject property are not included in the list of inventoried protected natural features in the Goal 5: Natural Resources element of the Tillamook County Comprehensive Plan. Development of the subject property shall be done in accordance with the development standards of Section 4.130: Development Requirements for Geologic Hazard Areas, consistent with the policies outlined in the Goal 7: Hazards element of the Tillamook County Comprehensive Plan.

Tillamook County established an Unincorporated Community Boundary (UCB) around Neskowin based on the procedures and requirements of the Goal 2 exception process. Planning for the unincorporated community of Neskowin was completed in accordance with Goal 14 Urbanization. The proposed plat is located within the Neskowin Unincorporated Community Boundary at a density consistent with Plan policies for development within UCBs (14.3.11, Goal 14 element of the Comprehensive Plan).

3. *The parcel is suitable for the proposed use considering its size, shape, location, topography, existence of improvements and natural features.*

**Findings:** Lot 24 and 25 are approximately 0.11-acres and 0.10-acres in size, respectively (Exhibit A). The subject properties are located within the Neskowin Unincorporated Community and are zoned Neskowin Rural Residential (NeskRR), with the Planned Development (PD) Overlay. Neskowin Rural Residential (NeskRR) zoned properties surround the properties (Exhibit A). The subject properties are accessed via Proposal Point Drive, a private road, which abuts their northerly property boundary. Proposal Point Drive intersect Sakhali Drive, a private road, which serves as entry from Highway 101, a State highway, to the east (Exhibit A).

The properties do not contain wetlands and are located upland from an unnamed creek to the south, and are adjacent to wetlands at the base of the ridge located to the south (Exhibit A). The properties are located within an area of geologic hazard, maintaining susceptibility for shallow & deep landslides as identified in DOGAMI Open File Report O-20-13. The properties are located on an upland area with topography sloping downward to the south with a ridge. The properties are located outside of the area of special flood hazard per FEMA Firm #41057C0865F dated September 28, 2018 (Exhibit A).

The size of the proposed lots will meet the minimum in the Neskowin Rural Residential zone of 20,000 square feet with the area made up of lot area and area within the common areas. The Planned Development process allows for smaller lot sizes providing all area is accounted for. The proposal would include a reduction of the original approved density, which ensures that the original maximum approved density is not exceeded.



Applicant states the despite the topographic conditions and unique shape of the lots, an adequately sized home can be accommodated on the property (Exhibit B).

Site specific setbacks are proposed through the Planned Development process. These are discussed in this report, above, to include only a change to the zero (0) foot setback from the 'attached' side yard, as the proposal would request one (1) dwelling unit across two lots rather than two (2) dwelling units (Exhibit B). The proposed request is to modify an existing Master Plan for Sahlali South which was approved in 2005. The proposed setback amendments and density reduction are stated by the Applicant to avoid topographic and hazard areas of the existing lots, along with the small size of the property for the original design of two (2) dwellings (Exhibit B).

Staff recommend, in accordance with Department practice, a restrictive covenant which allows for development across a Lot boundary, requiring the properties be conveyed as a single ownership. A recommended covenant has been included in 'Exhibit C'.

4. *The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs or prevents the use of surrounding properties for the permitted uses listed in the underlying zone.*

**Findings:** The Sahlali South lots (Lot 24 and 25) located within the Neskowin Unincorporated Community Boundary (UCB) and consists of residential structures (dwellings) on lots with an average density of 2.02 lots per acre. This includes common space. The area surrounding the Planned Development is predominantly residential, both inside the community boundary and outside. The original Planned Development maintained 1.99 lots per acre (Exhibit B).

Applicant states the Sahlali South architectural Review Board provided approval of the proposed development, with a letter included in their submittal (Exhibit B).

Staff find that the proposed amendment to the Master Plan would not alter the original exterior footprint of the proposed development of Lots 24 and 25 (Exhibit B).

5. *The proposed use will not have a detrimental effect on existing solar energy systems, wind energy conversion systems or wind mills.*

**Findings:** Applicant states the proposed use will not have a detrimental effect on these systems (Exhibit B). There is no known existing solar energy system, wind energy conversion systems or windmills in the vicinity.

6. *The proposed use is timely, considering the adequacy of public facilities and services existing or planned for the area affected by the use.*

**Findings:** Applicant states the existing facilities include power, water, stormwater, and electricity which are currently in place on the development (Exhibit B). The applicant's submittal demonstrates that adequate access to roadways with the combination of the lots would be maintained as part of the amendment. Applicant has provided a copy of the approval from Sahlali South HOA for sewer connection to the community system (Exhibit B).

The area is served by Neskowin Regional Water District. No comments were received from the Nestucca Rural Fire Protection District or Tillamook County Public Works.

#### **D. TCLUO Section 4.130: Development Requirements for Geologic Hazard Areas.**

The properties are located within an area of geologic hazard, maintaining susceptibility for shallow & deep landslides as identified in DOGAMI Open File Report O-20-13. The properties are located on an upland area with topography sloping downward to the south with a ridge.



**Findings:** Applicant has provided a Geologic Hazard Analysis and Geotechnical Report for Lot 24 and Lot 25 by Oregon Geotechnical Services dated November 14, 2021 (Exhibit B). The report states that the site can be safely developed as proposed, using conventional methods of construction (Exhibit B).

Given the properties are within an area of geologic hazard, a Condition of Approval is recommended to require a site-specific Geologic Hazard Report in accordance with TCLUO Section 4.130 at time of lot development. This requirement ensures that continued development of the site is appropriately addressed in accordance with TCLUO Section 4.130 at the time of construction.

**V. RECOMMENDED CONDITIONS OF APPROVAL FOR CONDITIONAL USE REQUEST #851-23-000118-PLNG**

Sections 6.070: COMPLIANCE WITH CONDITIONS, AND 6.080: TIME LIMIT require compliance with approved plans and conditions of this decision, and all other ordinance provisions, and allows 24 months for compliance with conditions and start of construction. Failure to comply with the conditions of approval and ordinance provisions could result in nullification of this approval.

1. The applicant/owner shall conform to all Federal, State and local regulations, and shall obtain all required permits prior to construction and/or development.
2. Letters of water and sewer availability are required for the development of individual lots and shall be submitted to Community Development at the time of zoning permit submittal.
3. Setbacks for Lot 24 and 25 shall be: 10-foot setback from front property line, 10-foot setback from the rear property line and 10-foot setback from the side property lines. No setback shall be prescribed between the separating lot line between Lot 24 and 25.
4. One (1) single-family dwelling shall be placed on Lot 24 and 25, to be combined using the restrictive covenant in 'Exhibit C'.
5. Development of each lot shall otherwise conform to the development standards outlined in TCLUO Section 3.320 Neskowin Rural Residential (NeskRR) zone as applicable.
6. A site specific Geologic Hazard Report in accordance with TCLUO Section 4.130: Development Requirements for Geologic Hazard Areas shall be completed prior to consolidated Zoning/Building permit applications.
7. This approval shall be void two years, (24 months), from the date of the Order from the Planning Commission, unless all of the conditions are met, or an extension is requested from, and approved by, this department before expiration.

**VII. EXHIBITS**

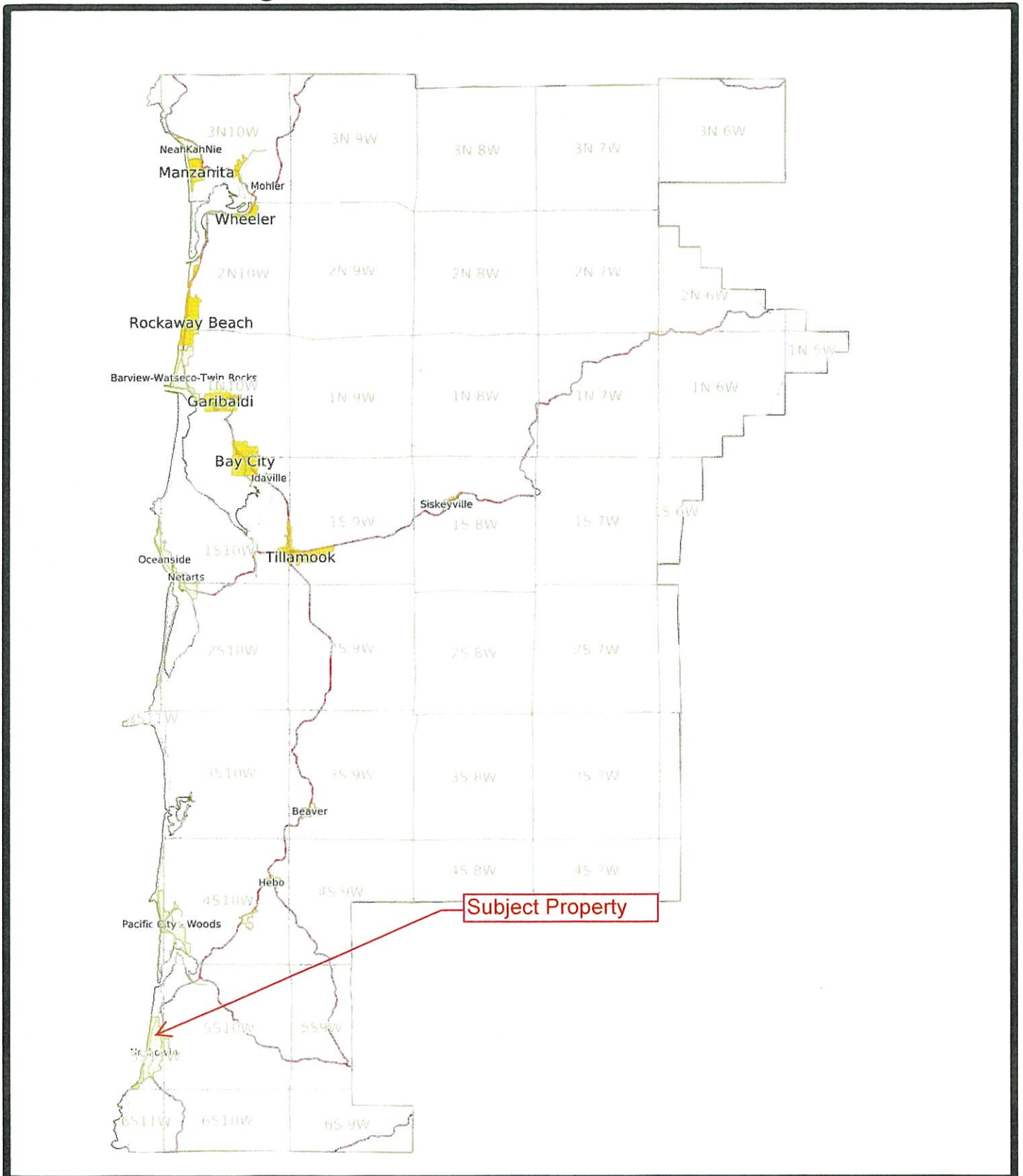
- A. Maps
- B. Applicants Submittal
- C. Restrictive Covenant



# EXHIBIT A

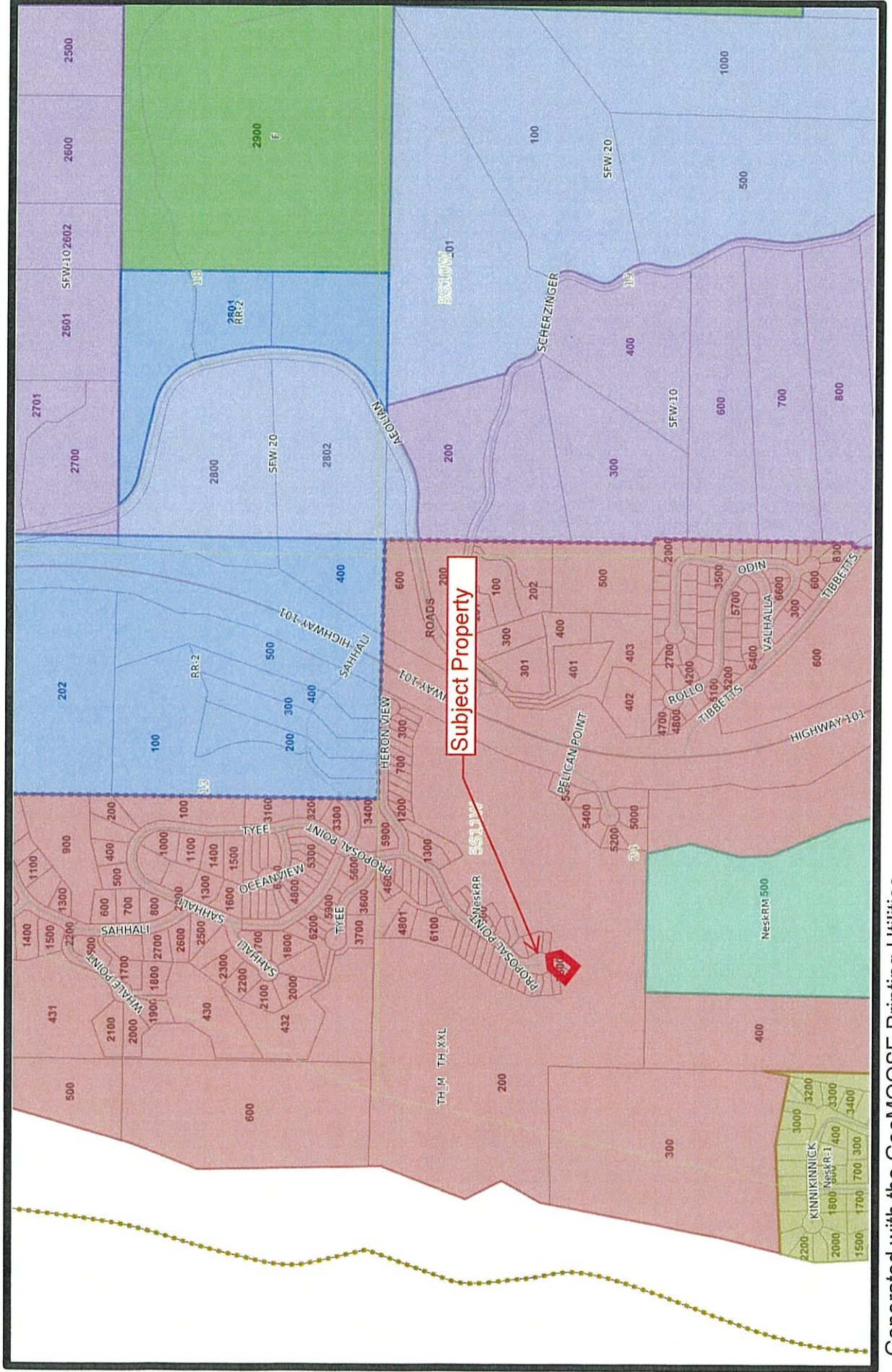


# Vicinity Map





# Zoning Map





FOR ASSESSMENT AND TAXATION ONLY. NOT SUITABLE FOR  
LEGAL, ENGINEERING, OR SURVEY PURPOSES.

N.W.1/4 N.E.1/4 SEC.24 T.5S. R.11W. W.M.  
Tillamook County  
1" = 100'

05S11W24AB  
SAHHALI SOUTH  
CANCELLED



SAHHALI SOUTH  
05S11W24AB  
REVISED 03/2006, WS



**Tillamook County**  
**2022 Real Property Assessment Report**  
 Account 412318

Map 5S1124AB02500  
 Code - Tax ID 2210 - 412318

Tax Status Assessable  
 Account Status Active  
 Subtype NORMAL

Legal Descr SAHHALI SOUTH  
 Lot - 25

Mailing SHAINSKY, MICHAEL K TRUSTEE &  
 SHAINSKY, JANICE L TRUSTEE  
 4125 SW 48TH PL  
 PORTLAND OR 97221

Deed Reference # 2022-4606  
 Sales Date/Price 07-19-2022 / \$249,000  
 Appraiser RANDY WILSON

Property Class 100 MA SA NH  
 RMV Class 100 09 OV 965

<b>Site</b>	<b>Situs Address</b>	<b>City</b>
-------------	----------------------	-------------

Value Summary					
Code Area	RMV	MAV	AV	RMV Exception	CPR %
2210 Land	186,530		Land	0	
Impr	0		Impr	0	
<b>Code Area Total</b>	186,530	162,820	162,820	0	
<b>Grand Total</b>	186,530	162,820	162,820	0	

Land Breakdown									
Code Area	ID #	RFPD	Ex	Plan Zone	Value Source	Trend %	Size	Land Class	Trended RMV
2210	1	<input checked="" type="checkbox"/>		NESKR R	Market	118	0.10 AC		186,530
<b>Code Area Total</b>							0.10		186,530

Improvement Breakdown								
Code Area	Year Built	Stat Class	Description	Trend %	Total Sqft	Ex% MS Acct	Trended RMV	

Exemptions / Special Assessments / Notations
<b>Notations</b>
<ul style="list-style-type: none"> <li>▪ ADJUDICATION - 5 YEARS EXPIRED 309.115 ADDED 2014</li> </ul>

**Comments** 5/4/07 Apportioned value after Sahhali South Subdivision. dv. 9/9/08 Land to market after Sahhali South Subdivision. dv.  
 4/8/13 Tax Court Adjudicated value entered, rolled values forward.LM 5/8/14 Reappraised land, tabled values. GB  
 8/2014 Accnt. review/Adj. 5 yr. notation/Tabled value/Adjusted RMV values due to additional market analysis. RCW



**Tillamook County**  
**2022 Real Property Assessment Report**  
 Account 412317

Map 5S1124AB02400  
 Code - Tax ID 2210 - 412317

Tax Status Assessable  
 Account Status Active  
 Subtype NORMAL

Legal Descr SAHHALI SOUTH  
 Lot - 24

Mailing SHAINSKY, MICHAEL K TRUSTEE &  
 SHAINSKY, JANICE L TRUSTEE  
 4125 SW 48TH PL  
 PORTLAND OR 97221

Deed Reference # 2022-4607  
 Sales Date/Price 07-19-2022 / \$249,000  
 Appraiser RANDY WILSON

Property Class 100 MA SA NH  
 RMV Class 100 09 OV 965

Site	Situs Address	City
------	---------------	------

Value Summary					
Code Area	RMV	MAV	AV	RMV Exception	CPR %
2210 Land	222,680		Land	0	
Impr	0		Impr	0	
<b>Code Area Total</b>	<b>222,680</b>	<b>191,960</b>	<b>191,960</b>	<b>0</b>	
<b>Grand Total</b>	<b>222,680</b>	<b>191,960</b>	<b>191,960</b>	<b>0</b>	

Land Breakdown									
Code Area	ID #	RFPD	Ex	Plan Zone	Value Source	Trend %	Size	Land Class	Trended RMV
2210	1	<input checked="" type="checkbox"/>		NESKR R	Market	118	0.11 AC		222,680
<b>Code Area Total</b>							<b>0.11</b>		<b>222,680</b>

Improvement Breakdown									
Code Area	Year Built	Stat Class	Description	Trend %	Total Sqft	Ex%	MS Acct	Trended RMV	

Exemptions / Special Assessments / Notations
<p><b>Notations</b></p> <ul style="list-style-type: none"> <li>■ ADJUDICATION - 5 YEARS EXPIRED 309.115 ADDED 2014</li> </ul>

**Comments** 5/4/07 Apportioned value after Sahhali South Subdivision. dv. 9/9/08 Land to market after Sahhali South Subdivision. dv. 4/9/13 Tax Court Judgment entered, rolled values forward. LM 5/8/14 Reappraised land, tabled values. GB 8/2014 Acct. review/Adj. 5 yr. notation/Tabled value/Adjusted RMV values due to additional market analysis. RCW



























# National Flood Hazard Layer FIRMette



SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

## Legend

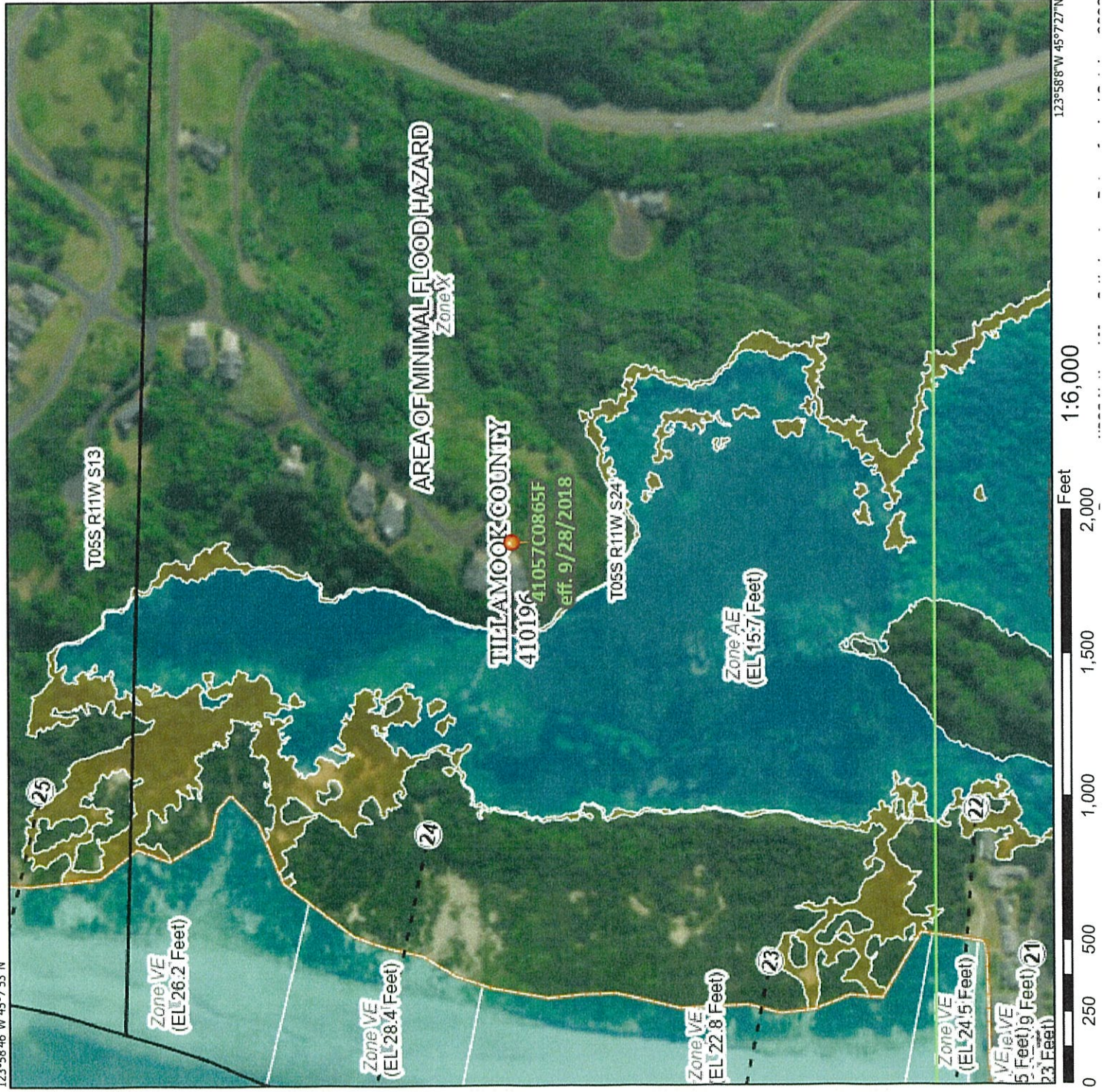
	Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
	With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
	Regulatory Floodway
	0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
	Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
	Area with Reduced Flood Risk due to Levee. See NOTES. <i>Zone X</i>
	Area with Flood Risk due to Levee <i>Zone D</i>
	NO SCREEN
	Area of Minimal Flood Hazard <i>Zone X</i>
	Effective LOMRs
	Area of Undetermined Flood Hazard <i>Zone</i>
	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
	Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Transect
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
	Digital Data Available
	No Digital Data Available
	Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/23/2023 at 6:05 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

