

20-001292

## Sensitive Areas Certification Form

**1. Property Information** (example 1S234AB01400)

 Tax lot ID(s): 2S133BB00100 and 2S1330000400  
 \_\_\_\_\_  
 \_\_\_\_\_

 Site Address: 14200 SW Tonquin Rd  
 \_\_\_\_\_

 City, State, Zip: Sherwood, OR, 97140  
 \_\_\_\_\_

 Nearest Cross Street: SW Oregon Street  
 \_\_\_\_\_

**2. Owner Information**

 Name: Tim Kerr  
 \_\_\_\_\_

 Company: Woodburn Industrial Capital Group  
 \_\_\_\_\_

 Address: PO Box 1060  
 \_\_\_\_\_

 City, State, Zip: Woodburn, OR, 97071  
 \_\_\_\_\_

 Phone/Fax: 971-235-5003  
 \_\_\_\_\_

 E-Mail: tkerr@kerrcontractors.com  
 \_\_\_\_\_

**3. Development Activity** (check *all* that apply)

- |  |  |
|--|--|
| <input type="checkbox"/> Addition to Single Family Residence (rooms, deck, garage) | <input type="checkbox"/> Minor Land Partition            |
| <input type="checkbox"/> Lot Line Adjustment                                       | <input type="checkbox"/> Commercial Condominium          |
| <input type="checkbox"/> Residential Condominium                                   | <input type="checkbox"/> Commercial Subdivision          |
| <input type="checkbox"/> Residential Subdivision                                   | <input checked="" type="checkbox"/> Multi Lot Commercial |
| <input type="checkbox"/> Single Lot Commercial                                     |  |
- Other \_\_\_\_\_  
 \_\_\_\_\_

**4. Applicant Information**

 Name: Tim Kerr  
 \_\_\_\_\_

 Company: Kerr Contractors  
 \_\_\_\_\_

 Address: 395 Shenandoah Ln. NE  
 \_\_\_\_\_

 City, State, Zip: Woodburn, OR 97071  
 \_\_\_\_\_

 Phone/Fax: 971-235-5003  
 \_\_\_\_\_

 E-Mail: tkerr@kerrcontractors.com  
 \_\_\_\_\_

**5. Check any of the following that apply to this project.**

- Adds less than 500 square feet of impervious surface.
- Does not encroach closer to the Sensitive Area than existing development on the property.
- Is not located on a slope greater than 25%.

**6. Applicant Information**

 Name: K. Sanderford  
 \_\_\_\_\_

 Company: Environmental Science & Assessment, LLC  
 \_\_\_\_\_

 Address: 4831 NE Fremont Street, Suite 2B  
 \_\_\_\_\_

 City, State, Zip: Portland, OR 97213  
 \_\_\_\_\_

 Phone/Fax: 503-478-0424  
 \_\_\_\_\_

 E-Mail: kims@esapdx.com  
 \_\_\_\_\_

**7. Will the project involve any off-site work?**  Yes  No  Unknown (check appropriate box)

 If yes, location and description of off-site work \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**8. Additional comments or information that may be needed to understand your project** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Sensitive Areas Certification Form** *(continued)***9. An on-site, water quality sensitive area reconnaissance was completed on:**

Date	By	Title	Company
5/26/20	K. Sanderford, E. Dalton	Wetland Scientist, Wetland Technician	Environmental Science & Assessment

**10. Existence of Water Quality Sensitive Areas** *(check all appropriate boxes)*

As defined in the Districts Design and Construction Standards:

- A. Water-quality-sensitive areas  do  do not exist on the tax lot.
- B. Water-quality-sensitive areas  do  do not exist within 200' on adjacent properties, or  unable to evaluate adjacent property.
- C. Vegetated corridors  do (\_\_\_\_\_ SF)  do not exist on the tax lot.
- D. Vegetated corridors  do  do not exist within 200' on adjacent properties, or  unable to evaluate adjacent property.
- E. Impacts to sensitive areas and/or vegetated corridors will occur  On-site  Off-site  None proposed at this time.
- F. If impacts, mitigation is  On-site  Off-site  Other \_\_\_\_\_

**11. Simplified Site Assessment containing the following information:** *(check only items submitted).*

Please refer to Design and Construction Standards 17-05 section 3.02.2 for application requirements.

- Complete Certification Form (2 pages)
- Written description of the site and proposed activity.
- Site plan of the entire property.
- Photographs of the site labeled and keyed to the site plan.

**12. Standard Site Assessment containing the following information:** *(check only items submitted).*

Please refer to Design and Construction Standards 17-05 section 3.02.2 for application requirements.

- Complete Certification Form (2 pages)
- Written description per Design and Construction Standards 17-05 section 3.13.3 b. 1
- Wetland Data sheets
- Vegetated Corridor Data sheets
- Existing Site Condition Figures
- Proposed Development Figures

**By signing this form the Owner, or Owner's authorized agent or representative, acknowledges and agrees that employees of Clean Water Services have authority to enter the project site at all reasonable times for the purpose of inspecting project site conditions and gathering information related to the project site.**

**I certify that I am familiar with the information contained in this document, and to the best of my knowledge and belief, this information is true, complete, and accurate.**

**Applicant:**

K. Sanderford

Print/Type Name

Signature

Wetland Scientist

Print/Type Title

5/29/2020

Date



## **Environmental Science & Assessment, LLC**

### **MEMORANDUM**

**DATE:** May 29, 2020

**TO:** Clean Water Services – Environmental Review

**Cc:** Tim Kerr – Kerr Contractors

**FROM:** Environmental Science & Assessment, LLC

**RE:** Simplified Site Assessment – Kerr – Tonquin Road (TL 2S133BB00100 & 2S1330000400)

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Environmental Science & Assessment, LLC (ES&A) conducted a site evaluation for a Clean Water Services (CWS) site certification on a 28.17-acre site southeast of the intersection of SW Oregon Street and SW Tonquin Road in Washington County, Oregon (Figure 1). The project area includes two tax lots located west of SW Tonquin Road (Tax Lot 2S133BB00100 & 2S1330000400).

This memorandum and attachments are submitted for use in documenting the presence or absence of Sensitive Areas (SAs) and their associated Vegetated Corridors (VCs) on or surrounding the project site to obtain a service provider letter (SPL) for the proposed development.

Field data was collected, and the entire site was investigated for wetland conditions; no wetland conditions were present within the site. During a previous site investigation for a Significant Natural Resource report submitted to Washington County, however, a wetland area was identified off-site on the lot to the south, approximately 1,000 feet south of the site boundary.

The immediate site development will involve mass grading with the long term site proposed for commercial development including several gravel yards and 4 future buildings with a gravel access road from Tonquin Road onto the western-most lot (TL 2S133BB00100). The gravel road would then extend to the eastern lot (TL 2S1330000400) (Figure 4).

This memorandum includes the following attachments:

Attachment A: Figures  
Attachment B: Site photographs  
Attachment C: Wetland Determination Data Forms

## METHODOLOGY

The primary guidance document for this report is the *Design and Construction Standards for Sanitary Sewer and Surface Water Management* (Resolution and Order 19-22; Clean Water Services, 2019), which provides the methodology for assessing the presence and extent of Sensitive Areas at the development site