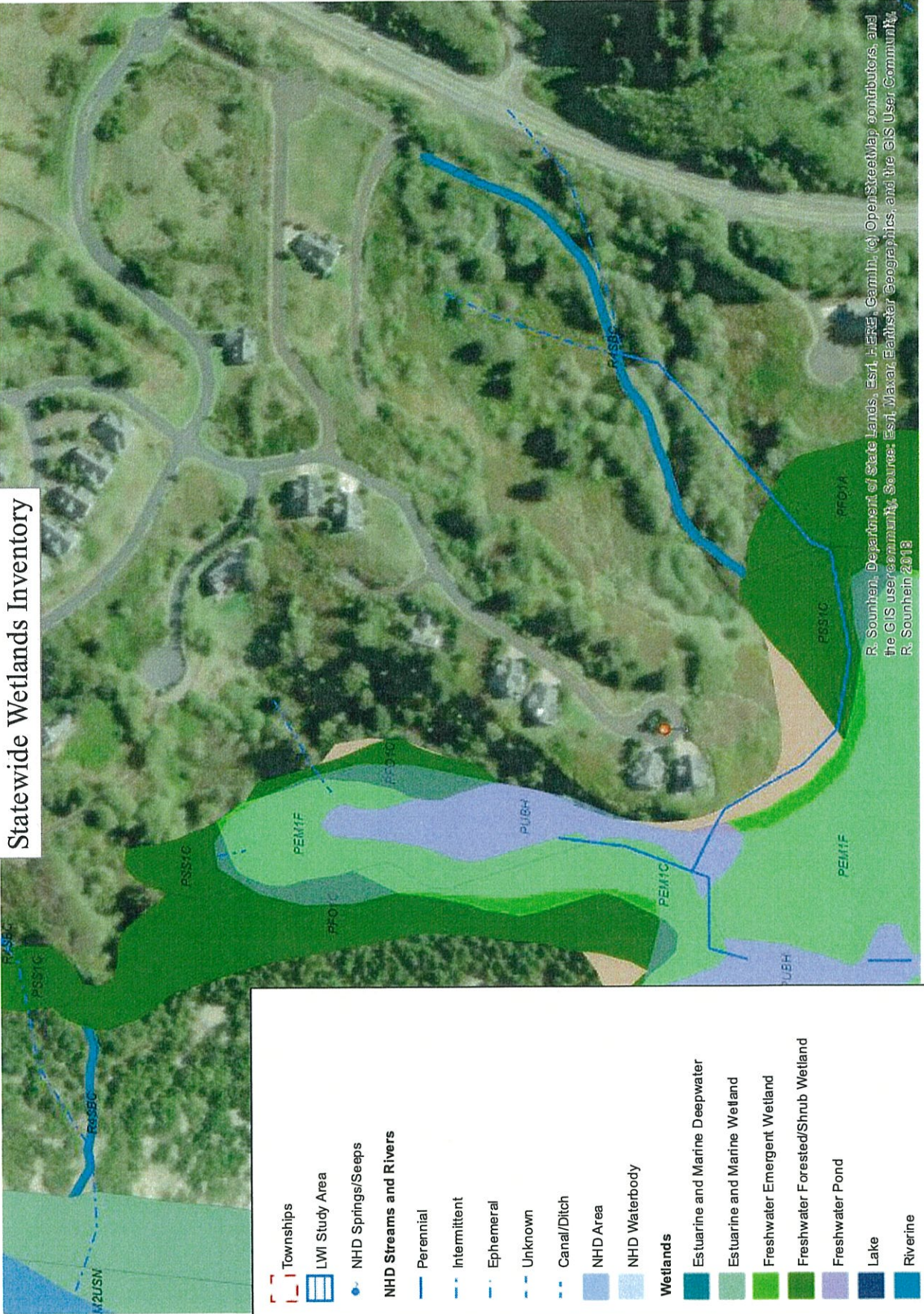


123°58'46"W 45°7'53"N

123°58'8"W 45°7'27"N



# Statewide Wetlands Inventory



R. Sounther, Department of State Lands, Esri, F. ERÉ, Camlin, (c) OpenStreetMap contributors, and the GIS user community. Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, R. Sounther 2013

	Townships
	LWI Study Area
	NHD Springs/Seeps
<b>NHD Streams and Rivers</b>	
	Perennial
	Intermittent
	Ephemeral
	Unknown
	Canal/Ditch
	NHD Area
	NHD Waterbody
<b>Wetlands</b>	
	Estuarine and Marine Deepwater
	Estuarine and Marine Wetland
	Freshwater Emergent Wetland
	Freshwater Forested/Shrub Wetland
	Freshwater Pond
	Lake
	Riverine
	SWI Predominantly Hydric Soil Map Units
	SWI Agate-Winlo Soils



The Statewide Wetlands Inventory (SWI) represents the best data available at the time this map was published and is updated as new data becomes available. In all cases, actual field conditions determine the presence, absence and boundaries of wetlands and water (such as creeks and ponds). An onsite investigation by a wetland professional can verify actual field conditions.

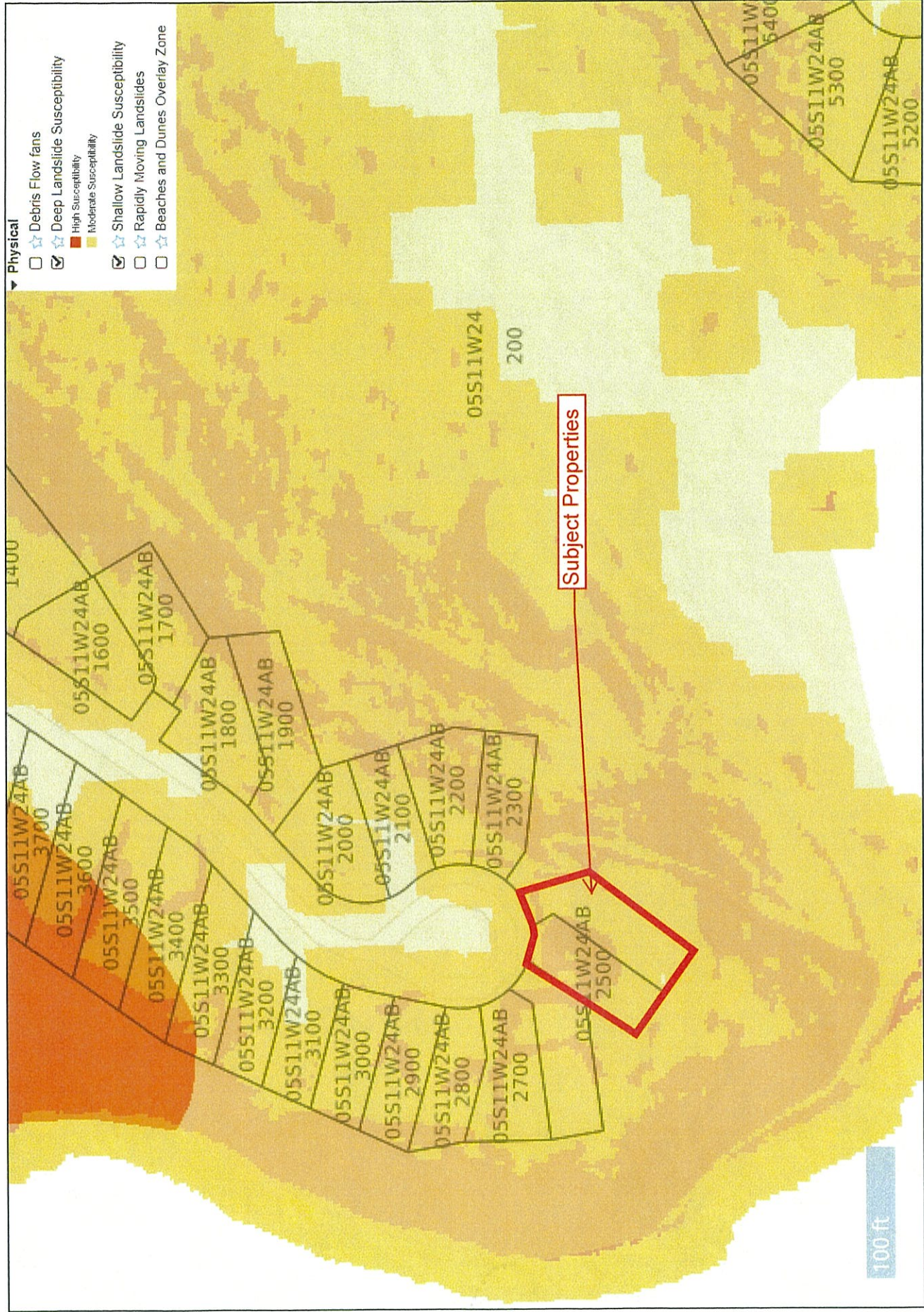
Date: 5/23/2023



Slab of Oregon  
 Department of State Lands  
 775 Summer Street, NE, S.B. 100  
 Salem, OR, 97301-3279  
 (503) 948-5700



# Hazard Map

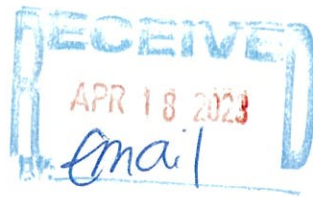


**Disclaimer:** The spatial information hosted at this website was derived from a variety of sources. Care was taken in the creation of these themes, but they are provided "as is." The state of Oregon, or any of the data providers cannot accept any responsibility for errors, omissions, or positional accuracy in the digital data or underlying records. There are no warranties, expressed or implied, including the warranty of merchantability or fitness for a particular purpose, accompanying any of these products. However, notification of any errors would be appreciated. The data are clearly not intended to indicate the authoritative location of property boundaries, the precise shape or contour of the earth or the precise location of fixed works of humans.



# **EXHIBIT B**





# SHAINSKY RESIDENCE

## SINGLE-FAMILY RESIDENCE

### CONDITIONAL USE PERMIT APPLICATION

LOT 24 & 25 - TAX LOT #2400 & 2500  
MAP T5S, R11W, SECTION 14



17 APRIL, 2023

 capriarchitecture

541.961.0503 info@capriarchitecture.com



# APPLICATION FORM





## PLANNING APPLICATION

**Applicant**  (Check Box if Same as Property Owner)

**Dustin Capri**  
 Name: **(Capri Architecture)** Phone: 541-961-0503  
 Address: 747 SW 13th Street  
 City: **Newport** State: **OR** Zip: **97365**  
 Email: **dustin@capriarchitecture.com**

### Property Owner

Name: **Michael & Janice Shainsky** Phone: 503-319-5700  
 Address: 4125 SW 48th Place  
 City: **Portland** State: **OR** Zip: **97221**  
 Email: **mikeshainsky@gmail.com**

OFFICE USE ONLY	
Date Stamp	
<input type="checkbox"/> Approved	<input checked="" type="checkbox"/> Denied
Received by: <b>MT</b>	
Receipt #:	
Fees: <b>2,100</b>	
Permit No: <b>851-23-00018-PLNG</b>	

Request: **See Attached Memorandum**

### Type II

- Farm/Forest Review
- Conditional Use Review
- Variance
- Exception to Resource or Riparian Setback
- Nonconforming Review (Major or Minor)
- Development Permit Review for Estuary Development
- Non-farm dwelling in Farm Zone
- Fore-dune Grading Permit Review
- Neskowin Coastal Hazards Area

### Type III

- Appeal of Director's Decision
- Extension of Time
- Detailed Hazard Report
- Conditional Use (As deemed by Director)
- Ordinance Amendment
- Map Amendment
- Goal Exception

### Type IV

- Appeal of Planning Commission Decision
- Ordinance Amendment
- Large-Scale Zoning Map Amendment
- Plan and/or Code Text Amendment

### Location:

Site Address: **Lots 24 & 25 Sahhali South**

Map Number:	<b>T5S</b>	<b>R11W</b>	<b>14</b>	<b>2400 &amp; 2500</b>
	Township	Range	Section	Tax Lot(s)

Clerk's Instrument #: \_\_\_\_\_

### Authorization

This permit application does not assure permit approval. The applicant and/or property owner shall be responsible for obtaining any other necessary federal, state, and local permits. The applicant verifies that the information submitted is complete, accurate, and consistent with other information submitted with this application.

\_\_\_\_\_  
 Property Owner Signature (Required)

4/16/2023

Date

\_\_\_\_\_  
 Applicant Signature

17 APRIL 2023

Date



April 17<sup>th</sup>, 2023

Tillamook County Planning Commission  
1510-B Third Street  
Tillamook, OR 97141  
503-842-3408

We are writing this letter to formally submit a Conditional Use Permit (CUP) Application to Tillamook County for consideration of a single-family home construction on Lots 24 and 25 in the Sahhali South Planned Unit Development. Please note the subject property is Tax Lot 2400 and 2500, Map T5S, R11W, Section 14. We are representing our clients, Mike and Janice Shainsky, who are the property owners of these tax lots.

Per the conditions of Tillamook County Land Use Ordinance (TCLUO) Section 3.520 Planned Development Overlay (PD); "Building permits in a planned development shall be issued only on the basis of the approved plan. Any changes in the approved plan shall be submitted to the Planning Commission for approval in accordance with the procedures for approval of a conditional use request."

These parcels as prescribed in the Planned Development Overlay required a Front/Rear setback of 10-feet, Side setbacks of 10-/0-feet and were designed to have attached dwellings with one dwelling per lot or a townhome approach. It is the intent of our clients to reduce the PD density and construct a single family residence on lot 24 and lot 25. Additionally, the TCLUO Section 4.110: Exceptions to Yard Setback Requirements are being requested as a part of this application, including eaves extending into the setback and the deck extension. Additionally, landscape boulders, concrete steps and a front entry deck, with associated handrails, are planned to be placed within the setback for safety and a clear driveway access.

Per TCLUO Section 6.040, criteria 4 and 6 discuss alterations of the character of the surrounding area and the adequacy of public facilities and services. The HOA has reviewed the design and it is confirmed to fit into the character of the surrounding area. Additionally, the Planned Development Overlay, TCLUO Section 3.520(3)(b) discusses considerations for traffic, streets, utilities, and drainage facilities which have been addressed through the HOA review process. The ARB unanimously approved the project during their meeting on Thursday, April 13<sup>th</sup>.

We hope this letter assists the Planning Commission in their review of Mike and Janice's new home in Sahhali South. Please feel free to call me if you have any questions.

Sincerely,

  
Dustin Capri, AIA, NCARB, LEED AP ND  
Principal - Capri Architecture, LLC  
dustin@capriarchitecture.com  
541.961.0503



Shainsky Residence





# Sahhali South



*The sun always shines on Sahhali*

**Draft submitted by applicant for consideration of the ARB**

July 12  
~~June ---~~, 2022

Melissa Jenck, Planner  
Tillamook County  
201 Laurel Avenue  
Tillamook, OR 97141

Re: Lots 24 & 25 of Sahhali South

Dear Melissa;

This letter is issued by the Architectural Review Board (“ARB”) of the Sahhali South Homeowners Association to help inform your decision regarding a development approval request for lots 24 and 25 of Sahhali South.

The Covenants, Conditions and Restrictions (“CC&Rs”) of Sahhali South were recorded February 20, 2007 in Tillamook County as document number 2007-001308. Section 10.1.4 of the CC&Rs states “An Owner may combine lots, subject to the approval of the Architectural Review Board,” and further states, “Any Owner, upon compliance with the requirements of all applicable zoning, building and land use laws, regulations and ordinances, and the architectural requirements of the Declaration and any rules and regulations of the Association, may construct (reconstruct or replace) one Living Unit on two or more lots.”

In consideration of the above, the ARB of the Sahhali South Homeowners Association affirms that the combining of two or more lots within Sahhali South into a single lot for the purpose of constructing a single-family home is permitted under the governing documents of the Homeowners Association. The Architectural Review Board approves the combination of lots 24 and 25 of Sahhali South.

Sincerely,

Architectural Review Board -- Sahhali South Homeowners Association

DocuSigned by:  
  
by: Richard D. Boyles  
0E93708E067340D...

DocuSigned by:  
  
by: Boyce Heidenreich  
727BD1D4C0164A7

by: Tony Ryan



# EXTERIOR RENDERINGS



# SHAINSKY RESIDENCE

CONDITIONAL USE PERMIT SUBMITTAL - 17 APRIL 2023

capriarchitecture

541.961.0503 info@capriarchitecture.com



SOUTH PERSPECTIVE VIEW



# SHAINSKY RESIDENCE

CONDITIONAL USE PERMIT SUBMITTAL - 17 APRIL 2023

capriarchitecture

541.961.0503 info@capriarchitecture.com



WEST PERSPECTIVE VIEW



# SHAINSKY RESIDENCE

ARB DESIGN SUBMITTAL - 13 APRIL 2023

capriarchitecture

341.961.0503 info@capriarchitecture.com



EAST PERSPECTIVE VIEW

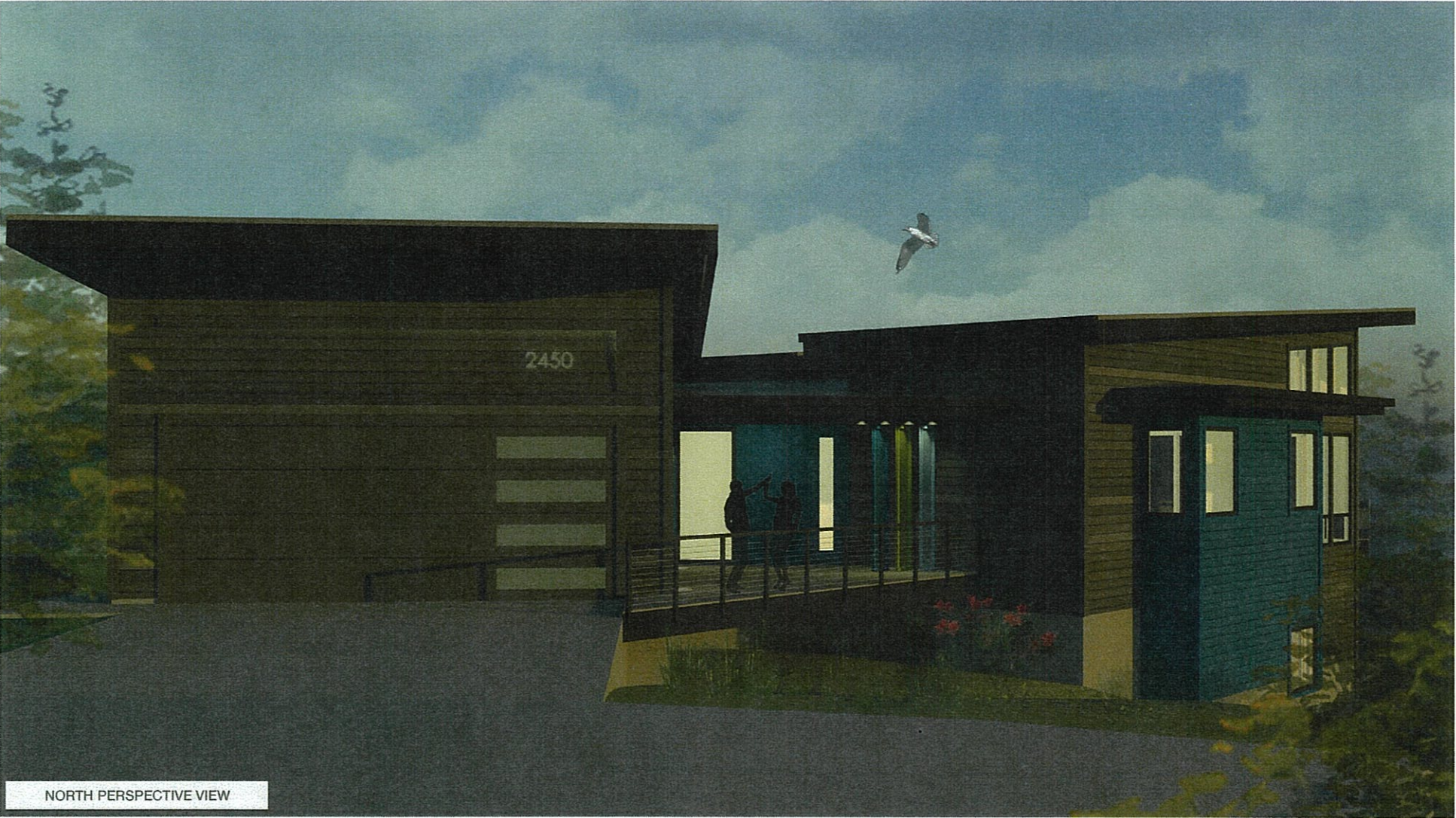


# SHAINSKY RESIDENCE

CONDITIONAL USE PERMIT SUBMITTAL - 17 APRIL 2023

capriarchitecture

341.961.0503 info@capriarchitecture.com



NORTH PERSPECTIVE VIEW

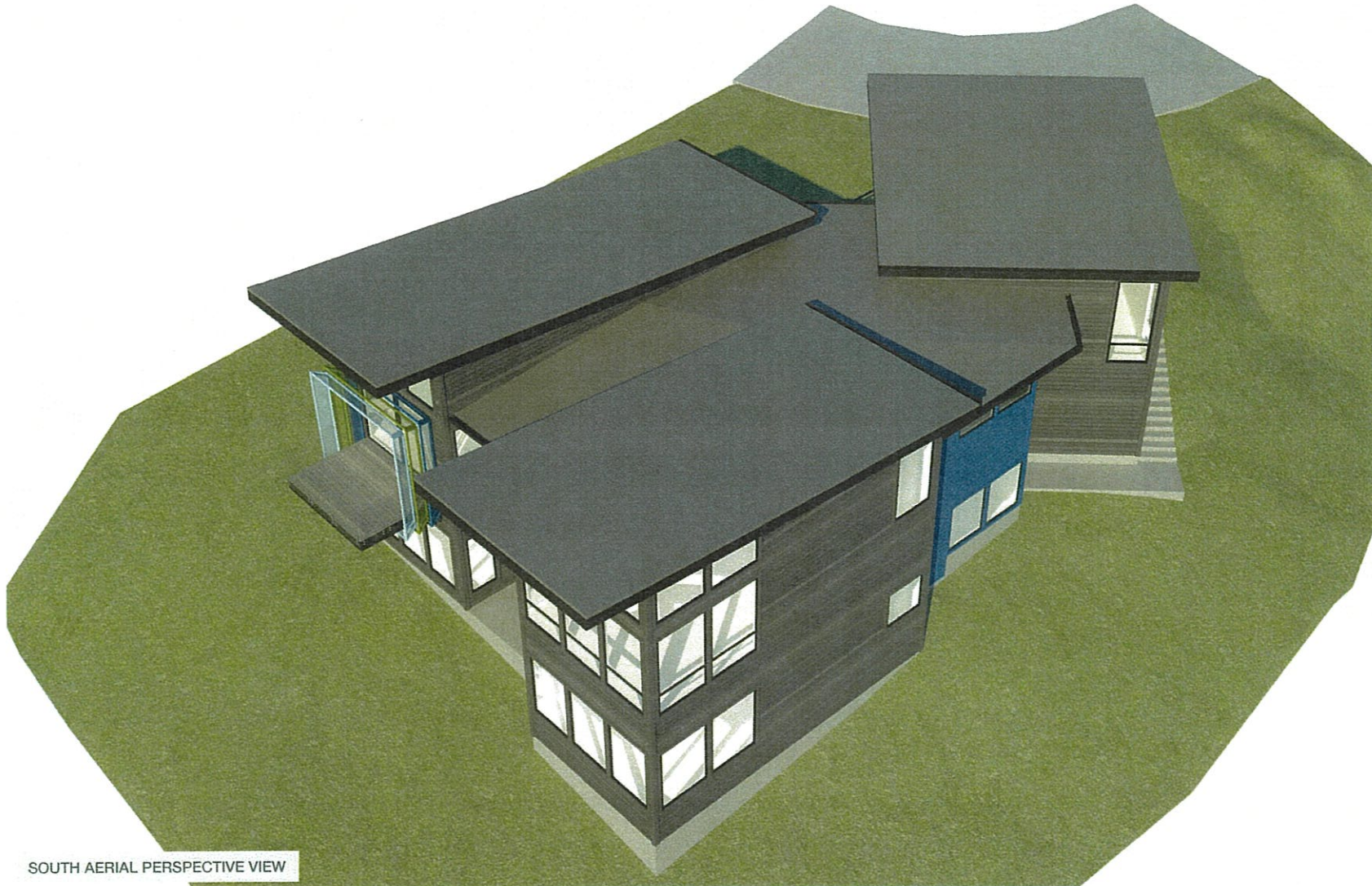


# SHAINSKY RESIDENCE

CONDITIONAL USE PERMIT SUBMITTAL - 17 APRIL 2023

capriarchitecture

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SOUTH AERIAL PERSPECTIVE VIEW



# SHAINSKY RESIDENCE

CONDITIONAL USE PERMIT SUBMITTAL - 17 APRIL 2023

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NORTHWEST PERSPECTIVE VIEW

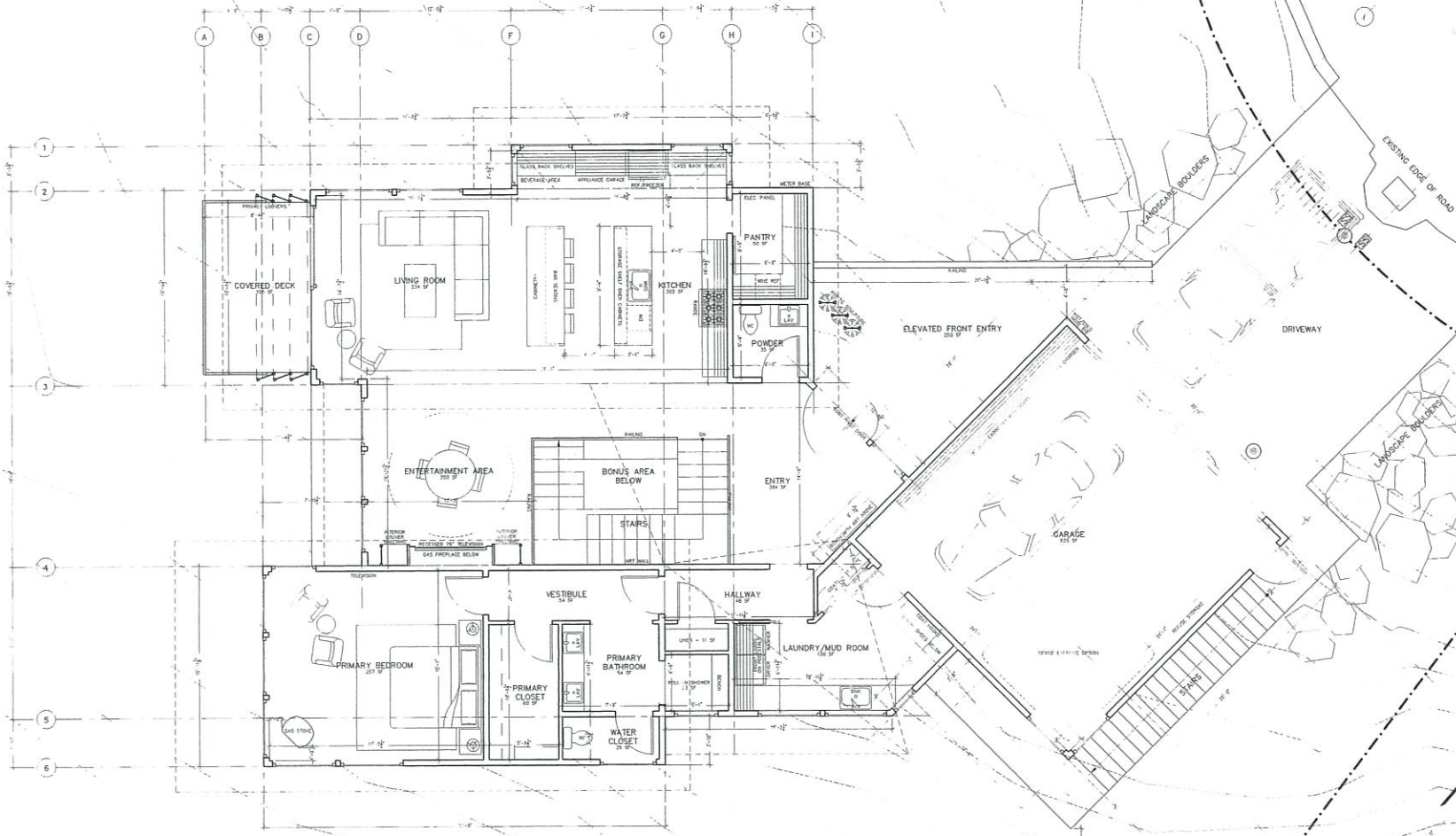


# ARCHITECTURAL DRAWINGS









**1 LEVEL 1 FLOOR PLAN**  
**A3-1 LIVING - 2,030SF, 625SF GARAGE AND PATIO/DECK - 355SF**

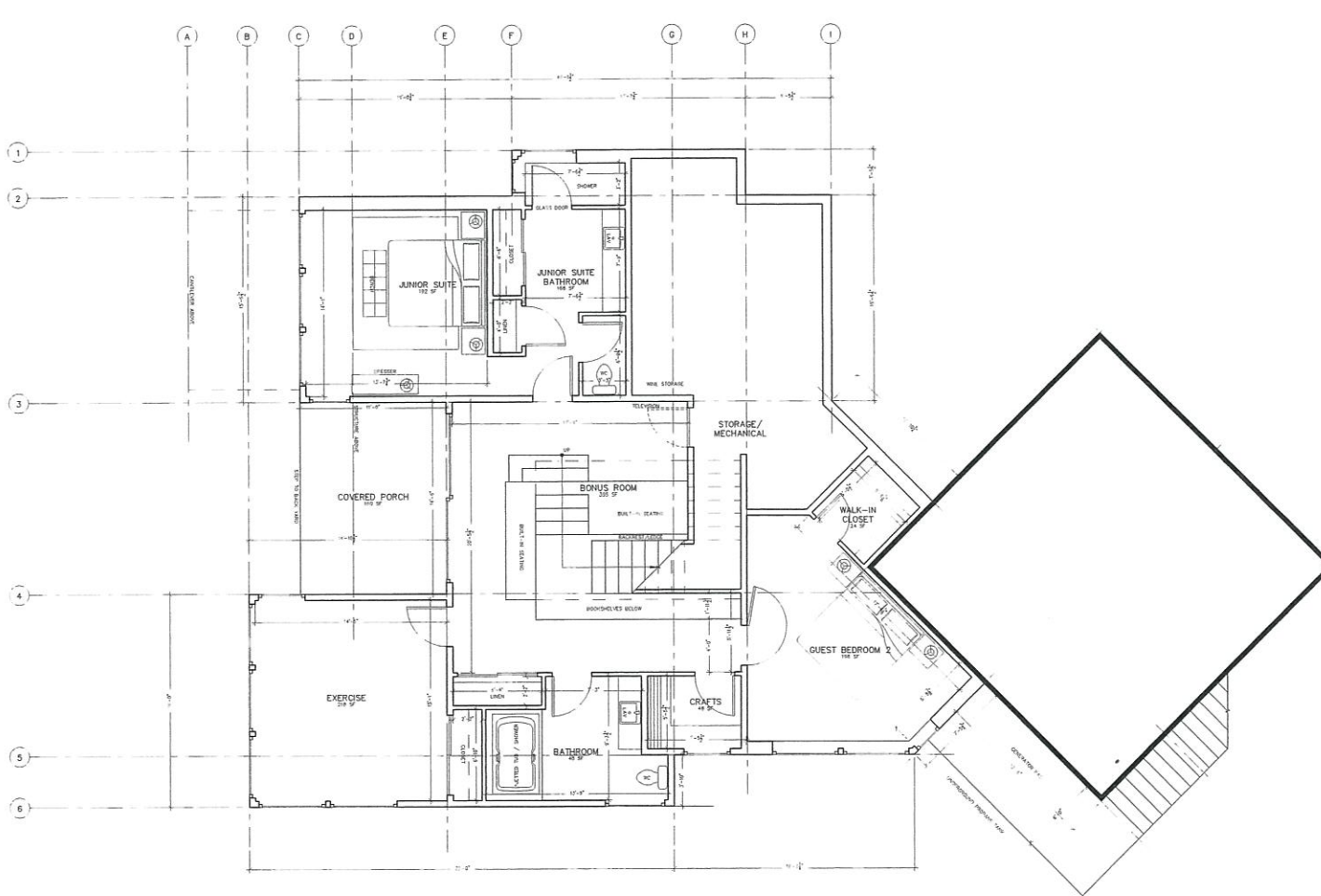


**SHAINSKY RESIDENCE**  
 SAHHALI SOUTH, OREGON

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 441.991.0503 info@capriarchitecture.com

SCALE: 1/4" = 1'-0"  
 DATE: 04/17/2023  
 ARCHITECT: Dustin J. Capri  
 PROJECT MANAGER:  
 DRAWN BY: Dustin J. Capri  
 CHECKED BY: Dustin J. Capri





1 BASEMENT FLOOR PLAN  
 A3-2 LIVING - 1,722SF AND PATIO/DECK - 160SF



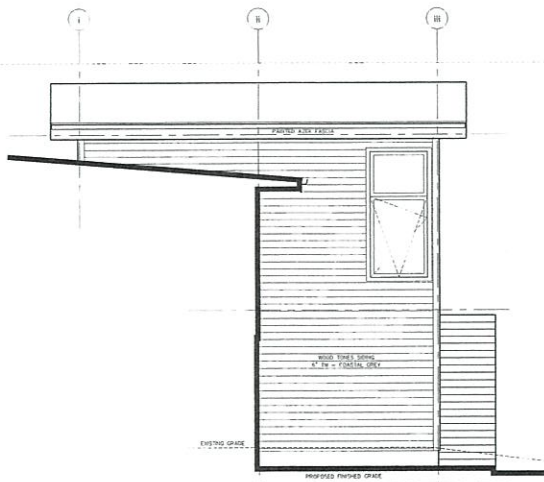
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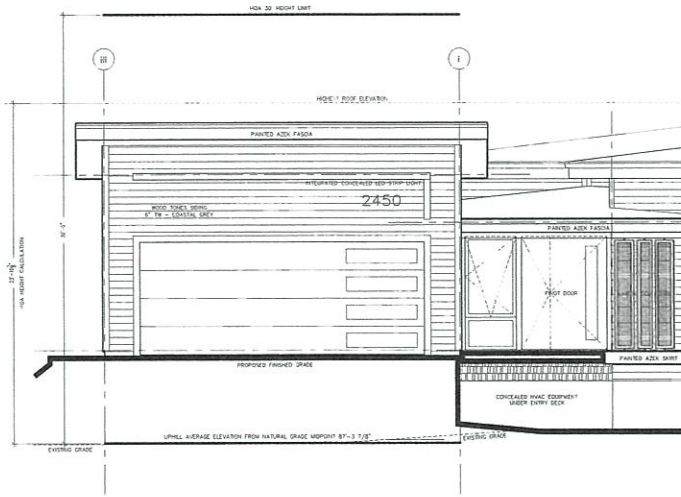
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 DATE: 04/17/2023  
 ARCHITECT: Dustin J. Capri  
 PROJECT MANAGER:  
 DRAWN BY: Dustin J. Capri  
 CHECKED BY: Dustin J. Capri

**A3-2**

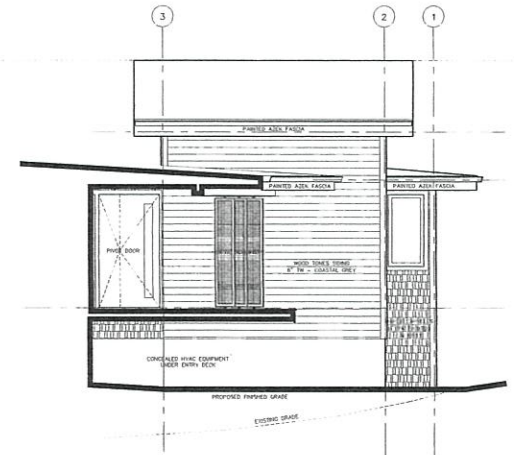




1 SOUTH PARTIAL EXTERIOR ELEVATION - GARAGE  
A6-1



2 NORTH EXTERIOR ELEVATION - UPHILL ELEVATION (HEIGHT CALCULATION)  
A6-1



3 NORTHEAST PARTIAL EXTERIOR ELEVATION  
A6-1



**SHAINSKY  
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SCALE: 1/4" = 1'-0"

DATE: 04/17/2023

ARCHITECT: Dustin J. Capri

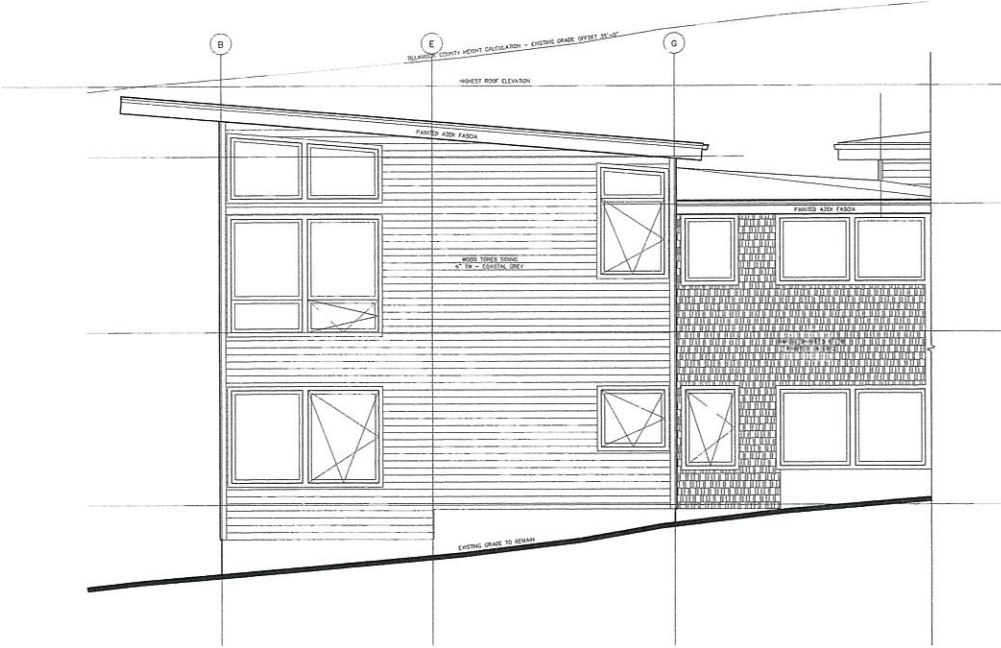
PROJECT MANAGER:

DRAWN By: Dustin J. Capri

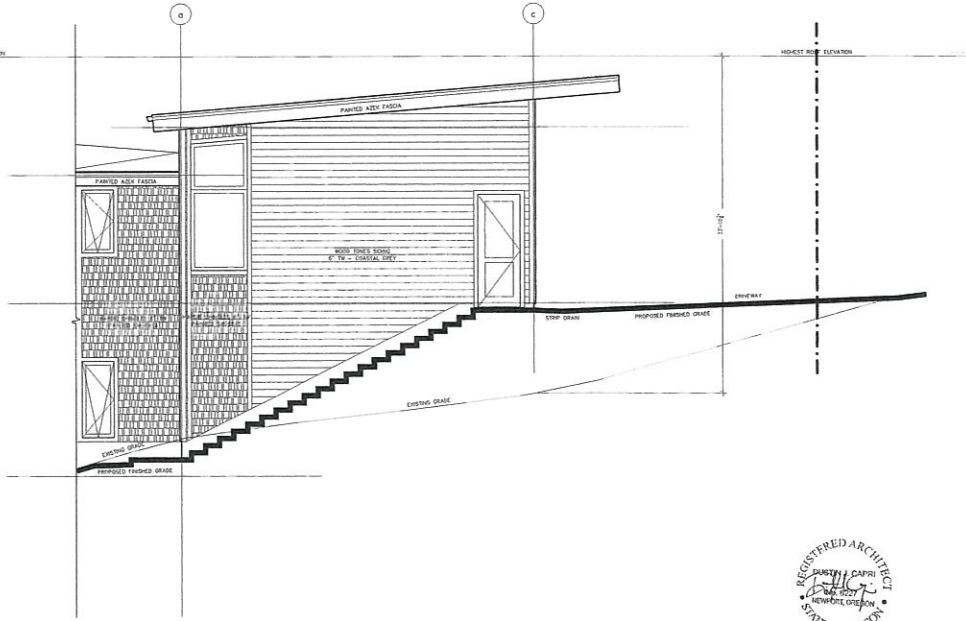
Checked By: Dustin J. Capri

**A6-1**





1  
A6-2 **SOUTHEAST EXTERIOR ELEVATION - SOUTH PORTION**



2  
A6-2 **EAST EXTERIOR ELEVATION - NORTH PORTION**



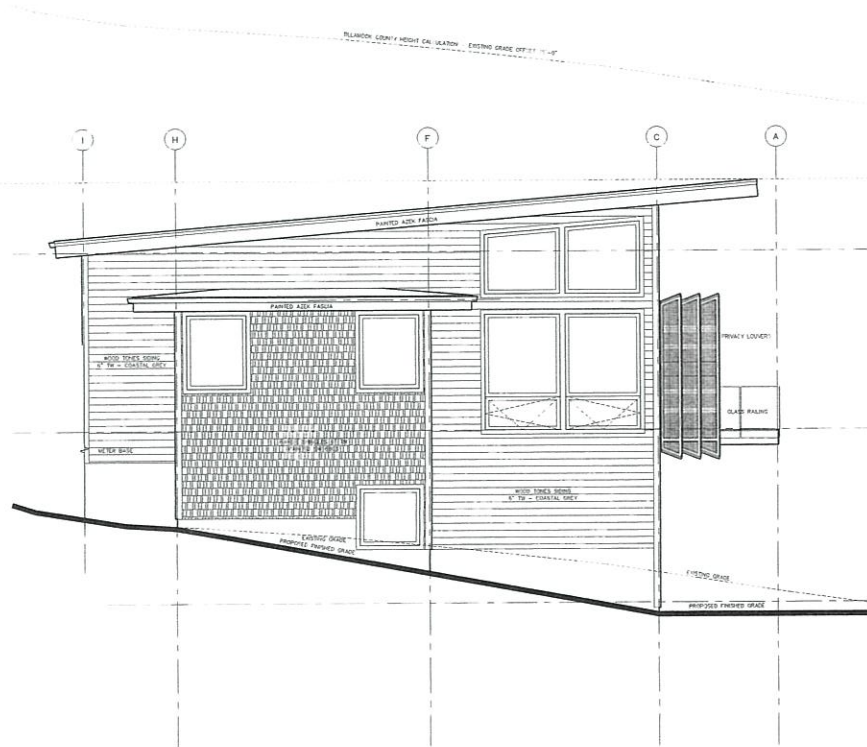
**SHAINSKY  
RESIDENCE**  
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441.961.0503 info@capriarchitecture.com

SCALE: 1/4" = 1'-0"  
DATE: 04/17/2023  
ARCHITECT: Dustin J. Capri  
PROJECT MANAGER:  
DRAWN BY: Dustin J. Capri  
Checked by: Dustin J. Capri

**A6-2**





1 NORTHWEST EXTERIOR ELEVATION  
A6-3



2 SOUTHWEST EXTERIOR ELEVATION  
A6-3



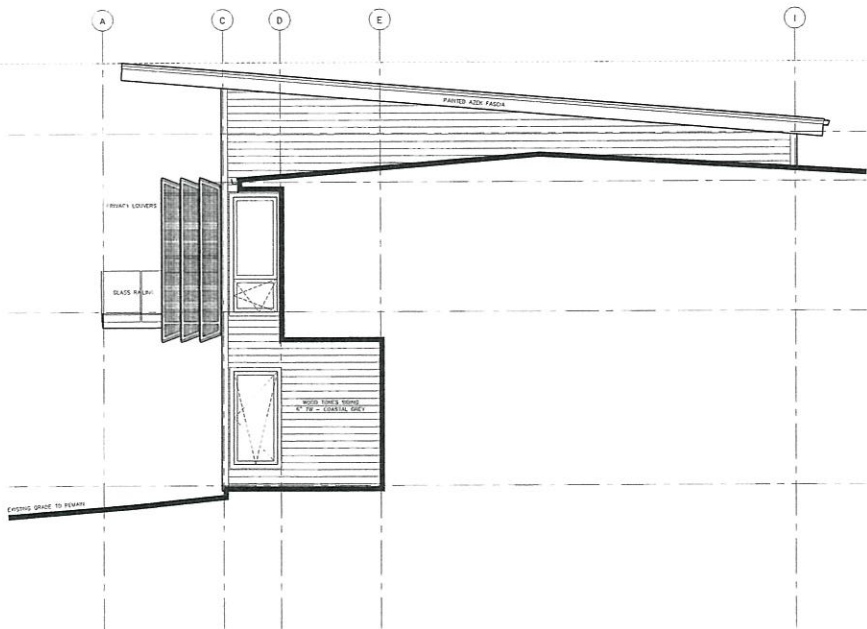
**SHAINSKY  
RESIDENCE**  
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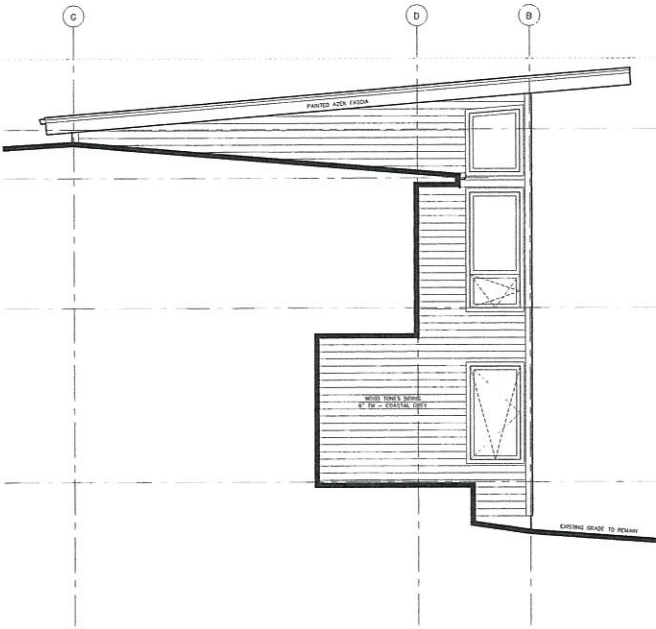
SCALE: 1/4" = 1'-0"  
DATE: 04/17/2023  
ARCHITECT: Dustin J. Capri  
PROJECT MANAGER:  
DRAWN BY: Dustin J. Capri  
Checked By: Dustin J. Capri

**A6-3**





1 SOUTHEAST PARTIAL EXTERIOR ELEVATION - WEST  
A6-4



2 NORTHWEST PARTIAL EXTERIOR ELEVATION - EAST  
A6-4



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RESIDENCE**  
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SCALE: 1/4" = 1'-0"  
DATE: 04/17/2023  
ARCHITECT: Dustin J. Capri  
PROJECT MANAGER:  
DRAWN By: Dustin J. Capri  
Checked By: Dustin J. Capri

**A6-4**



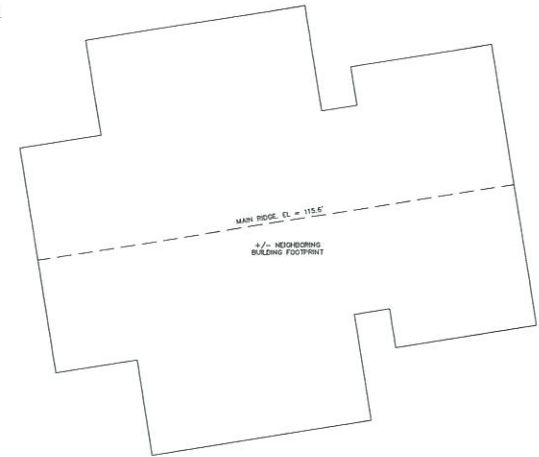
**BASIS OF BEARING**  
 THE LINE BETWEEN FOUND MONUMENTS (32) AND (33) BEARS  
 SOUTH 35°31'11" WEST, THE RECORD VALUE FROM MAP C-552,  
 TILLAMOOK COUNTY SURVEY RECORDS.

**LEGEND**

- ⊛ INDICATES MONUMENT FOUND AS NOTED HEREON, HELD FOR CONTROL.
- ( ) INDICATES RECORD VALUE FROM MAP C-552, TILLAMOOK COUNTY SURVEY RECORDS.
- NO ( ) INDICATES MEASURED VALUE.

CURVE TABLE				
SURVEY	RADIUS	INTERPT	BEEL	CH. LENGTH
(C1)	55.00'	26.23'	27°20'39"	583.4213'E
(C1)	55.00'	26.23'	27°19'14"	583.4828'E
(C2)	55.00'	26.23'	27°20'39"	1088.370'E
(C2)	55.00'	26.23'	27°36'24"	1088.4123'E

**NOTES**  
 THIS MAP DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE SUBJECT  
 PROPERTIES DESCRIBED AS LOTS 24 & 25, SAKHALI SOUTH. THE EXTENSIVE  
 BOUNDARY WAS LAD OUT AT BY HOLDING FOUND ORIGINAL MONUMENTS AS  
 SHOWN HEREON.  
 THE PURPOSE OF THIS MAP IS TO SHOW TOPOGRAPHIC FEATURES ON THE  
 SUBJECT PROPERTY AS WELL AS THE APPROXIMATE LOCATION OF THE  
 NEIGHBORING HOUSE TO THE WEST AND THE CENTER OF THE TRAIL TO THE  
 EAST. FIELD WORK FOR THIS SURVEY WAS COMPLETED ON AUGUST 16, 2022.  
 ELEVATIONS ON THIS MAP ARE BASED ON NAVD 1988.



**MONUMENT NOTES**

- (31) FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "H&J ASSOC INC" 0.2' BELOW GROUND, HELD FOR POSITION. SEE MAP C-552, TILLAMOOK COUNTY SURVEY RECORDS. ELEVATION ON CAP = 93.29'
- (32) FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "H&J ASSOC INC" FLUSH IN GROUND, HELD FOR POSITION. SEE MAP C-552, TILLAMOOK COUNTY SURVEY RECORDS. ELEVATION ON CAP = 87.52'
- (33) FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "H&J ASSOC INC" FLUSH IN GROUND, HELD FOR POSITION. SEE MAP C-552, TILLAMOOK COUNTY SURVEY RECORDS. ELEVATION ON CAP = 80.87'
- (34) FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "H&J ASSOC INC" 0.1' ABOVE GROUND, HELD FOR POSITION. SEE MAP C-552, TILLAMOOK COUNTY SURVEY RECORDS. ELEVATION ON CAP = 77.96'
- (35) FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "H&J ASSOC INC" 0.2' ABOVE GROUND, HELD FOR POSITION. SEE MAP C-552, TILLAMOOK COUNTY SURVEY RECORDS. ELEVATION ON CAP = 71.85'
- (36) FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "H&J ASSOC INC" 0.1' ABOVE GROUND, HELD FOR POSITION. SEE MAP C-552, TILLAMOOK COUNTY SURVEY RECORDS. ELEVATION ON CAP = 87.84'
- (37) FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "H&J ASSOC INC" 0.1' BELOW GROUND, HELD FOR POSITION. SEE MAP C-552, TILLAMOOK COUNTY SURVEY RECORDS. ELEVATION ON CAP = 93.79'
- (38) FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "H&J ASSOC INC" FLUSH IN GROUND, HELD FOR POSITION. SEE MAP C-552, TILLAMOOK COUNTY SURVEY RECORDS. ELEVATION ON CAP = 93.20'

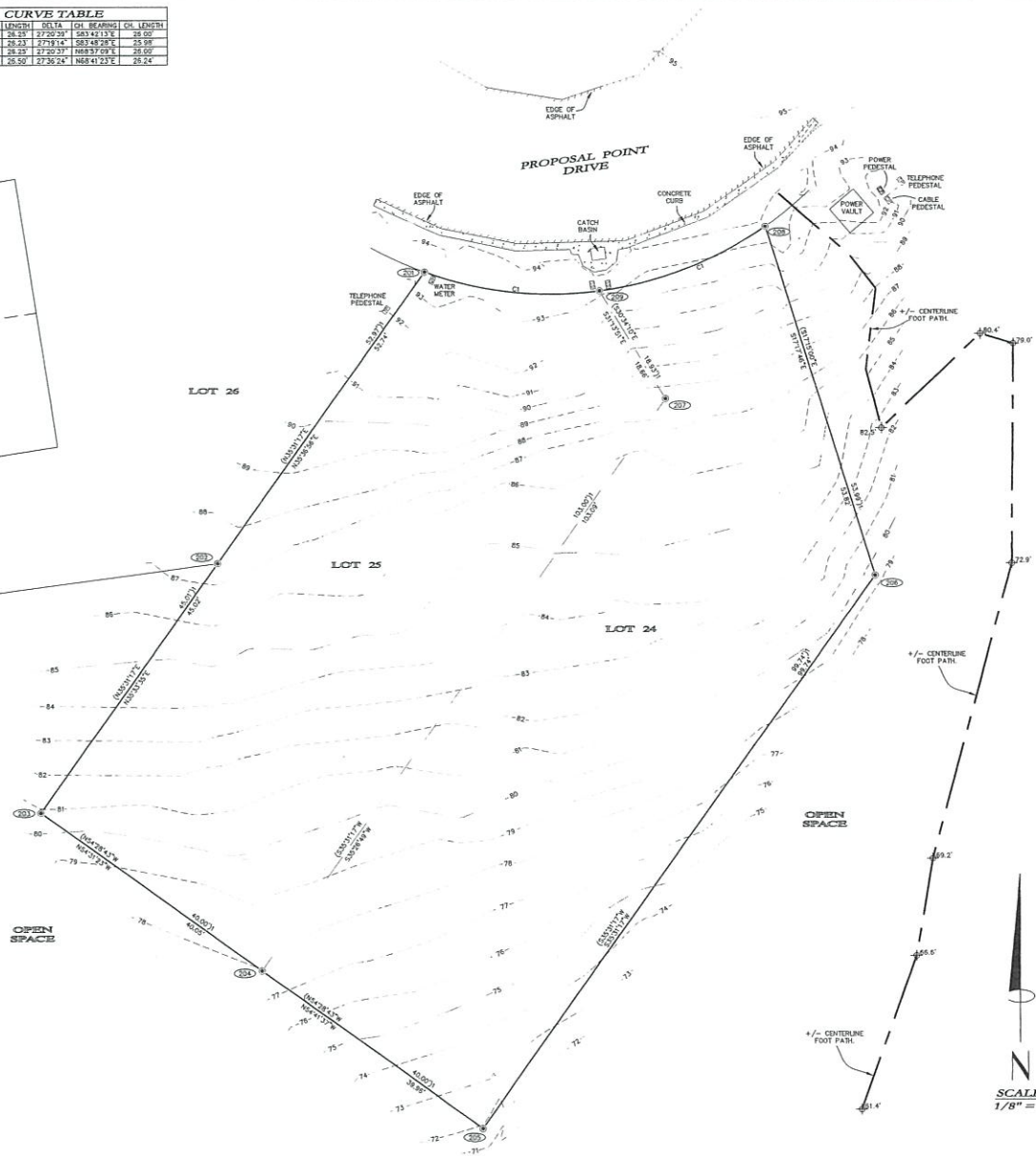
REGISTERED  
 PROFESSIONAL  
 LAND SURVEYOR  
*Paul M. White*  
 ORREGON  
 APRIL 26, 2014  
 ERICK M. WHITE  
 79672  
 REVIEWED 6/30/2024

TOPOGRAPHIC SURVEY FOR:  
**MIKE & JANICE  
 SHAINSKY**  
 LOTS 24 & 25  
 SAKHALI  
 SOUTH  
 NW 1/4, NE 1/4, SECTION 24, T5S, R11W, W.M.  
 TILLAMOOK COUNTY  
 AUGUST 17, 2022

**ONION PEAK  
 DESIGN**

11450 EVERGREEN WAY  
 NEHALEM, OR 97131  
 (503) 440-4423

"SHAIN" #A2202  
 SHAINSKY2208-10WS





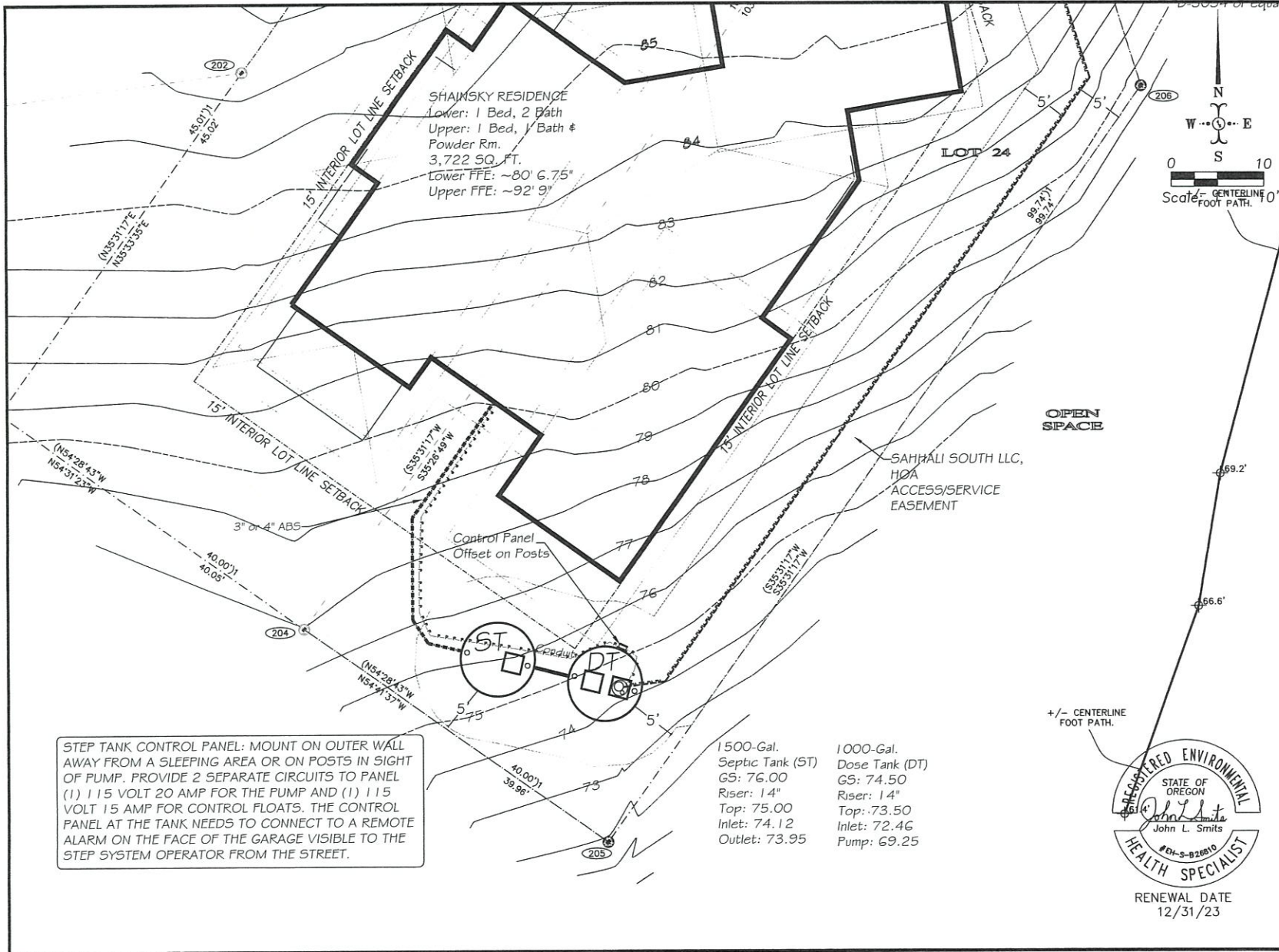
# STEP DESIGN











STEP TANK CONTROL PANEL: MOUNT ON OUTER WALL AWAY FROM A SLEEPING AREA OR ON POSTS IN SIGHT OF PUMP. PROVIDE 2 SEPARATE CIRCUITS TO PANEL (1) 115 VOLT 20 AMP FOR THE PUMP AND (1) 115 VOLT 15 AMP FOR CONTROL FLOATS. THE CONTROL PANEL AT THE TANK NEEDS TO CONNECT TO A REMOTE ALARM ON THE FACE OF THE GARAGE VISIBLE TO THE STEP SYSTEM OPERATOR FROM THE STREET.

1500-Gal. Septic Tank (ST) GS: 76.00 Riser: 14" Top: 75.00 Inlet: 74.12 Outlet: 73.95	1000-Gal. Dose Tank (DT) GS: 74.50 Riser: 14" Top: 73.50 Inlet: 72.46 Pump: 69.25
---	---



**Smits & Associates, Inc.**  
 Environmental Consultants • Designers  
 990 Newport Avenue  
 Imbler, OR 97841-9706  
 John L. Smits, REHS  
 Ph. (541) 537-0392  
 Email: john.smits.associates@gmail.com

SEPTIC & DOSE TANK AREA

SHAINSKY RESIDENCE  
 PROPOSAL POINT DR.  
 T.5S., R.11W., Sec. 24AB TL 400 & 2500  
 Tillamook County

SHEET  
**San 3**  
 of 11

April 14, 2023





# EXTERIOR MATERIAL SPECIFICATIONS

# SHAINSKY RESIDENCE

CONDITIONAL USE PERMIT SUBMITTAL - 17 APRIL 2023

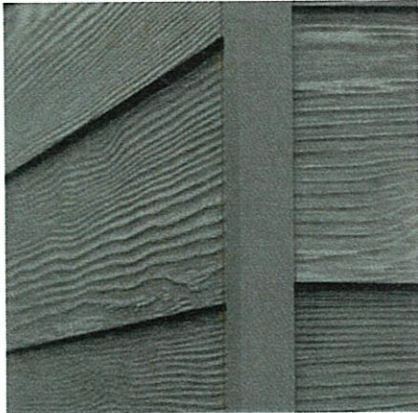
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511 961 0503 | info@capriarchitecture.com

## EXTERIOR ENVELOPE MATERIALS

### PRIMARY LAP SIDING

WOOD TONES RUSTIC - COASTAL GRAY



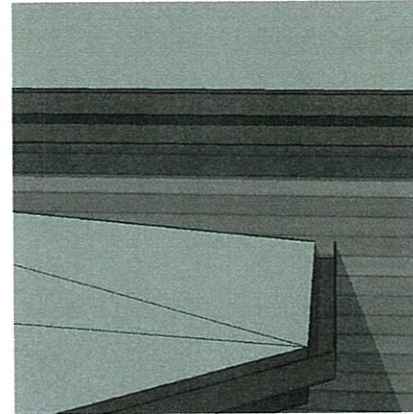
### PRIMARY SHINGLE SIDING

JAMES HARDIE - PAINTED SW 6803



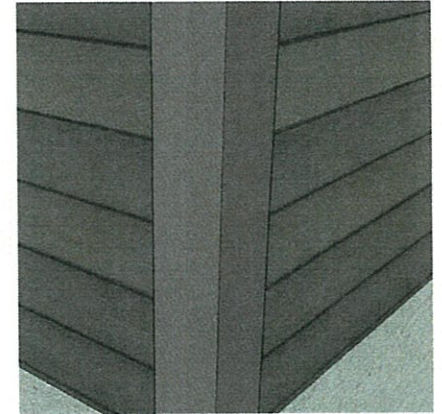
### EXTERIOR TRIM & GUTTERS

AZEK & ALUMINUM - COASTAL GRAY COLOR



### EXTERIOR CORNER BOARDS

AZEK - COASTAL GRAY COLOR



### ROOFING PRIMARY

80 MIL MEMBRANE ROOFING - CHARCOAL



### DECK RAILING - NORTH

CHARCOAL ALUMINUM STAINLESS CABLE



### DECK RAILING - SOUTH

GLASS RAILING



### WINDOWS & DOORS

INNOTECH VINYL - BLACK COLOR





# SHAINSKY RESIDENCE

CONDITIONAL USE PERMIT SUBMITTAL - 17 APRIL 2023

## EXTERIOR ENVELOPE MATERIALS

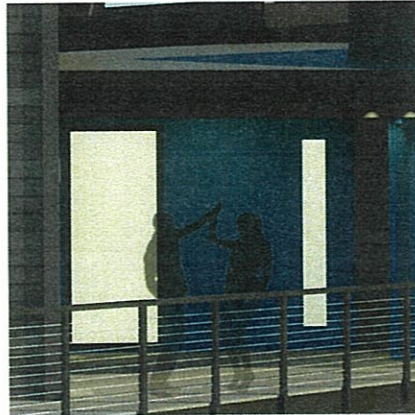
### DRIVEWAY

STAMPED & STAINED LIGHT GRAY COLOR



### FRONT DOOR

PIVOT DOOR COMPANY - PAINTED SW 6803



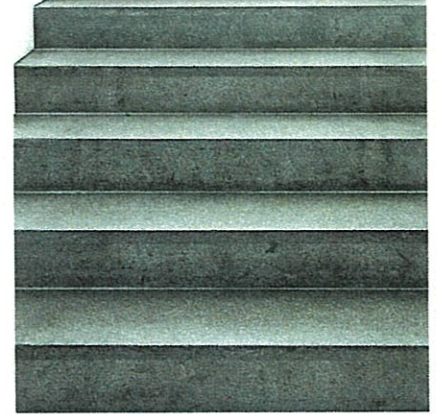
### GARAGE DOOR

CUSTOM DOOR - COASTAL GRAY COLOR



### CONCRETE STEPS

BRUSHED CONCRETE STAIRS



# **GEOTECHNICAL REPORT & CONFORMANCE LETTER**





**OREGON**  
**GEOTECHNICAL**  
**SERVICES**

7385 SW Alden Street  
Portland, OR 97223

PDX (503) 245-5555

**To:** Mike and Janice Shainsky  
4125 SW 48<sup>th</sup> Place  
Portland, OR 97221

**Date:** November 14, 2021

**Re:** Geologic Hazards Analysis and Geotechnical Report, Lots 24 and 25, Sahhali South, Tax Lots 2400 and 2500, T5S, R11W, Section 24, Neskowin, Oregon.

Introduction

This report was prepared by David E. Reich, Certified Engineering Geologist (Oregon License # E1227) of Oregon Geotechnical Services, 7385 SW Alden Street, Portland, Oregon, for Mike and Janice Shainsky, potential buyers of the lot/lots. Field work was performed on October 13 and November 8, 2021, By David E. Reich, of Oregon Geotechnical Services, 7385 SW Alden Street, Portland, OR 97223.

The analysis and recommendations in this report assume that the site will be developed with either a single family home or homes, or a double-occupancy family dwelling (ie one building straddling the mutual property boundary to provide two separate but attached halves), using conventional methods of construction. Development plans should conform, and construction activities should be performed at the site, according to the information and recommendations presented in this report. Based on the conditions of the site as observed during this investigation, it is my opinion that the site can be safely developed as proposed, using conventional methods of construction. However, this investigation and report presents information that should be incorporated into the final design and construction plans for this site to ensure long term stability and structural integrity. Oregon Geotechnical Services can provide inspection services at the time of construction to verify compliance with the recommendations in this report. Development plans and design revisions should be submitted to our office for review to verify compliance with the recommendations in this report.



### Location

The subject property, Lots 24 and 25, Tax Lots 2400 and 2500, Sahhali South, T5S, R11W, Section 24, Neskowin, Oregon, is located north of Neskowin, Oregon, west off of Hwy. 101 (northeast quarter of Section 24, T5S, R11W of the Willamette Meridian, Tillamook County, Oregon). See Location and Vicinity Maps, attached.

The lot lies to the south of the cul-de-sac at the end of Proposal Point Drive, on moderately sloping ground of the southwest trending ridge that makes up this western portion of the subdivision. The elevation of the property ranges from approximately 68 to 86 feet above sea level. The proposed building location is anticipated to be generally centered on the common line between the two lots, at an approximate elevation of 75 to 85 feet elevation as shown on the attached Plan and Cross Section AA' and BB'. The recommendations provided in this report apply to a building site in the location shown on the attached Plan and Cross Section AA' and BB'.

### Background, Purpose and Scope-of-Services

This investigation was performed to address the Development Guidelines of Tillamook County (Tillamook County Land Use Planning Guidelines, Section 4.070) regarding the development of coastal property. These guidelines require geotechnical evaluation addressing mapped geologic hazards and slope stability concerns associated with proposed coastal development. This work includes evaluation of existing conditions on the subject property, and assessment of the potential impact of proposed site development, and to provide recommendations for the proposed development on the subject property.

The purpose of this investigation was to:

- 1.) Assess the geologic and soil characteristics of the site for construction and engineering purposes, and to provide information to facilitate foundation design and construction; and
- 2.) To provide a geotechnical evaluation addressing mapped geologic hazards associated with proposed coastal development, including: faulting, slope stability, coastal erosion/recession, tsunami hazard assessment, and soil stability for foundation placement.

The effect of the ordinances in Oregon has been to establish guidelines that require standard building restrictions (setbacks, etc) and/or an evaluation by a qualified engineering geologist.





This investigation was performed to evaluate the existing conditions on the subject property, and to assess the potential impact of proposed site development, and to provide recommendations for development and construction activities on the subject property.

The geologic hazards that are apparent at the site, or described and mapped in DOGAMI Bulletin 74, Environmental Geology of the Coastal Region of Tillamook and Clatsop Cos., Oregon, (1972), or other references reviewed in the preparation of this report, are discussed below.

This report presents the results of site and soils investigation and field reconnaissance at the above referenced property. The investigation involved geologic research, from published sources, and field investigation and survey of the subject property. Aerial photographs from 1939 to 2017 were analyzed, and cross-sections were developed at the site in order to provide a basis for the geologic interpretation. Soil inspection was performed to determine surface and subsurface distribution of rock and soil units and obtain samples for field classification according to the Unified Soil and Unified Rock Classification Systems, in order to define material characteristics. Subsurface information was obtained from existing exposures on the subject property, and excavated test pits or borings advanced with hand tools such as hand augers and relative density probes. Cross sections were measured with cloth tape, clinometer and Brunton compass, or derived from site topo if available. Stationing is relative only to the site. Elevations are estimated based on site survey and USGS Topographic Quadrangle, and GPS elevations measured at the site.

This report provides additional soil and rock information, setback recommendations, and general construction recommendations for the proposed project.

### Field Methods

Field procedures consist of field classification of soil and rock materials according to the Unified Soil and Rock classification systems (USCS and URCS), determination of vertical distribution of soil and rock materials using excavated test pits and the relative density probe, and designation of rock and soil units according to the engineering characteristics of the site materials. Other field procedures include site survey work and measurement of field developed cross-sections, in situ soil strength testing, and soil sampling.

Field classification of soil is used to determine material properties including approximate gradation, dilatancy, dry strength and toughness. This is performed according to the standard practice for description and identification of soils according to the American Society for Testing



and Materials (ASTM) method D2488-84. Using visual examination and simple manual tests, this practice gives standardized criteria and procedures for describing and identifying soils. The soil can be given an identification by assigning a group of symbol(s) and a name. In addition to describing the soil, the descriptive information required in this practice can be used to aid in the evaluation of its significant properties for engineering use. The “Annual Book of ASTM Standards, 2016” contains descriptions of procedures in detail.

Estimates of unconfined compressive strength (UCS) are generated by measuring the resistance of the soil to a driven steel rod. A pocket penetrometer and/or standardized hand tests using ones thumb or finger are also used to estimate soil strength. Ultimate allowable bearing capacities were generated for the proposed structure based on soil classification, and using results obtained from these tests. Allowable bearing capacities are reported in Pounds per Square Foot (PSF).

Field developed geologic cross sections are surveyed on representative slopes to model the previous, current, and potential stability conditions, and create a visual portrayal that provides an interpretation of site-specific subsurface conditions at the time of investigation. Field surveys are performed using a Brunton compass, measuring tape, and clinometer or digital level to obtain a topographic model of the site, locate surface features and geotechnical exploration sites, and provide ties to the existing house and roads. This survey work is accurate within the site, but should not be used as a means to establish legal boundaries. Site topography for cross sections may also be developed from existing instrument surveys of the site. The topographic model is used to make an initial assessment of subsurface site conditions, and to provide a basis for the geotechnical conclusions and recommendations.

### Existing Site Conditions

#### Climate

The climate of the north-central Oregon Coast is Temperate Marine with cool winters and warm summers. Based on data from the nearest climate station in Otis, Oregon, the area receives approximately 98 inches of precipitation annually (nearly 100% of which occurs as rain) with periodic extremes exceeding 130 inches. The majority of the precipitation falls between November and March. The average annual air temperature is 41.7 degrees Fahrenheit for the coldest month (December) and 70.8 degrees Fahrenheit for the warmest month (August) (OCS 2016 Station: OTIS 2 NE, OREGON (356366); period of record 1948-2014).

#### General Geology and Soils

According to current geologic mapping by Walker and MacLeod (1991), Wells et al. (1983),





Schlicker et al., (1972), the subject property is underlain by Eocene to Oligocene marine sedimentary rocks. Most mapping lumps the area with the typical formations consisting of thin-bedded to massive tuffaceous siltstone and claystone, with subordinate amounts of sandstone and shale. Basaltic sandstone and conglomerate are described as present at the base of the section in places. The Wells et al. (1983) mapping differentiates the project area as underlain by the "Basaltic Sandstone of Pacific City", and describes the unit as "massive to thick-bedded, gritty to coarse-grained basaltic sandstone...", which unconformably overlies the "Basalt of Cascade Head", that Wells et al describe as "fine grained basalt and flow breccia, basaltic andesite ...thin bedded tuff and lapilli tuff interbedded with some flows. This field investigation indicates that coarse grained basaltic sandstone, not siltstone or claystone, is the dominant rock-type in the area, and that the volcanic rock of the Basalt of Cascade Head is exposed at the lower elevations of the southern portion of the subdivision. Lots 24 and 25 lie within the area of Basaltic Sandstone of Pacific City. No bedding directions were discernable in the exposures at this site, however, exposures to the north of the site are mapped as having a dip of 10 to 20 degrees in the northwest direction. Local uplift associated with subduction of the Juan de Fuca plate along the Cascadia Subduction Zone is responsible for bringing these marine or near shore sediments to their present elevation.

The site soils were originally mapped as have been mapped by the Soil Conservation Service as NkG - Neskowin silty clay loam, 40 to 60 percent slope (USDA, 1964). Following is the descriptions based on the 1964 Soil Survey description:

The Neskowin soil series consists of dark-colored, well-drained, relatively shallow soils on hills adjacent to the coast. According to the Soil Survey, Neskowin soils form from decomposition of basaltic parent material. The thin soil profile is a result of the relative resistance to weathering of the basaltic parent material. As described by the Soil Survey, the topsoil layer consists of approximately 1 foot of very dark brown to almost black, friable, granular silty clay loam underlain by approximately 1 foot of dark reddish brown silty clay loam. Depth to weathered igneous bedrock is approximately 2 feet. Runoff for the Neskowin soils is rated rapid, and the hazard of erosion is severe. Site observations are generally consistent with this SCS soil mapping of the site.

The site soils have been re-mapped by the Soil Conservation Service in 2006 as Unit 181E - Neskowin - Salander medial loams 30 to 60 percent slopes. Following are the descriptions of the two components, taken directly from the NRCS Website:

Component: Neskowin (60%)

The Neskowin component makes up 60 percent of the map unit. Slopes are 30 to 60 percent. This



component is on hillslopes, mountain slopes. The parent material consists of colluvium derived from igneous rock. Depth to a root restrictive layer, bedrock, lithic, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 75 percent. Non-irrigated land capability classification is 6e. This soil does not meet hydric criteria.

#### Component: Salander (25%)

The Salander component makes up 25 percent of the map unit. Slopes are 30 to 60 percent. This component is on mountain slopes, hillslopes. The parent material consists of colluvium derived from igneous rock. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 75 percent. Non-irrigated land capability classification is 6e. This soil does not meet hydric criteria.

#### Surface Features

The subject property is located north of Neskowin in the Sakhali South Subdivision. The subdivision property is west off of old U.S. Hwy. 101 south of the existing Sakhali Shores at Neskowin Subdivision (northeast quarter of Section 24, T5S, R11W of the Willamette Meridian, Tillamook County, Oregon). The subject parcel and building site is located on moderately sloping ground of the southwest trending ridge that makes up this western portion of the subdivision. The elevation of the property ranges from approximately 68 to 86 feet above sea level. The western and southwest portion of the property is approximately 80 to 100 feet from the top of a high (approximately 60 to 80ft) stable (bedrock) bluff overlooking the lakes, dunes and Pacific Ocean to the southwest. The area to the southeast of the parcel slopes steeply but more gradually down to the beach elevation. The proposed building site is centrally located on the common boundary between the two lots, or alternatively, individual buildings could be constructed on each lot, as long as the foundation construction adhere to the recommendations provided in this report. There are no natural drainage or waterways on the property. The site is generally and overall a planar to convex slope, that will disperse runoff and subsurface flow toward the southeast. The shallow soils and relatively impervious bedrock, will increase the propensity to concentrate limited amounts of local runoff. In addition, the generally shallow soils will also contribute to rapid runoff rates in the building area. The site topography in the building area is approximately as shown on the attached plan and cross-section. It can be anticipated that





the area will be subject to high amounts of runoff and soil moisture during the wet months from November through March. There are no outstanding natural features were noted in the building area.

No prior modification of the property, except for the present day road building activities, and placement of utilities on the slopes adjacent to the road were noted on the site. There are no natural drainages or waterways on the subject property. There is a lake at the base of the bluff to the west of the parcel, and a large stretch of stabilized dunes separates the base of the bluffs from the beach to the west.

Survey control was based on found pins, and property-line locations were estimated using the provided lot maps, roads, and adjacent properties. The anticipated building site will occupy the central portion of the lots, accessed by a driveway off of Proposal Point Drive. The footings will require excavation into the southeast facing slopes of the ridge. The slopes in the anticipated building area are between approximately 6% to 20% toward the south and southeast. Please refer to the Site Plan and Cross Sections.

#### Subsurface Features

Three test pits were excavated on the parcels and existing exposures and previously excavated test pits on adjacent parcels provided excellent exposures of the soil profile for sample collection and for field classification of materials. The test pits were excavated in the anticipated building area, and existing cuts and exposures were logged at locations as shown of the attached site plan and cross section (detailed Boring Logs attached in appendix). In addition, adjacent bluffs, ditches, roadcuts, and other nearby exposures were inspected and available geologic literature and in-house data was reviewed, in order to describe the following generalized sub-surface profile.

Based on the subsurface soil sampling, the general soil profile at the *building* site consists of approximately 12 to 18 inches of loose, dark brown sandy silt surficial soils (ML/MH), underlain by less than 1 feet of friable decomposed basaltic sandstone, which grades over approximately 6 to 12 inches as blocky weathered sandstone to fresh, very dense basaltic sandstone at approximately 3 feet below the surface. The soil profile is described in detail as follows and illustrated in attached soil logs (Appendix)

#### Topsoil (ML Sandy Silt)

The topsoil consists of soft, moist to damp, dark brown sandy silt with low plasticity (ML/MH) fines, containing a significant amount of organic material, mostly in the form of roots and organic debris, and rock fragments. This material is found to a depth of approximately 2 to 4



inches in the main building area. The topsoil is relatively weak and should be removed from footing areas and should be stockpiled for later use in landscaping areas.

Surficial Soil (SM Silty Sand)

The surficial soils consist of loose to medium dense, damp to moist, dark brown silty sand (SM) with low plasticity (ML) fines. This material is found from a depth of approximately 2 to 4 inches, to the top of weathered rock, at a depth of 1.0 to 1.5 ft below the surface. This soil contains increasingly abundant rock fragments with depth. This soil is also relatively weak and should be removed from areas of the foundation, and is rich enough in organics to be stockpiled for later use in landscaping areas.

Completely to Partly Decomposed Rock (Highly Fractured Basaltic Sandstone) The material underneath the surficial soil consists of completely decomposed (friable) basaltic sandstone that remolds to a tan, sandy silt with small, hard platy rock fragments. Most areas are heavily oxidized to an orangish red color. This friable rock unit is less than 1 foot thick.

Bedding planes are generally incoherent in this generally massive sandstone. In the weathered material, there are open planes of separation (discontinuities), oriented sub-parallel to the slope. Unstable slope conditions can occur when the bedding planes have a similar dip direction to the slope, and a dip angle that daylight into the slope, and yet is steeper than the strength and frictional resistance of discontinuities within the rock units. Due to the high potential for failure along the discontinuities, foundations (for building and attachments) should not be placed in the upper highly-weathered friable, platy sandstone (see Foundation section in the General Construction Recommendation section of this report).

Partly Decomposed Rock to Stained State (Fractured Basaltic Sandstone) Weathered sandstone is underlain by coarse grained basaltic sandstone of limited degrees of alteration. The platy and friable completely decomposed sandstone is underlain by 6" to 1 foot of dense, blocky sandstone grading from brown to gray with increasing depth. This blocky material is very hard, and will provide excellent bearing capacity (2000 PSF), and excellent lateral stability for footings. Below the blocky layer (approximately 3 feet) the sandstone becomes increasingly hard and less fractured, and will require mechanical splitting for deeper excavations.

Bedding planes are generally incoherent in this generally massive (lacking discontinuities) sandstone. Regional dips for the unit appears to be to the NW at 10 - 20 degrees. The regional





dip is not apparent in most exposures, and only vaguely apparent in some. The degree of alteration decreases and hardness increases with increasing depth. Less altered portions are darker gray. This dark gray material is very hard, and will provide excellent bearing capacity (>6000 PSF), and excellent lateral stability for footings keyed into the bedrock. Based on the results of our geologic literature review, this material extends to depths of many tens of feet.

#### Groundwater and Runoff

The catchment area above the property supplying groundwater recharge is very limited, and one can expect deep groundwater conditions, and limited available runoff. However, the dense bedrock will act as a barrier to the downward migration of water, and may create perched water tables at relatively shallow depths. During the winter and spring, groundwater seepage was noted exiting the cuts in the fractured bedrock at the base of the surficial soils, just above the transition into relatively unaltered rock material (no seepage was encountered during test pit excavation). Based on this information, the position of the deep water table is unknown, however one can expect that the surficial soils will, on a seasonal basis, develop perched watertable conditions within the upper soil (necessitating drainage around foundations). It must be kept in mind, however, that the exact position of the water table may fluctuate up or down several feet depending on the existing moisture conditions at the time of examination. The position of the water table can be expected to vary both on a season-to-season, and a year-to-year basis.

Runoff at the site will be limited due to the limited catchment area above the property, however, the moderate slopes, dense bedrock and shallow soils will increase the magnitude and the velocity of the runoff. In general, due to the generally planar to convex shape of the slopes, runoff that is not captured by the cuts and impervious surfaces will disperse around the property onto the natural slopes, without concentration into channels or streams. Rocky areas and cuts will have immediate response time, delivering runoff at high rates during storm events.

#### Geologic Hazards

Using the results of our field exploration, literature and geotechnical evaluation, we identified the following geologic hazards applicable to the site.

- Chronic Hazards - Slope stability, cliff erosion and coastal erosion (recession)
- Catastrophic Hazards, earthquake related phenomena, massive landsliding, flooding and Tsunamis



According to available sources while the low lying areas surrounding the project area have moderate coastal recession, ocean flooding, erosional bluff, and tsunami flooding hazards, there are no mapped geologic hazards on the subject property, or adjacent parcels.

#### Landslides and Slope Stability

According to available sources, there are no mapped geologic hazards (landslides, faulting, flooding, erosion, high groundwater, etc.) at the site (Schlicker et al., 1972), nor was any evidence for recent landslide activity or faulting documented during field investigation, or during air photo analysis. Observations made during air photo analysis show minimal amounts of recent mass wasting in the area. At the time of this investigation, we did not notice bent trees, scarps, crevices tension cracks in the ground surface, irregular toes, exposed surfaces of ruptures without vegetation, presence of distinct fast-growing vegetation, undrained depressions, etc., that are generally indicative of active slope movement.

Generally shallow soil depths, moderate slope (of the building area), significant bedrock exposure, the absence of fine sediments (clay/silt) within the bedrock, a lack of colluvial (landslide) deposits, modern or ancient, and the absence of morphologic features suggestive of landslide topography indicate that there is little threat from slope instability to the subject property.

In my opinion, conventional residential construction adhering to the recommendations provided in this report, will not affect the existing slope stability at the site. In my opinion, in the absence of large earth-shaking events, the potential for catastrophic or massive landslide failure is low to none, but such an occurrence cannot be completely ruled out in any hilly area, especially considering the fact that we are in a 20-year wet weather cycle which began in 1996. Therefore, the owner should be willing to take the risk of such an occurrence.

#### Cliff Erosion and Coastal Recession

Cliff erosion can occur due to episodic mass-wasting of the slope, and due to wind and rain impact during severe winter storms, or a combination thereof. Mass wasting represents most of the short-term erosion events, and wind and rain impact relates to long-term (chronic) erosion effects.

At the present time, there is no available coastal erosion mapping for Tillamook County. Coastal recession rates therefore had to be based on observations of the conditions at the site, and on





aerial photograph analysis conducted during this investigation. Due to the inland position of the property from the main shoreline, well behind the dunes, wave caused erosion of the property is not an issue at this time (i.e. no wave action at the base of the cliff).

Aerial photographs were analyzed following the site visit in order to determine if significant slope retreat has occurred over time and to aid in determining a site specific coastal recession rate. Photographs from 1939 through 2021 were viewed (physically and digitally). Recession rates can be estimated by visual estimation of recession based on the relative position and shapes of landforms and cultural landmarks at a given location. While precision measurements can be made and compared with other photo measurements, magnitudes of movement must be fairly large in order to be discernable, and this is a less quantitative but equally valuable approach. There are no observable effects of erosion at the site, either from wave activity (which, as mentioned, is not possible at the property), or from surface water or wind. The photo record suggests that this site is extremely stable.

Observations of the photographs show that the relative position of the sea-cliff edge, and bluff edge, with respect to fixed cultural landmarks and landforms remains relatively fixed through the photo interval. This suggests that little recession has occurred in this area of the coastline during the air photo record. It is also apparent from these photos that the general configuration of the bluff to the west of the subject property has also remained the same. In general, the aerial photography indicates that the large-scale topographic and vegetative features have remained relatively consistent throughout the years, and that coastal recession has not been an active process in this area.

#### Earthquake Related Phenomena

Earthquakes in the Pacific Northwest occur due to tectonic activity associated with the subduction of the Juan de Fuca Oceanic plate beneath the North American Continental plate. The Juan de Fuca plate is converging on and thrusting beneath the North American Continental plate along the Cascadia Subduction Zone (CSZ), which is situated offshore along Oregon coast causing earthquakes in the Oregon and Washington states. This convergence along CSZ is the source of three types of earthquakes in Western Oregon. These are (1) deep intraplate earthquakes originating in the Juan de Fuca plate, (2) large subduction zone-interface earthquakes that may occur during periodic slip along the interface between the Juan de Fuca and North American plates, and (3) shallow crustal earthquakes generated by faults.



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Available research indicates that there is a potential for a large subduction zone earthquake near Oregon coast. This narrow belt, which marks the Juan de Fuca and North American tectonic plate boundary, lies approximately 50 miles west and runs parallel to the present-day Oregon coastline. Recent studies have documented the occurrence of these massive earthquakes and their estimated recurrence interval of 350 to 500 years (see summaries provided by Atwater et al., 1995; Nelson et al., 1995), and have estimated that within the next 50 years, the probability of a great subduction zone earthquake approaching magnitude 9 is between 10 and 20 percent (Darienzo and Peterson, 1995). In order to interpret earthquake potential of the CSZ plate interface, geologic lines of evidence such as coastal subsidence, stratigraphic evidence for flooding associated with earthquakes, and turbidity in the ocean have been used. Based on the available geologic evidence, there is a sufficient scientific consensus to consider the CSZ plate interface as a potential earthquake source for Oregon coast. Based on our literature review, the estimated maximum magnitudes of CSZ interplate earthquakes are in the range of M8.0 to M9.0+. The estimated recurrence interval is 350 to 500 years, and the last major quake was thought to of occurred approximately 300 years ago.

Based on site geology, topography, and our preliminary evaluation, in our opinion, the site is susceptible to severe ground shaking and landsliding during an earthquake on the Oregon coast. Ground acceleration in excess of 0.4g may occur at the site. It should be noted that the majority of the Oregon coast is susceptible to similar hazards.

Effects of a major subduction zone earthquake on the Oregon Coast would be catastrophic. Research indicates that there is a potential for severe ground shaking, fault rupture and coseismic subsidence on the Oregon Coast. Additional effects of an earthquake of the predicted magnitudes would include massive landslides, soil liquefaction, tsunami and flooding. While in the past 150 years or so, there has been no “proof” of catastrophic earthquake damage on the Oregon coast, and additionally, no community or landowner on the Oregon coast can afford to “earthquake-proof” their structures in the short run, in our opinion, geologic hazard reports must discuss earthquake hazards in order to educate and familiarize landowners or communities with potential earthquake hazards for their areas.

#### Flooding and Tsunami

Available reports and maps, DOGAMI Bulletin 74, Environmental Geology of the Coastal Region of Tillamook and Clatsop Cos., Oregon, indicate that the site is not in an area subject to possible Ocean flooding or wave attack.





Tsunamis occur when an earthquake, volcanic eruption, and/or sub-seasurface landslide deforms the ocean seafloor. This deformation is transmitted to the sea surface, typically forming a series of tsunami waves. Waves may reach the Oregon coastline within hours or minutes after initial movement and seafloor deformation.

A recent study conducted by the State of Oregon Department of Geology and Mineral Industries has mapped the expected inundation area for tsunamis caused by a magnitude 8.8 to 8.9 undersea earthquake (Priest, 1995). The map that includes the subject property is the Neskowin quadrangle and Nestucca Bay Quadrangle (Map #0-95-23 & 24 of the Priest report). It shows the property near the margin of the area expected to be inundated by tidal waves during an event of this magnitude. The mapped tsunami flooding/inundation boundary is based on “interpretation of a numerical simulation of potential tsunami waves that could strike the coast should the offshore subduction zone fault system experience an earthquake approaching magnitude 9” (Priest, 1995). Predictions for wave height above MSL were simulated by three separate computer models.

For the subject property, located at approximately 45°08' north latitude, and an elevation of approximately 68 to 86 feet above MSL, the most extreme model predicted maximum wave height would reach an approximate elevation of 20 feet above MSL, in the immediate vicinity, and only as much as 35 feet in the area. These estimates place the subject property well above the area expected to be inundated by tidal waves accompanying a large magnitude event along the Oregon portion of the Cascadia Subduction Zone.

#### Seismic

Per State of Oregon Structural Specialty Code, the area of Neskowin, Oregon is in Seismic Zone 4, which correlates to a Seismic Zone Factor  $Z=0.4$ . Soil profile  $S_c$  appears appropriate for the site. Seismic design parameters can be obtained using the site coordinates and above information from online calculators, depending on the preferred reference document. Site coordinates are Latitude: 45.128 and Longitude -123.974. Seismic design parameter and other hazard information available at: <https://hazards.atcouncil.org/>

#### Summary Findings and Conclusions

Based on the conditions of the site as observed during this investigation, and the above geologic hazards analysis, it is my opinion that the site can be safely developed with either one single home, two individual structures, or a double occupancy family dwelling (ie one building



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straddling the mutual property boundary to provide two separate but attached halves). However, this investigation and report presents information that should be incorporated into the final design and construction plans for any design at this site to ensure long term stability and structural integrity of the development on the subject property, as well as limiting and or mitigating impact to surrounding properties. Oregon Geotechnical Services can provide inspection services at the time of construction to verify compliance with the recommendations in this report. Final development plans and any design revisions should be submitted to our office for review to verify compliance with the geotechnical recommendations in this report.

If developed according to generally accepted engineering and construction principles and practices, and the recommendations provided in this report, construction at this site should not present hazards to life, public and private property, and the natural environment.

An erosion control plan can be prepared by Oregon Geotechnical Services (once a development plan for the parcel has been prepared) to provide methods for limiting the release of sediment and sediment laden water from the site to protect the surrounding area from any adverse effects of the development during construction.

Temporary and permanent stabilization programs and the planned maintenance of new and existing vegetation is important in protecting the surrounding area from any adverse effects of the development during and after construction. A vegetation plan should be developed for the site and proposed development activities to provide guidelines for the protection of site vegetation during and after construction. Construction activities shall remove only the vegetation necessary to accommodate approved development on the parcel. The implementation of the Vegetation Plan and the construction, maintenance, replacement, and upgrading of these facilities is the responsibility of the applicant/contractor until all construction is completed and approved and vegetation/landscaping is established. The boundaries of the clearing limits shown on this plan shall be clearly flagged in the field prior to construction. During the construction period no disturbance beyond the flagged clearing limits shall be permitted. The flagging shall be maintained by the applicant/contractor for the duration of construction. Natural vegetation shall remain on all areas of the property not required for construction. Vegetation shall be placed as rapidly as possible after construction and site development. Seeding and re-vegetation shall be performed no later than Sept. 1, or concurrently with each phase of construction. All exposed soil shall be seed, revegetated and planted to mitigate erosion. Exposed soils areas can be mulched with straw other cover (bark chips), covered with jute-matting, or other stabilization





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product to prevent direct erosion of the soil, until the establishment of the vegetative cover. An appropriate fertilizer and regular watering during the dry months shall be used to speed the establishment of the vegetative cover. Native shrubs and trees shall be planted wherever possible to contribute to the long term revegetation and stability of the site.

Based on the conditions of the site as observed during this investigation, and the above geologic hazards analysis, it is my opinion that the site can be safely developed for a double occupancy family dwelling (ie one building straddling the mutual property boundary to provide two separate but attached halves). However, this investigation and report presents information that should be incorporated into the final design and construction plans for this site to ensure long term stability and structural integrity. Oregon Geotechnical Services can provide inspection services at the time of construction to verify compliance with the recommendations in this report. Final development plans and any design revisions should be submitted to our office for review to verify compliance with the geotechnical recommendations in this report.

According to available sources there are no mapped geologic hazards such as coastal recession, ocean flooding, erosional bluff, and tsunami flooding. Using the results of our field exploration, literature and geotechnical evaluation, we found that slope stability issues were the primary concern at the site. These include chronic problems associated with deep soils on steep slopes (that can be accommodated with appropriate foundation design and construction) and acute hazards associated with heavy rainfall and runoff, (that can be mitigated with appropriate runoff control and site drainage). In my opinion, conventional residential construction adhering to the recommendations provided in this report, will not affect the existing slope stability at the site.

In my opinion, in the absence of large earth-shaking events, the potential for catastrophic or massive landslide failure is low to none, but such an occurrence cannot be completely ruled out in any coastal hillside area, therefore, the owner should be willing to take the risk of such an occurrence.

#### General Construction Recommendations

Based on the results of our field exploration, soil evaluation, and geotechnical analyses, we believe the site is suitable for proposed residential development, provided following general construction and design recommendations are followed. The recommendations and



development standards provided in this report shall be followed in order that construction activities and site development protect the subject property and surrounding properties.

The following paragraphs provide only general recommendations. Variations in soil conditions may be encountered during construction. In order to permit correlation between soil exploration data and actual soil conditions encountered during construction, we recommend that a geotechnical engineer or engineering geologist (or their representative) be retained to perform inspections during construction and to provide specific recommendations for soils or foundation related phases of work.

According to the preliminary information provided to OGS, it is understood that this site is to be developed with a double occupancy family dwelling (ie one building straddling the mutual property boundary to provide two separate but attached halves), placed on the central portion of the lots. Road construction on the site appears to be limited to a short driveway extending off of Proposal Point Drive.

Future site development and design plans for construction at this site should be reviewed by Oregon Geotechnical Services staff for compliance with the recommendations provided in this report. Inspection of the exposed subgrade during site preparation and measurement of the actual placement of structures to verify soil and rock subgrade conditions should be performed by Oregon Geotechnical Services staff.

Construction activities shall remove only the vegetation necessary to accommodate approved development on the parcel. The boundaries of the clearing limits shown on this plan shall be clearly flagged in the field prior to construction. During the construction period no disturbance beyond the flagged clearing limits shall be permitted. Natural vegetation shall remain on all areas of the property not required for construction. Vegetation shall be placed as rapidly as possible after construction and site development. Seeding and re-vegetation shall be performed no later than Sept. 1, or concurrently with each phase of construction. All exposed soil shall be seed, revegetated and planted to mitigate erosion. Exposed soils areas can be mulched with straw other cover (bark chips), covered with jute-matting, or other stabilization product to prevent direct erosion of the soil, until the establishment of the vegetative cover. An appropriate fertilizer and regular watering during the dry months shall be used to speed the establishment of the vegetative cover. Native shrubs and trees shall be planted wherever possible to contribute to the long term revegetation and stability of the site.





#### Setback and Locations for Structures and Roads

According to the site base map, and discussions with the Client, the house is to be placed as shown on the attached plan of exploration, with a minimum of approximately 50' setback from the bluff to the west property line. Due to the loose surficial soils and moderate slopes in the building area, conventional foundations (shallow spread footing and stemwall) should not be placed onto the surficial soils. However, provided that the foundation is designed by a qualified structural engineer, adhering to the foundation recommendations provided in this report (in particular that the footing be placed in dense blocky basaltic sandstone), and that the construction of the proposed residence is appropriately inspected and monitored, the house can be built, as proposed, with no additional geotechnical setback restrictions from the bluff.

Any fills for the driveway deeper than 4 feet should be contained behind retaining structures built with foundations meeting the criteria discussed below. No special design for the driveway surfacing or retaining structures will be required to provide more than adequate strength for the anticipated residential traffic, provided that any fill placed for the road structure meets the requirements of engineered fill, outlined below. Drainage from the driveway is discussed in the Drainage section to follow.

#### Grading, Excavation and Embankment

In general, we recommend that any surface water within construction areas be drained away by cutting drainage ditches or by pumping from a sump hole, if necessary. Surface vegetation including topsoil, any saturated/inundated and disturbed soil, and any non-soil or incompetent materials encountered at the time of construction should be removed. If any deep root systems or tree trunks are removed, then the excavated areas should be filled with densely compacted on-site sandy clean soils or imported crushed rock.

In wet season, to protect moisture sensitive soils during construction activities, a 3-inch to 6-inch thick layer of crushed rock should be placed immediately on any exposed SOIL subgrades after site grading and topsoil removal, areas of exposed bedrock do not require this treatment. For construction truck traffic areas, at least 12-inch thick granular working base is generally recommended with thicker sections and/or geotextile fabrics for heavily traveled areas.

Only the areas of construction and landscaping should be disturbed. Existing vegetation outside the project area should be protected during construction. Site re-vegetation should occur as soon as possible after the end of construction.



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Soils exposed in excavated areas should be protected from rain, freezing, and excessive loading along edges. Surface water run-off should be intercepted and drained away from excavated areas. Ideally, in structural areas, concrete should be poured as soon as possible after excavation.

The surficial soils to a depth of between 1 and approximately 2 feet, can be excavated with light construction equipment. Below this depth, the material changes to a layer of friable rock and extends from as little as 6 inches to a depth of 1 ft and can be excavated with light to medium construction equipment. The highly weathered friable sandstone is underlain by 6 inches to 1 ft of weathered blocky sandstone that can be excavated with medium sized construction equipment. Below the blocky layer the sandstone becomes increasingly hard and less fractured (2 to 3 ft) the rock material changes to very hard, dense, massive gray sandstone bedrock, this material will be very difficult to excavate, and may require mechanical splitting.

In general, temporary earth slopes in soil may be cut near vertical up to 5 feet deep. All excavations should be performed in accordance with Department of Labor Occupational Safety and Health Administration (OSHA) guidelines for Type B soils. Deeper excavations may be excavated at grades steeper than the recommended OSHA grades provided the excavations are monitored and certified by a qualified geotechnical engineer. Care must be taken to move any loose boulders out of the building area prior to initiation of major excavation activities. Please note that site safety is the sole responsibility of the project contractor and/or the owners.

Other than for the construction of the driveway we do not anticipate the placement of fill for this project, nor do we recommend placement of other than minor fills for landscaping on this lot (other than the driveway). In any case, fills should not be placed on or near steep slopes on the site prior to consulting with a qualified engineering geologist or geotechnical specialist.

Due to the slopes at the building site, some fills for the driveway may need to be contained within retaining walls, or other alternative means. All fill embankment slopes must not be steeper than 2(H):1(V) unless specified by a qualified geotechnical specialist.

All fill in proposed building construction area must be placed only after the subgrade is properly prepared and then approved by a qualified engineering geologist or geotechnical specialist. At the time of construction, a qualified specialist may recommend that all exposed subgrades be proof-rolled with a loaded dump truck having a static weight of at least 45,000 pounds. Generally, areas





found to be soft or otherwise unsuitable for supporting anticipated structural loads during a proof-roll test are over-excavated and replaced with compacted fill.

Structural fill materials for new building and pavement areas should be placed in layers that, when compacted, do not exceed about 6 to 8 inches for fine-grained soils (silts and clays) and about 10 to 12 inches for granular materials (sand and gravel). Fill materials for new building and pavement areas should be moistened or dried to achieve near optimum moisture conditions and then compacted by mechanical means to a minimum of 95 percent of the maximum dry density determined from ASTM D1557 modified Proctor laboratory test. Landscape fill can be placed and compacted by mechanical means to a minimum of 90 percent of the maximum dry density determined from ASTM D1557 modified Proctor laboratory test or equivalent.

#### Foundations

The foundation should be designed by a qualified structural engineer to accommodate the issues associated with the loose soils and potential for slippage and severe differential settlement in the upper portions of the weathered sandstone. The foundations for the proposed structure should not be placed in the upper surficial and residual soil or upper highly weathered portions of the platy weathered rock.

The foundations for the structure should be supported on native, relatively unaltered, brown to gray blocky basaltic sandstone located 2 ½ to 3 feet below existing grades in the building area, and designed for the net maximum allowable bearing pressure of 2,000 PSF. Suitability of the bedrock subgrade should be verified in the field during construction by a qualified engineering geologist/geotechnical engineer. The allowable bearing capacities for dead loads and sustained live loads and can be increased by one-third for the total of all loads, including short-term wind or seismic loads.

All footings should be placed on the uniform subgrade consisting of basaltic sandstone and have a minimum width of 16 inches and should be placed at least 18 inches below finished exterior grades. The excavated footing subgrade should be inspected and approved by a registered geotechnical engineer or engineering geologist prior to the placement of concrete.

We estimate that foundations supported on native subgrade designed and constructed in accordance with the above recommendations will experience total settlements generally less than ½ -inch and differential settlements between columns generally less than ¼ -inch.



Allowable lateral frictional resistance between the base of footings and the native subgrade can be expressed as the applied vertical load multiplied by a coefficient of friction of 0.45. In addition, lateral loads may be resisted by passive earth pressures based on an equivalent fluid density of 450 pounds per cubic foot (pcf) on footings poured “neat” against in-situ material or properly back-filled with structural fill. This recommended value includes a factor of safety of approximately 1.5, which is appropriate due to the amount of movement required to develop full passive resistance.

Development plans should be submitted to our office for review to verify compliance with the recommendations in this report, at that time, additional borings can be performed at the actual location of the building corners, to determine the footing depth requirements. In addition, subgrade conditions should be verified in the field at the time of construction to accommodate the slope and soil issues, lack of setback, and minimize the potential for differential settlement and or structural failure of the foundation system. The excavated footing subgrade or pile/pier placement should be inspected and approved by a registered geotechnical engineer or engineering geologist prior to the placement of concrete.

All footings should be placed on the uniform subgrade consisting of basaltic sandstone. The excavated footing subgrade should be inspected and approved by a registered geotechnical engineer or engineering geologist prior to the placement of concrete.

#### Foundation/Retaining Walls

In general, lateral earth pressures on walls that are not restrained at the top, such as boundary retaining walls, etc., may be calculated using an equivalent fluid pressure of 45 pcf for level backfill and 70 pcf for steeply sloping backfill. Walls that are restrained from yielding at the top (such as foundation walls) may be calculated using an equivalent fluid pressure of 55 pcf for level backfill and 90 pcf for steeply sloping backfill.

Lateral earth pressures on foundation walls may be resisted by passive pressure resistance acting against footing base and by frictional resistance between footing elements and supporting soils. An equivalent fluid density of 450 pounds per cubic foot (pcf) and a friction factor of 0.45 may be used for retaining wall design. The recommended equivalent fluid density includes a factor of safety of 1.5, which is appropriate due to the amount of movement required to develop full passive resistance.





All backfill immediately behind retaining walls, foundation walls, etc., should be select granular material (sand and/or sandy gravel). We anticipate that on-site material will not be suitable for this purpose. All backfill behind walls should be placed in lifts not exceeding 6 inches in loose thickness and compacted to at least 90 percent of the maximum dry density obtainable by the ASTM D 1557 test procedure or equivalent. While placing fill behind walls, care must be taken to minimize undue lateral loads on the wall.

#### Slabs

All slab-on-grade should be supported on native subgrade or on structural fills after the topsoil is removed and after the subgrade is well prepared.

#### Drainage and Storm Water Management

In general, building areas placed below exterior site grades must be provided with a well-designed drainage system in order to control hydrostatic pressures against walls, seepage of groundwater through base walls, etc.

Drainage from foundation drains, downspouts and collected surface runoff should be directed away from the footings in order to avoid differential settlement of the foundation, or degradation of the subgrade. A perimeter drain around the foundation is recommended to divert stormwater draining out of the soil around the structure. Excavations may need to be daylighted, and graded to drain so that puddling does not occur on the subgrade during construction. Interior slabs-on-grade may require a vapor barrier. Drainage and/or runoff should not be directed toward the slopes to the north, preferably, drainage that is collected from the roofs, etc, should be directed back toward Proposal Point Drive, and into the public storm water system.

Under no circumstances should surface water run-off and roof drains be led towards foundation areas. Surface run-off from roof drains should be tight-lined into storm sewer or other approved disposal areas. All areas should be sloped away from the building to prevent ponding of water near buildings. Connect all drainpipes to solid discharge pipes and discharge beyond the slopes, constructed fills, and at least 25 feet away from foundation edges.

All surface water and subsurface water (such as roof drains) must be drained towards the main roadway or other appropriate drainage structure (as described above). Impervious surfaces such as the driveway and parking areas, etc, should be sloped to drain toward the street.



Groundwater seepage in excavations should be anticipated during wet season of the year. For most of the excavations on this project, pumping from sumps outside the limits of the excavation should control groundwater seepage and surface water ponding.

An erosion control plan can be prepared by Oregon Geotechnical Services (after development plans have been finalized) to provide methods for limiting the release of sediment and sediment laden water from the site to protect the surrounding area from any adverse effects of the development during construction.

#### Limitations

This report was prepared for the exclusive use of Mike and Janice Shainsky and their authorized agents. Professional services were rendered in accordance with generally accepted geotechnical services, and using the degree of care and skill ordinarily exercised under similar circumstances by firms or individuals practicing in similar locations. The purpose of a geotechnical investigation is to reasonably evaluate the potential for impact of past and/or present construction practices on a given property. In performing a geotechnical assessment, it is understood that a balance must be struck between a reasonable inquiry into the pertinent issues, and an exhaustive analysis of each conceivable issue of potential concern.

Analysis, conclusions and recommendations included in this report relate to conditions at the time the services were performed. Data was accumulated from overall site reconnaissance and limited subsurface exploration. Subsurface exploration provides information at the point of exploration, however, variations in soil conditions may exist between points of exploration. In the event that changes in the nature, design or layout of the project are made, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and verified in writing. No warranties are expressed or implied. Oregon Geotechnical Services is not responsible for independent conclusions made by others.

Considering the dynamic coastal environment with inherent unavoidable risks to development, and the fact that the study of all geologic hazard processes is not completely known to the professional and research community at this time, we warn that our report does not assure any safety or warranty to built structures from geologic hazards. In accepting this report, the client is





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assuming all risks associated with the development of the site.

Oregon Geotechnical Services appreciates the opportunity to be of service to you on this project. If you have any questions, or if we can provide additional assistance or observation and testing services during design and construction phases please call me at 503-720-6886.

Sincerely,  
Oregon Geotechnical Services  
David E. Reich, PG, CEG

Attachments





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References

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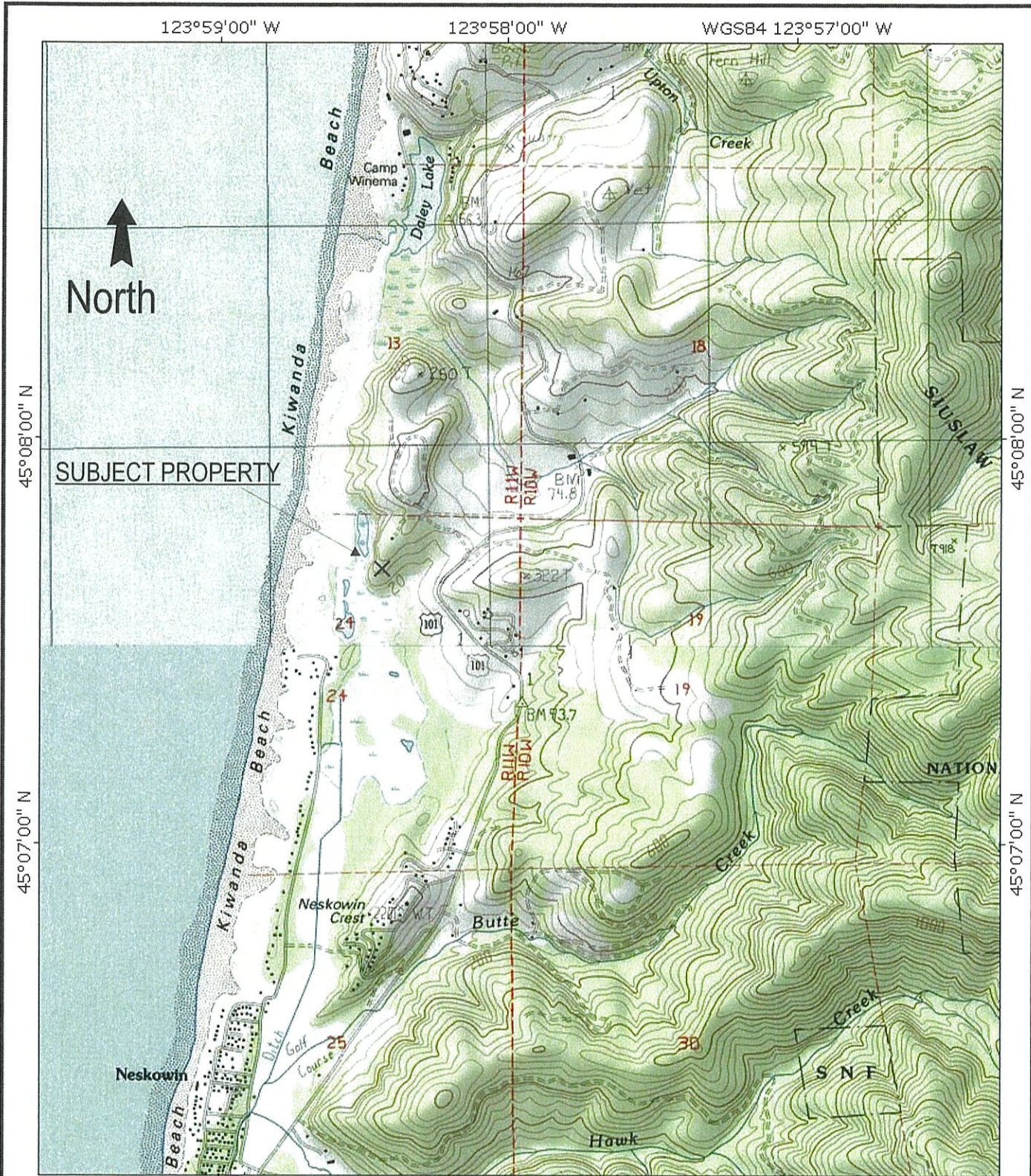
**Geologic Hazards Analysis and Geotechnical Report**  
**Lots 24 and 25, Sahhali South,**  
**Tax Lots 2400 and 2500 , T5S, R11W, Section 24, Neskowin, Oregon.**

November 14, 2021

Prepared for:

Mike and Janice Shainsky  
4125 SW 48th Place  
Portland, OR 97221





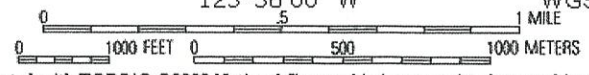
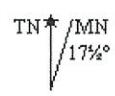
**SUBJECT PROPERTY**

45°08'00" N  
45°07'00" N

45°08'00" N  
45°07'00" N

123°59'00" W 123°58'00" W WGS84 123°57'00" W

123°59'00" W 123°58'00" W WGS84 123°57'00" W



Map created with TOPO!® ©2002 National Geographic (www.nationalgeographic.com/topo)



**OREGON GEOTECHNICAL SERVICES**

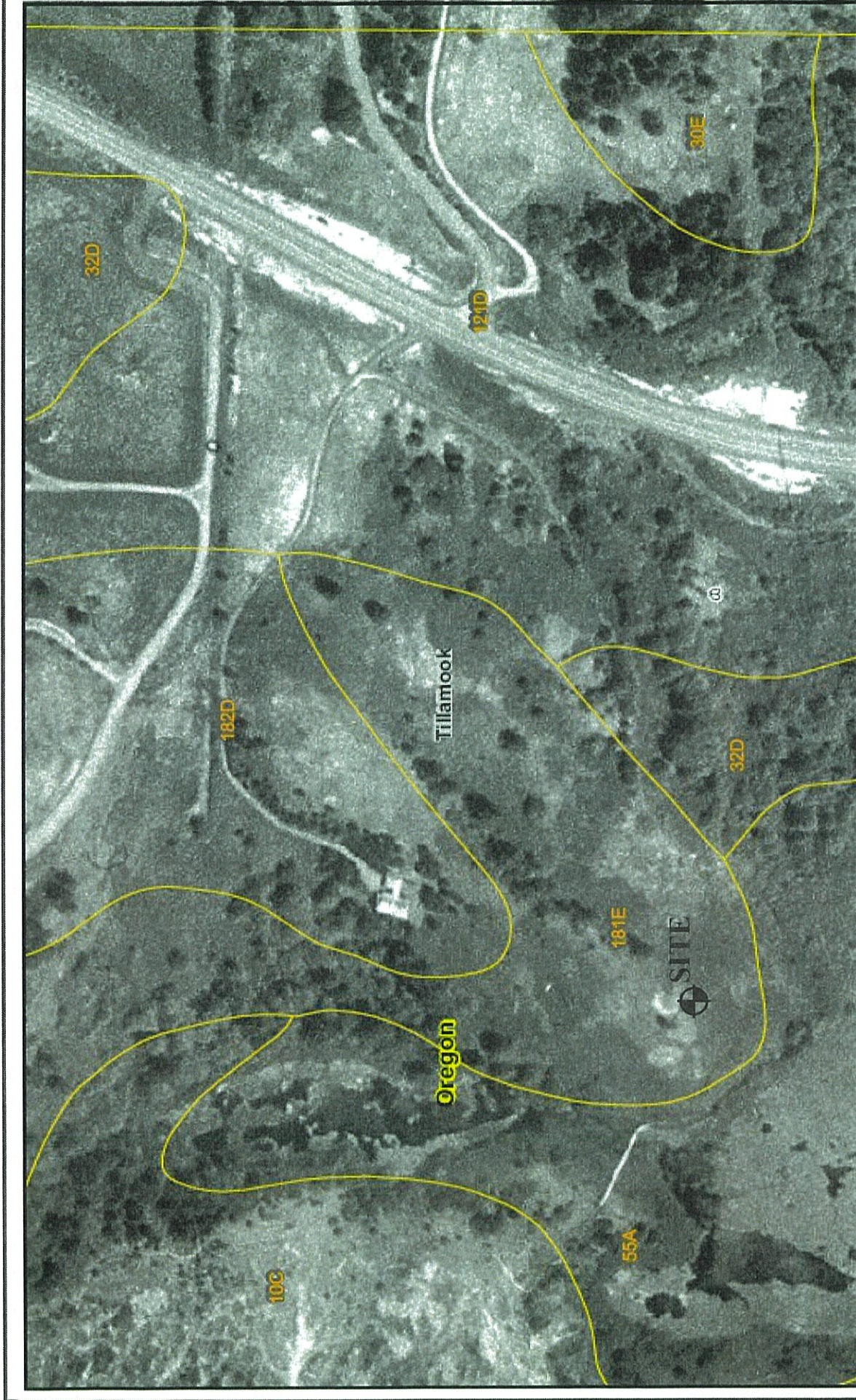
7385 SW Alden Street, Portland, OR 97223

**LOCATION MAP**

**Lots 24 & 25, Sahhali South, Neskowin Oregon**

Base map: USGS 7.5 Minute, Nestucca Bay and Neskowin OR, Quads. Scale 1:24,000





Lots 24 & 25, Sahhali South, Neskowin, Oregon

**NRCS SOIL SURVEY MAP**

Scale as Shown

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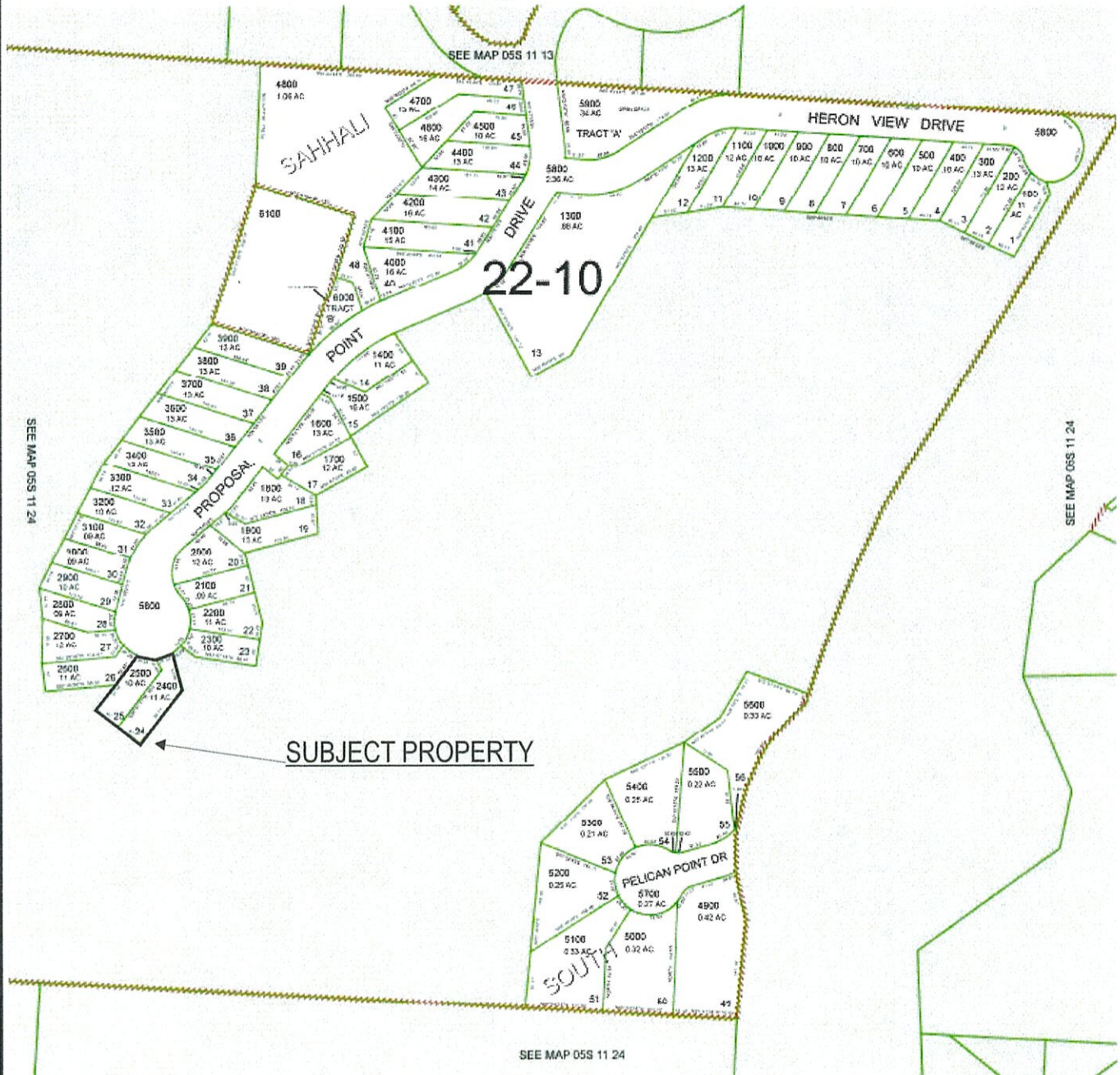
05S11W24AB  
SAHHALI SOUTH

CANCELLED

FOR ASSESSMENT AND  
TAXATION ONLY

N.W. 1/4 N.E. 1/4 SEC. 24 T.5S. R.11W. W.M.  
Tillamook County

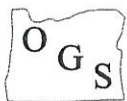
1" = 100'



SUBJECT PROPERTY

SAHHALI SOUTH  
05S11W24AB  
REVISED 08/28/07, WS

Base Map: Tillamook County Tax Assessors Map



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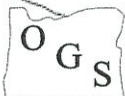
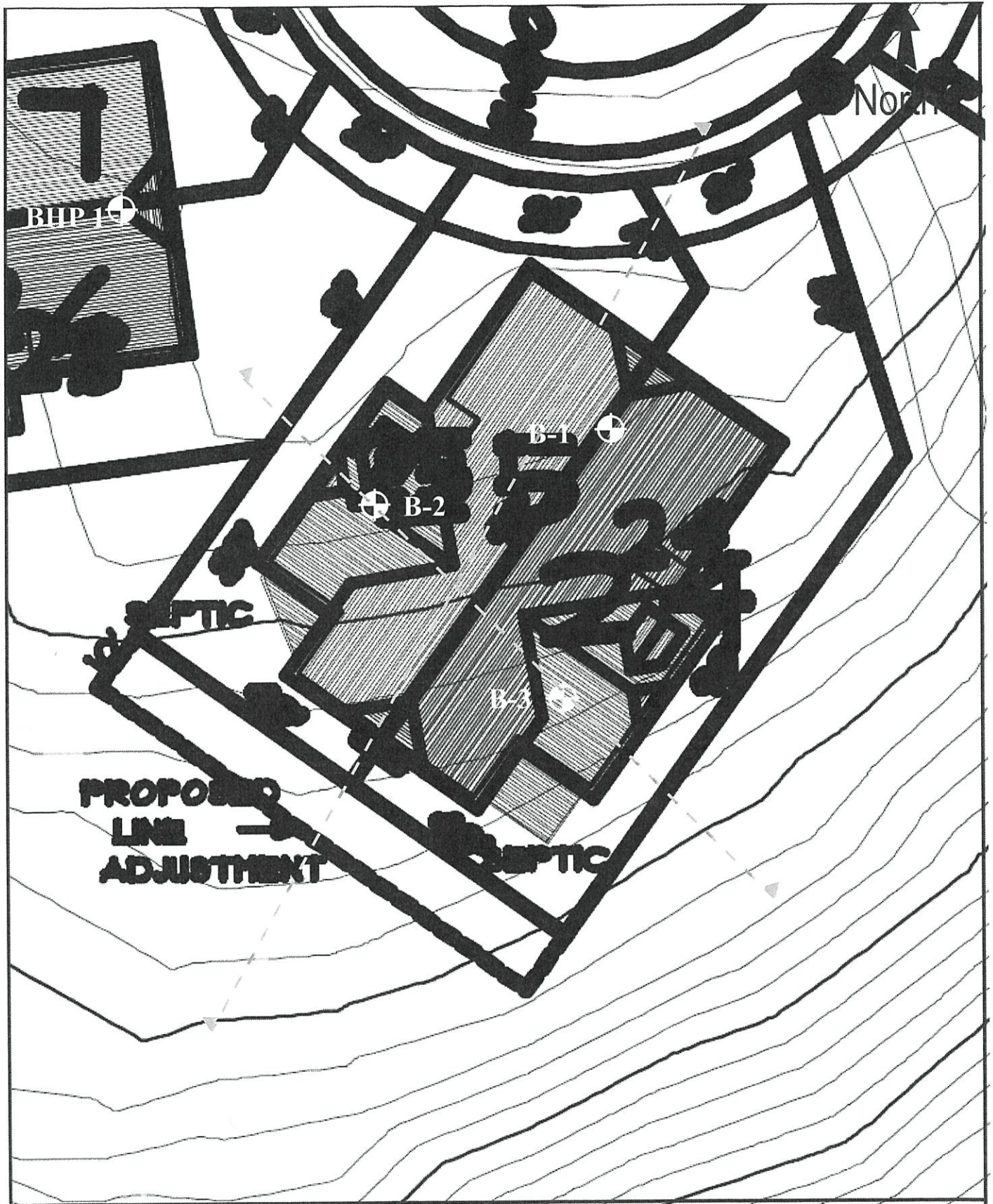
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Vicinity Map

Lots 24 & 25, Sahhali South, Neskowin Oregon

Not to scale





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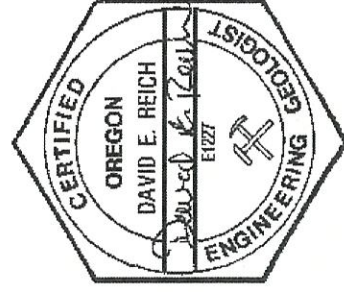
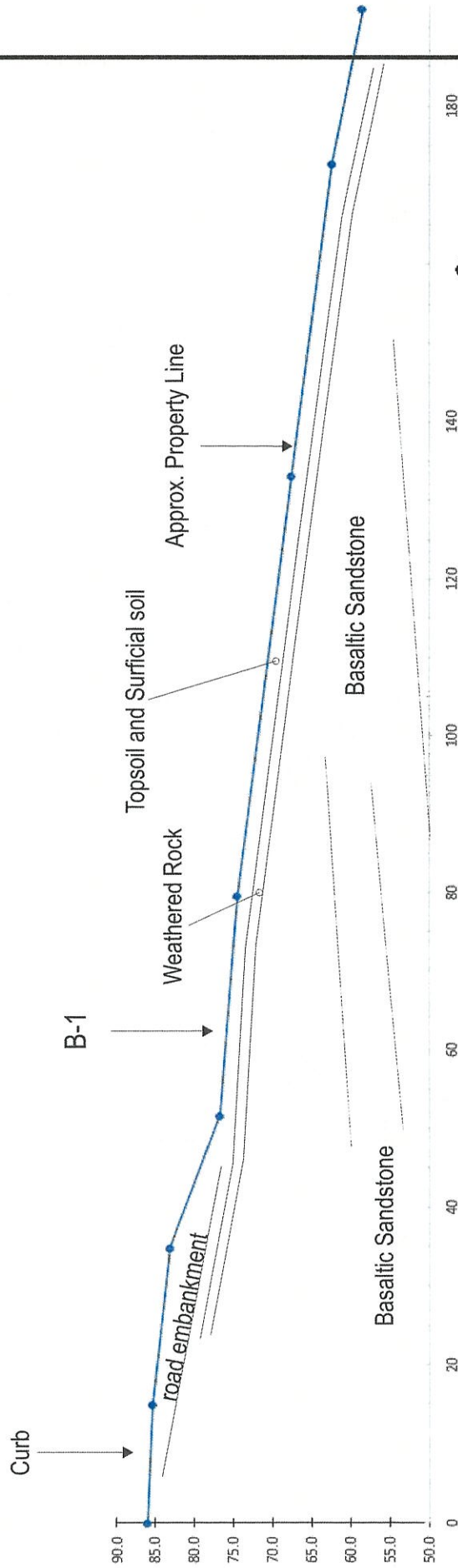
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### PLAN OF EXPLORATION

Lots 24 & 25, Sahhali South, Neskowin Oregon

Base map: provided by Butterfield Homes - Scale Approx. 1" = 20'

APPROX. HOMESITE



Elevation and Stationing relative to Site



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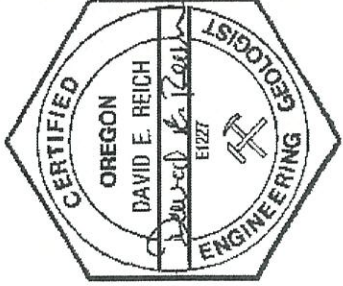
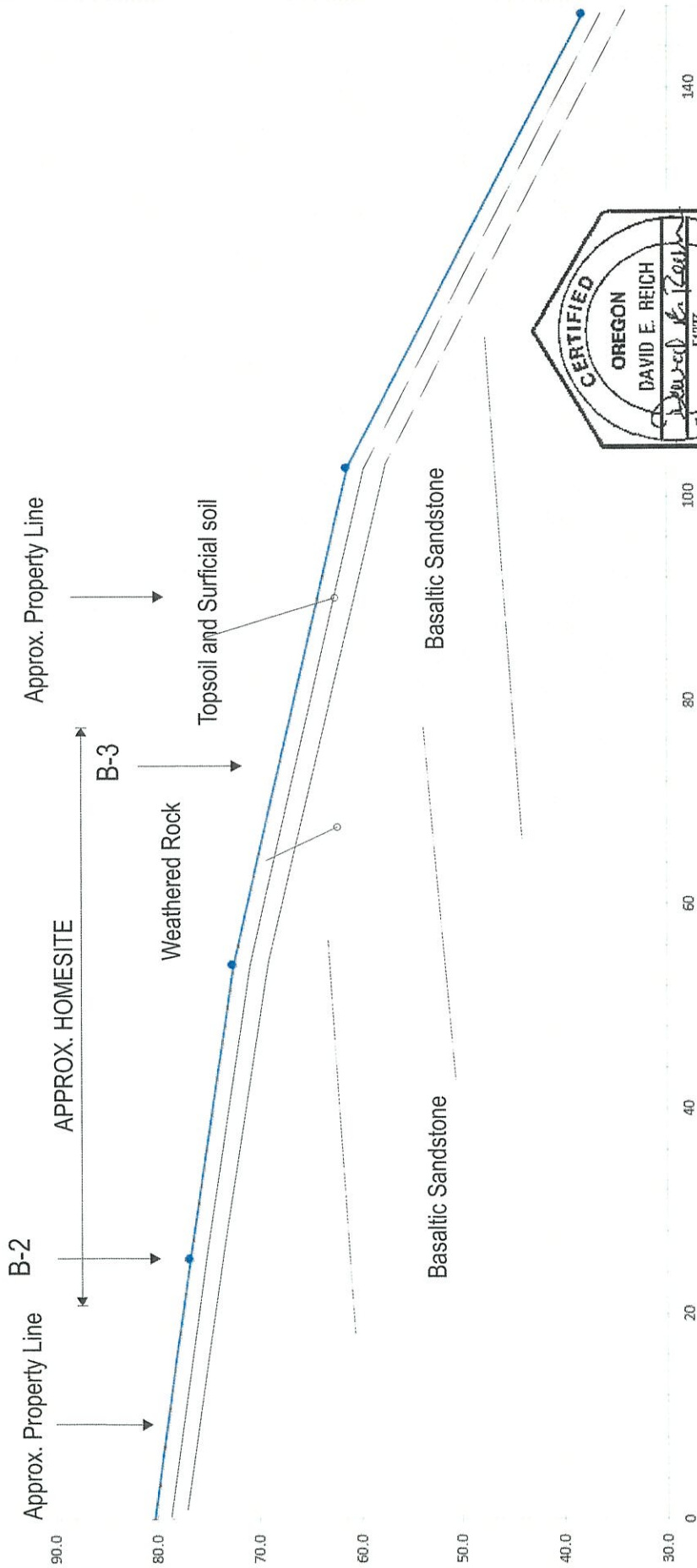
Lots 24 & 25, Sahhali South, Neskowin, Oregon

Cross - Section A - A'

Scale as Shown, See Plan for section location and approximate azimuth

DER 11/21





Elevation and Stationing relative to Site



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**Lots 24 & 25, Sahhali South, Neskowin, Oregon**

**Cross - Section B - B'**

Scale as Shown, See Plan for section location and approximate azimuth

DER 11/21

**BORING NUMBER: TC -A**

**PROJECT:** Lots 24 and 25, Sahhali South, Neskowin, Oregon

**DATE:** February 20, 2007

**HOLE DIMENSIONS:** large cut

**DEPTH OF HOLE:** ~8 feet high cut

**EQUIP:** N/A

**HOLE LOC:** driveway between lots 39 and 40

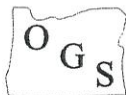
**DEPTH TO ROCK:** ~2 feet to weathered basaltic sandstone.

**OPERATOR:** N/A

**HOLE ELEVATION:** Approximately 160' above MSL

**DEPTH TO WATER:** N/A

ELEVATION (feet)	DEPTH	LEGEND	USCS	DESCRIPTION	BPF	SPECIFIC DATA / COMMENTS
			ML	TOPSOIL : Sandy Silt with abundant organics and rock fragments. Dark brown, Moist, loose.		Contains numerous roots and organic debris
	1		ML/SM	SURFICIAL SOIL: Sandy Silt/Silty Sand. Dark brown, medium dense, moist. Contains many fine roots and abundant rock fragments.		Plasticity: Low Dry Strength: Low Toughness: Low Consistency: medium dense Dilatancy: Rapid
	2					
	3			FRIABLE SANDSTONE: Highly weathered basaltic sandstone. Dense, highly weathered into <1" layers. Brown, friable, particularly along platy layering. Top ~6" is completely decomposed portion and remolds to coarse silty sand with small rocks		Friable zone ranges in thickness from approximately 2 to 3 feet
	4			SANDSTONE: partially decomposed portion of basaltic sandstone. Dense to very dense, weathered into 1" to 6" blocks. Brown.		
	5			SANDSTONE: relatively unaltered portion of basaltic sandstone. Dense to very dense, generally massive. Brown to Dark gray. Total thickness of the sandstone in this area is greater than 100 feet.		
	6					
	7					
	8					
				Total height of cut is approx. 8 feet.		No groundwater seepage encountered



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7385 SW Alden Street, Portland, OR 97223

**PROJECT:** Sahhali South, Neskowin, OR

**HOLE #:** TC -A

DER 02/07



**BORING NUMBER: BHP-1**

**PROJECT:** Lots 24 & 25, Sahlali South, Neskowin, Oregon

**DATE:** December 10, 2007

**HOLE DIMENSIONS:** 2' x 5 feet

**DEPTH OF HOLE:** ~ 2 1/2'

**EQUIP:** Komatsu PC 25

**HOLE LOC:** as shown on plan

**DEPTH TO ROCK:** ~ 1.8ft to weathered basaltic sandstone.

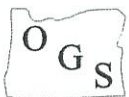
**OPERATOR:** B. Noble

**HOLE ELEVATION:** Approximately 84' above MSL

**DEPTH TO WATER:** no seepage

ELEVATION (feet)	DEPTH	LEGEND	USCS	DESCRIPTION	BPF	SPECIFIC DATA / COMMENTS
	1		ML/MH	<p>TOPSOIL AND SURFICIAL SOIL: Sandy Silt/Silty Sand. Dark brown, loose to medium dense, moist. Contains many fine roots and abundant rx.</p>		<p>Top 6" Contains abundant roots and organic debris</p> <p>No seepage encountered</p>
	2			<p>FRIABLE SANDSTONE: Highly weathered basaltic sandstone. Dense, highly weathered into &lt;1" layers. Brown, friable, particularly along platy layering.</p>		<p>Friable zone ranges in thickness from ~1/2 to 1 feet Top ~6" is completely decomposed portion and remolds to coarse silty sand with small rocks</p>
	3			<p>SANDSTONE: partially decomposed portion of basaltic sandstone. Dense to very dense, weathered into 1" to 12" blocks. Brown.</p>		
	4			<p>SANDSTONE: relatively unaltered portion of basaltic sandstone. Dense to very dense, generally massive. Brown to Dark gray. Total thickness of the sandstone in this area is greater than 100 feet.</p>		
	5					
	6					
	7					
	8					

Total depth of boring is approx 2.5 ft.



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7385 SW Alden Street, Portland, OR 97223

**PROJECT:** Lots 24 & 25, Sahlali South, Neskowin, OR

**BORING NUMBER: BHP-1**

DER 12/07

**BORING NUMBER: B-1**

**PROJECT:** Lots 24 & 25, Sahhali South, Neskowin, Oregon

**DATE:** October 13, 2021

**HOLE DIMENSIONS:** 1 ft diam

**DEPTH OF HOLE:** ~ 2'

**EQUIP:** hand excavated

**HOLE LOC:** as shown on plan

**DEPTH TO ROCK:** ~ 15" to weathered basaltic sandstone.

**OPERATOR:** DER

**HOLE ELEVATION:** Approximately 80' above MSL

**DEPTH TO WATER:** no seepage

ELEVATION (feet)	DEPTH	LEGEND	USCS	DESCRIPTION	BPF	SPECIFIC DATA / COMMENTS
	1		ML/MH	<p>TOPSOIL AND SURFICIAL SOIL: Sandy Silt/Silty Sand. Dark brown, loose to medium dense, moist. Contains many fine roots and abundant rx.</p>		Top 2 to 4" Contains abundant roots and organic debris
	2			<p>FRIABLE SANDSTONE: Highly weathered basaltic sandstone. Dense, highly weathered into &lt;1" layers. Brown, friable, particularly along platy layering.</p>		No seepage encountered Friable zone ranges in thickness from ~1/2 to 1 feet Top ~6" is completely decomposed portion and remolds to coarse silty sand with small rocks
	3			<p>SANDSTONE: partially decomposed portion of basaltic sandstone. Dense to very dense, weathered into 1" to 12" blocks. Brown.</p>		
	4			<p>SANDSTONE: relatively unaltered portion of basaltic sandstone. Dense to very dense, generally massive. Brown to Dark gray. Total thickness of the sandstone in this area is greater than 100 feet.</p>		
	5					
	6					
	7					
	8					

Total depth of boring is approx 2 ft



OREGON GEOTECHNICAL SERVICES

7385 SW Alden Street, Portland, OR 97223

**PROJECT:** Lots 24 & 25, Sahhali South, Neskowin, OR

**BORING NUMBER: B-1**

DER 11/21



**BORING NUMBER: B-2**

**PROJECT:** Lots 24 & 25, Sahhali South, Neskowin, Oregon

**DATE:** October 13, 2021

**EQUIP:** hand excavated

**OPERATOR:** DER

**HOLE DIMENSIONS:** 1 ft diam

**HOLE LOC:** as shown on plan

**HOLE ELEVATION:** Approximately 80' above MSL

**DEPTH OF HOLE:** ~ 1.5'

**DEPTH TO ROCK:** ~ 1ft to weathered basaltic sandstone.

**DEPTH TO WATER:** no seepage

ELEVATION (feet)	DEPTH	LEGEND	USCS	DESCRIPTION	BPF	SPECIFIC DATA / COMMENTS
	1		ML/MH	<p>TOPSOIL AND SURFICIAL SOIL: Sandy Silt/Silty Sand. Dark brown, loose to medium dense, moist. Contains many fine roots and abundant rx.</p>		<p>Top 2 to 4" Contains abundant roots and organic debris</p> <p>No seepage encountered</p>
	2			<p>FRIABLE SANDSTONE: Highly weathered basaltic sandstone. Dense, highly weathered into &lt;1" layers. Brown, friable, particularly along platy layering.</p>		<p>Friable zone ranges in thickness from ~1/2 to 1 feet Top ~6" is completely decomposed portion and remolds to coarse silty sand with small rocks</p>
	3			<p>SANDSTONE: partially decomposed portion of basaltic sandstone. Dense to very dense, weathered into 1" to 12" blocks. Brown.</p>		
	4			<p>SANDSTONE: relatively unaltered portion of basaltic sandstone. Dense to very dense, generally massive. Brown to Dark gray. Total thickness of the sandstone in this area is greater than 100 feet.</p>		
	5					
	6					
	7					
	8					

Total depth of boring is approx 2 ft.



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7385 SW Alden Street, Portland, OR 97223

**PROJECT:** Lots 24 & 25, Sahhali South, Neskowin, OR

**BORING NUMBER: B-2**

DER 11/21

**BORING NUMBER: B-3**

**PROJECT:** Lots 24 & 25, Sahhali South, Neskowin, Oregon

**DATE:** October 13, 2021

**HOLE DIMENSIONS:** 1 ft diam

**DEPTH OF HOLE:** ~ 2'

**EQUIP:** hand excavated

**HOLE LOC:** as shown on plan

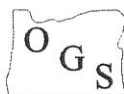
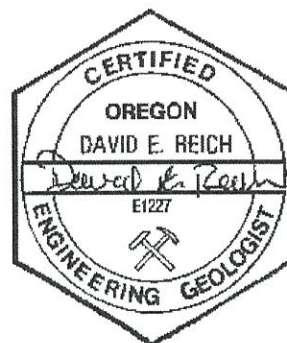
**DEPTH TO ROCK:** ~ 1.5ft to weathered basaltic sandstone.

**OPERATOR:** DER

**HOLE ELEVATION:** Approximately 80' above MSL

**DEPTH TO WATER:** no seepage

ELEVATION (feet)	DEPTH	LEGEND	USCS	DESCRIPTION	BPF	SPECIFIC DATA / COMMENTS
	1		ML/MH	<p>TOPSOIL AND SURFICIAL SOIL: Sandy Silt/Silty Sand. Dark brown, loose to medium dense, moist. Contains many fine roots and abundant rx.</p>		<p>Top 2 to 4" Contains abundant roots and organic debris</p> <p>No seepage encountered</p>
	2			<p>FRIABLE SANDSTONE: Highly weathered basaltic sandstone. Dense, highly weathered into &lt;1" layers. Brown, friable, particularly along platy layering.</p>		<p>Friable zone ranges in thickness from ~1/2 to 1 foot Top ~6" is completely decomposed portion and remolds to coarse silty sand with small rocks</p>
	3			<p>SANDSTONE: partially decomposed portion of basaltic sandstone. Dense to very dense, weathered into 1" to 12" blocks. Brown.</p>		
	4			<p>SANDSTONE: relatively unaltered portion of basaltic sandstone. Dense to very dense, generally massive. Brown to Dark gray. Total thickness of the sandstone in this area is greater than 100 feet.</p>		
	5					
	6					
	7					
	8					
				Total depth of boring is approx 2 ft.		



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7385 SW Alden Street, Portland, OR 97223

**PROJECT:** Lots 24 & 25, Sahhali South, Neskowin, OR

**BORING NUMBER: B-3**

DER 11/21





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Portland, OR 97223

Phone: (503) 720-6886

Mike and Janice Shainsky  
4125 SW 48th Place  
Portland, OR 97221

November 22, 2022

**Re: Preliminary geotechnical review of development plans for construction of the Shainsky Residence, a single family dwelling proposed for Lots 24 and 25, Sahhali South, Tax Lots 2400 and 2500, T5S, R11W, Section 24, Neskowin, Oregon.**

At the request of Dustin Capri of Capri Architecture, on behalf of the property owner, I have provided a preliminary geotechnical review of development plans for the proposed residential construction at Lots 24 and 25, Sahhali South, Tax Lots 2400 and 2500, T5S, R11W, Section 24, Neskowin, Oregon. This letter is for submittal with accompanying documents to the Sahhali South HOA. This work was performed by David E. Reich, Certified Engineering Geologist (OR Lic. # E1227) of Oregon Geotechnical Services, 7385 SW Alden Street, Portland, OR 97223.

The findings and conclusions addressing geologic hazards and providing geotechnical parameters and design information to mitigate long-term geologic hazards, presented in the November 14, 2021, Oregon Geotechnical Services report are still valid and applicable to the site conditions and planned improvements.

The purpose of this preliminary plan review is to document that the preliminary plans for the proposed site development are in compliance with the recommendations provided in the previous geotechnical reporting for the proposed improvements at the above referenced site. Scope of services included the following:

- Review of the original geotechnical report “Geologic Hazards Analysis and Geotechnical Report, Lots 24 and 25, Sahhali South, Tax Lots 2400 and 2500, T5S, R11W, Section 24, Neskowin, Oregon.”, dated November 14, 2021, by David E. Reich, CEG, of Oregon Geotechnical Services.
- Review of preliminary plans and renderings dated September 16, 2022 and November 01, 2022 (Site plans building plans, renderings) for The Shainsky Residence, residential construction, Lots 24 and 25 Sahhali South, prepared by Dustin Capri of Capri Architecture, and
- Preparation of this letter.



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Portland, OR 97223

Phone: (503) 720-6886

Geotechnical review of the preliminary development plans finds that, so far, the recommendations provided in the Oregon Geotechnical Services report, “Geologic Hazards Analysis and Geotechnical Report, Lots 24 and 25, Sahhali South, Tax Lots 2400 and 2500, T5S, R11W, Section 24, Neskowin, Oregon.”, dated November 14, 2021, have been incorporated into the plans for the proposed improvements at the site. The plans have been reviewed and found to be in compliance with the intent of the recommendations in the November 14, 2021 report.

Engineering notes and detailed foundation plans are not yet available, however, the location of the proposed residence is placed as anticipated during the geotechnical evaluation. Foundation plan, footing details and engineering notes will be reviewed by Oregon Geotechnical Services prior to issuance of the building permit. *Foundations will be constructed on approved subgrade, per general recommendations in the November 14, 2021 geotechnical report.* The deeper excavations for foundations and/or retaining walls may be difficult due to very hard and shallow bedrock, mechanical splitting may be required. The outside of the foundations areas may need to be stepped down, following the slope, to remove the surficial and residual soils and expose weathered sandstone for approved foundation subgrade. Oregon Geotechnical Services, or another firm or individual with geotechnical certification should be retained to provide construction inspection services to approve the subgrade once it has been exposed at the site. Oregon Geotechnical Services can provide an engineering geologist to perform inspections during construction and to provide observation and testing of subgrade materials and preparation for the foundations. Oregon Geotechnical Services will provide documentation of the inspections in daily diaries/field reports that include observations at the site and recommendations provided to overcome any additional observed hazards.

Subgrade Preparation, Fill Placement, Grading: Oregon Geotechnical Services, or another firm or individual with geotechnical certification should be retained to provide construction inspection services at the site, during excavation, grading and foundation subgrade preparation. Oregon Geotechnical Services will provide an engineering geologist to perform inspections during construction and to provide specific recommendations for soils or foundation related phases of work, as needed during site development. Oregon Geotechnical Services will provide documentation of the inspections in daily diaries that include observations at the site and recommendations provided to overcome any additional observed hazards. Inspections will include (but not be limited to) observation and manual testing of subgrade preparation for the foundations, and driveways, and the actual placement of the structure to verify soil conditions and compliance with foundation subgrade recommendations, and site drainage/erosion control.





**Setback:** According to the site base map, and discussions with the Client, the house is to be placed as shown on the attached plan of exploration, with a minimum of approximately 50' setback from the bluff to the west property line. Due to the loose surficial soils and moderate slopes in the building area, conventional foundations (shallow spread footing and stemwall) should not be placed onto the surficial soils. However, provided that the foundation is designed by a qualified structural engineer, adhering to the foundation recommendations provided in this report (in particular that the footing be placed in dense blocky basaltic sandstone), and that the construction of the proposed residence is appropriately inspected and monitored, the house can be built, as proposed, with no additional geotechnical setback restrictions from the bluff.

**Drainage:** As per the recommendations in the November 14, 2021 report, storm water collected in the gutters, impervious surfaces (paths or driveway) or the foundation drains should be dispersed into a tightline system and conveyed into the existing storm drain system at the public street when possible. In no circumstances shall collected runoff be allowed to flow freely over steep native slopes or cutbanks. Finished slopes in the landscaping areas can be graded to direct runoff away from the structure and into the on-site native vegetation for dispersal.

**Temporary Drainage:** During construction, the site grading should be performed such that puddling does not occur on any areas of the prepared subgrade. Where possible, any construction benches should be crowned in the middle so that runoff flows toward each end, and can be dispersed into the natural slopes, uphill of the erosion control devices (silt fence), at multiple locations (ie each end of the bench). Runoff should not be allowed to run over the cutslopes. Benches may need to be widened in some areas to provide areas for the runoff to ditched around the top of the adjacent cuts.

**Vegetation Management:** Temporary and permanent stabilization programs and the planned maintenance of new and existing vegetation is important in protecting the surrounding area from any adverse effects of the development during and after construction. Construction activities should remove only the vegetation necessary to accommodate approved development. Natural vegetation should remain on all areas of the property not required for construction and grading. Vegetation should be placed as rapidly as possible after construction and site development. All exposed soil should be seed, re-vegetated and planted to mitigate erosion. Exposed soils areas can be mulched with straw other cover (bark chips), covered with jute-matting, or other stabilization product to prevent direct erosion of the soil, until the establishment of the vegetative cover. An appropriate fertilizer and regular watering during the dry months should be used to speed the establishment of the vegetative cover. Native shrubs and trees should be planted wherever possible to contribute to the long term re-vegetation and stability of the site.



**OREGON**  
**GEOTECHNICAL**  
**SERVICES**

7385 SW Alden Street  
Portland, OR 97223

Phone: (503) 720-6886

Erosion Control: The driveway into the site may need to be rocked during construction to limit the tracking of soil from the site into the street. During construction, runoff from the construction area and driveway shall be dispersed (through site grading and cross draining of the driveway) onto the natural slopes and into the on-site native vegetation where it will naturally filter out the sediment. Silt fencing should be placed along the downslope side of the building pad/disturbed area. Hay bales or bio-bags may be needed to help control sedimentation in the ditches downslope from the site during construction. Other erosion control measures do not appear needed at this time, however, Oregon Geotechnical Services can provide an engineering geologist to perform inspections during construction to provide recommendations to limit the release of sediment into the stormwater system, if needed. Oregon Geotechnical Services can provide documentation of any inspections in daily diaries, including recommendations provided to overcome observed sedimentation issues.

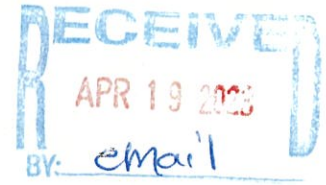
Any changes in the site development and design plans for construction at this site should be reviewed by Oregon Geotechnical Services staff for compliance with the recommendations provided in the geotechnical reporting.

We have performed this study in general accordance with industry practices and accepted principals. No warranty of any kind is expressed or implied. Oregon Geotechnical Services is not responsible for independent conclusions made by others. If you have any questions, please call me at 503-720-6886.

Sincerely,  
David E. Reich, CEG  
*Oregon Geotechnical Services*







April 19<sup>th</sup>, 2023

Tillamook County Planning Commission  
1510-B Third Street  
Tillamook, OR 97141  
503-842-3408

We are writing this letter to respond to the Incomplete Application for a Conditional Use Request #851-23-000118-PLNG letter that was emailed on April 18<sup>th</sup>, 2023. It was identified that three additional requirements are required to deem the application complete. We are proposing this letter serve as supplemental clarifications, in addition to the previously submitted materials, to show that this proposed development satisfies all the criteria of the Conditional Use Permit and the Planned Development Overlay. See our explanatory narrative below:

#### **Responses to Conditional Use Criteria**

Per TCLUO Section 6.040 Conditional Use Review Criteria, a conditional use shall be granted if the applicant demonstrates that all the following applicable criteria are satisfied. In the documents that have been provided as a part of the application and with the addition of this supplemental document, we are confident that the conditions of the Conditional Use Criteria have been satisfied. Please see our criteria responses outlined below:

**CUP Criteria 1:** The use is listed as a Conditional Use in the underlying zone, or in an applicable overlying zone.

**CUP Response 1:** The relevant parcels are located in the underlying zone NeskRR. Please note, per Section 3.320: Neskowin Rural Residential Zone (2) (a), Single-family dwelling is a use permitted outright. This criterion has been satisfied.

**CUP Criteria 2:** The use is consistent with the applicable goals and policies of the Comprehensive Plan.

**CUP Response 2:** The Tillamook County Comprehensive Plan, Goal 10, Housing; states that "housing condition is a significant problem in the County. A large proportion of housing units are currently in substandard condition..." This new proposed single-family residence represents an additional newly constructed home in Tillamook County that helps to address this significant problem that is outlined in the Comprehensive Plan. The comprehensive plan also notes that 90.7% of the households in the County prefer a single-family dwelling. This additional single-family home addresses not only the property owners' desire for a single-family residence, but provides a future benefit to the County with more desirable and high quality new housing being added to the County's inventory. Additionally, as demonstrated in Oregon Geotechnical Services Geological Report dated November 14, 2021, the site can be developed safely, but there are significant challenges that the site's slope present to development. As noted in the Comprehensive Plan, Goal 10; it is understood that in order to preserve agricultural land, the County should encourage development in the foothills of the County. It is our professional opinion that the topographic challenges of this property and the small size of the parcels are one of the key reasons why it has not yet been developed. Although many strategies are identified in the Housing section of the Tillamook County Comprehensive Plan, it is clear that this criteria is met for this project as it provides new desirable housing to the County on a site that is challenging to develop given its topographic slope. This criterion has been satisfied.

**CUP Criteria 3:** The parcel is suitable for the proposed use considering its size, shape, location, topography, existence of improvements and natural features.

**CUP Response 3:** Despite the challenging topographic conditions and the unique shape of the parcels, it is demonstrated that an adequately sized home can be accommodated on the property. This is demonstrated on drawings A1-1, A3-1 and A3-2 that have been submitted as a part of this application. The residence complies with the County height restriction (Section 3.320(4)(l), which is 35' and depicted on drawing A6-3. The design of the new proposed residence is specifically designed to respond to the parcels' size, shape, location, topography and existing improvements and natural features. This criterion has been satisfied.

**CUP Criteria 4:** The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs or prevents the use of surrounding properties for the permitted uses listed in the underlying zone.

**CUP Response 4:** The proposed residence is harmonious with other homes constructed within the development of Sahhali South. The grey and blue exterior tones were selected to blend with the natural environment. The construction of the proposed single-family home is consistent with the underlying character of the existing neighborhood and will not limit, impair or prevent the use of surrounding properties for the permitted uses listed in the underlying zone. This criterion has been satisfied.

**CUP Criteria 5:** The proposed use will not have a detrimental effect on existing solar energy systems, wind energy conservation systems or windmills.

**CUP Response 5:** It has been confirmed that the proposed single-family residence will not have any detrimental effect of existing solar energy systems, wind energy conservation systems or windmills. This criterion has been satisfied.

**CUP Criteria 6:** The proposed use is timely, considering the adequacy of public facilities and services existing or planned for the area affected by the use.

**CUP Response 6:** The existing public facilities including power, water, stormwater, and electricity have all been addressed as a part of the Sahhali South development and are currently in-place on the proposed parcels. The on-site septic system has been designed and the drawings are included with the submittal for the conditional use permit. The transportation system is designed to accommodate the construction of this additional single-family residence in Sahhali South. This criterion has been satisfied.

#### **Responses to Planned Development Overlay Criteria**

Per TCLUO Section 3.080(3)(b) Planned Development Overlay Criteria, it is understood that the Planning Department shall distribute copies of the proposal to county agencies for study and comment. In the documents that have been provided as a part of the application and with the addition of this supplemental document, we are confident that the conditions of the Planned Development Overlay Criteria have been satisfied. Please see our criteria responses outlined below:

**PUD Criteria 1:** There are special physical conditions or objectives of development which the proposal will satisfy to warrant a departure from the standard ordinance requirements.

**PUD Response 1:** The property owners of both parcels have an objective of developing a single-family residence on their property. Additionally, as noted above, there are unique physical conditions of the subject parcels' shape and the topographic conditions of the site



that lends itself to a single family residence construction instead of the originally proposed townhouse approach. It is our professional opinion that the challenging topography, lots' shape, and small size of the lots are a contributing factor to these parcels being undeveloped for such a considerable time. It is these special physical conditions and objectives of development that warrant the departure from the standard ordinance. This criterion has been satisfied.

**PUD Criteria 2:** Resulting development will not be inconsistent with the comprehensive plan provisions or zoning objectives of the area.

**PUD Response 2:** As noted above, the relevant parcels are located in the underlying zone NeskRR. Please note, per Section 3.320: Neskowin Rural Residential Zone (2) (a), Single-family dwelling is a use permitted outright. The minimal parcel sizes, width, and depth were addressed as a part of the original PUD application and supports the Comprehensive Plan's goals of encouraging cluster development and more compact parcel development. This criterion has been satisfied.

**PUD Criteria 3:** The plan can be completed within a reasonable period of time.

**PUD Response 3:** The general contractor, Mike Riddle, has confirmed that once construction begins, the project will be completed in 10-14 months. Given the challenging construction market and availability of materials, it is clear that this is a reasonable period of time for constructing this single-family residence. This criterion has been satisfied.

**PUD Criteria 4:** The streets are adequate to support the anticipated traffic and the development will not overload the streets outside the planned area.

**PUD Response 4:** The Sahhali South PUD was designed to accommodate construction of a townhouse on these parcels. With the construction of this single-family residence, it is clear that the traffic demand on the street will be less than the design load for the street as demonstrated in the original PUD. The streets are adequate to accommodate the anticipated traffic for this single-family residence. This criterion has been satisfied.

**PUD Criteria 5:** Proposed utility and drainage facilities are adequate for the population densities and type of development proposed.

**PUD Response 5:** As described above, the existing public facilities including power, water, stormwater, and electricity have all been addressed as a part of the Sahhali South development and are currently in-place on the proposed parcels. The on-site septic system has been designed and the drawings are included with the submittal for the conditional use permit. The utility and drainage facilities are adequate and specifically designed to accommodate the construction of residences. This criterion has been satisfied.

**PUD Criteria 6:** The parcel is suitable for the proposed use, considering its size, shape, location, topography, existence of improvements and natural features.

**PUD Response 6:** As noted above, despite the challenging topographic conditions and the unique shape of the parcels, it is demonstrated that an adequately-sized home can be accommodated on the property. This is demonstrated on drawings A1-1, A3-1 and A3-2, which have been submitted as a part of this application. The residence complies with the County height restriction (Section 3.320(4)(l), which is 35' and depicted on drawing A6-3. The design of the new proposed residence is specifically designed to respond to the parcels' size, shape, location, topography and existing improvements and natural features. This criterion has been satisfied.

**PUD Criteria 7:** The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs or prevents the use of surrounding properties for the permitted uses listed in the underlying zoning.

**PUD Response 7:** The proposed single-family residence recently went through a review process with the Sahhali South Architectural Review Board (ARB) as well as participating neighbors in the community and the project received unanimous approval from those living in the neighborhood. Additionally, the ARB wrote a letter that was included in the application that specifically offers the community's support for constructing a single-family residence on the parcel, including the CCNR supported option of combining lots for the construction of a detached single family residence. As noted above, the proposed residence is harmonious with other homes constructed within the development of Sahhali South. They grey and blue exterior tones were selected to blend with the natural environment. The construction of the proposed single-family home is consistent with the underlying character of the existing neighborhood and will not limit, impair, or prevent the use of surrounding properties for the permitted uses listed in the underlying zone. This criterion has been satisfied.

**PUD Criteria 8:** The proposed use is timely, considering the adequacy of public facilities and services existing or planned for the area affected by the use.

**PUD Response 8:** As noted above, the existing public facilities including power, water, stormwater, and electricity have all been addressed as a part of the Sahhali South development and are currently in-place on the proposed parcels. The on-site septic system has been designed and the drawings are included with the submittal for the conditional use permit. The transportation system is designed to accommodate the construction of this additional single-family residence in Sahhali South. This is a residential neighborhood with a mix of townhomes and single-family residences, and this use is timely for the existing and planned uses for the affected area. This criterion has been satisfied.

**PUD Criteria 9:** Proposed uses which are not otherwise permitted by the underlying zoning on the parcel are accessory uses within the entire development.

**PUD Response 9:** The development of Sahhali South and neighboring Sahhali Shores represent a dynamic residential neighborhood consisting of single-family residences and townhomes. The proposed single-family residence being constructed on these parcels is consistent with the uses within the entire development. This criterion has been satisfied.

**Fee Payment of \$2,100.00 made payable to Tillamook County**

Please note, the Owner, Michael and Janice Shainsky, made payment to the County on April 19<sup>th</sup>, 2023. This requirement has been addressed. See attached receipt.

We hope this letter assists the Planning Commission in their review of Mike and Janice's new home in Sahhali South. Please feel free to call me if you have any questions.

Sincerely,

  
Dustin Capri, AIA, NCARB, LEED AP ND  
Principal – Capri Architecture, LLC  
dustin@capriarchitecture.com  
541.961.0503



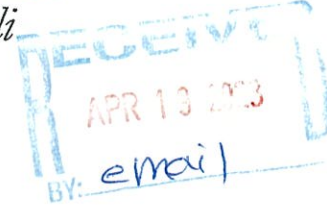




# Sahhali South



*The sun always shines on Sahhali*



Date: April 18, 2023

To: Tillamook County One-Stop Permit Counter  
DEQ – Northwest Region

From: Sahhali South Homeowners Association

Re: Lot approval and Sewer Availability

I confirm that sewer is available to the following lot(s) within the service area of the Sahhali South Homeowners Association:

Township: 5S Range: 11 W Section: 14 Tax Lot(s): 2400 & 2500

Sahhali South Subdivision Lot(s) 24 & 25

According to our records, the legal owner is Mike and Janice Shainsky

**Comments:** Sahhali South ARB approved the new construction of the presented application for Lot #24 & #25 on April 13, 2023.

**Additional reviews, easements and conditions may be required. This letter becomes void after 12 months from the date of issuance.**

The current System Development Charge may be due to Sahhali South Homeowners Association upon issuance of a building permit by the Tillamook County Department of Community Development. Sahhali South Homeowners Association requires a copy of the approved building permit be sent to Sahhali South Homeowners Association. This letter shall not create a liability on the part of the Sahhali South Homeowners Association, or by any officer, employee thereof, for the services described above.

\_\_\_\_\_  
Patti Lundeen, Sahhali South Homeowners Association Representative

Title-Secretary  
Telephone No: 541-284-0612  
Fax No: 541-746-2590



# **EXHIBIT**

# **C**



**INSTRUCTIONS FOR FILING RESTRICTIVE COVENANT FOR PLACEMENT OF  
STRUCTURE ON PROPERTY LINE OR WITHIN SETBACKS**

1. This acknowledgment is required when the County permits the placement of a structure over and upon a property line between contiguous properties or within the setback area defined for a property in the Tillamook County Land Use Ordinance.
2. Obtain the legal description of the subject property as it's recorded in the Tillamook County Deed Records. This is what is referred to as Exhibit A and must accompany the affidavit/covenant.
3. The attached affidavit/covenant must be filled out, showing the names of ALL current property owners who appear on the property deed or contract, and signed before a Notary Public. Community Development has Notaries that can provide the service for free.
4. Once the affidavit/covenant is signed and notarized with the attached legal description, bring these to the Tillamook County Clerk's office to be recorded. **The Clerk's will charge a recording fee.** Please contact the Clerk's office at (503)842-3402 for current fees.
5. **A copy of the recorded and notarized affidavit/covenant will be given to DCD to put on file.**
6. If you have any questions about the affidavit/covenant, or the recording procedure, please contact the DCD- Planning Staff at (503)842-3408.

After recorded return to:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**RESTRICTIVE COVENANT**

\_\_\_\_\_, (GRANTORS)

are the owners of real property described as follows:

**Property Legal Description attached as Exhibit A hereto and incorporated by reference**

The Tillamook County Land Use Ordinance provides for minimum setbacks from property lines for any structural development on a unit of land and further provides for placement of structures within the setback area when adjustment of property lines is impracticable. The Grantor(s) wish to build a structure over and upon a property line between the units of land described in "Exhibit A" or within the setback area defined for the subject property in the Tillamook County Land Use Ordinance, and in consideration of the approval of said structural development, the Grantor(s) do hereby covenant and agree as follows:

1. The Grantor(s), their heirs, successors and assigns acknowledge that they desire to place a structure over and upon the line between the units of land referenced above or within the setback area defined for the subject property in the Tillamook County Land Use Ordinance, and that they do not wish to vacate the lots at this time.
2. The Grantor(s) do further acknowledge that upon completion and recording of this document that the above referenced units of land must be conveyed as a single ownership and may no longer be considered separately saleable units of land even though a formal vacation of the lots has not been completed.
3. Nothing in this agreement shall prevent the Grantor(s) or subsequent owners of the subject properties from adjustment of property lines or other lawful land use actions in the future, provided such actions comply fully with the applicable state and local laws and ordinances then current.
4. By signing this document I authorize the Tillamook County Assessor's office to combine these parcels for property tax purposes.

This covenant shall run with the land and is intended to and hereby shall bind my/our heirs, assigns, lessees, and successors and it cannot be deleted or altered without approval by the Tillamook County Department of Community Development (GRANTEE) or its successor.

IN WITNESS WHEREOF, the said Party has executed this instrument this \_\_\_\_\_ day of

\_\_\_\_\_20\_\_\_\_\_,

\_\_\_\_\_

\_\_\_\_\_

Signature

Print Names

State of \_\_\_\_\_, County of \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_,

by \_\_\_\_\_ (Grantor(s)).

SEAL

\_\_\_\_\_  
Notary Public of Oregon  
My Commission Expires:

\_\_\_\_\_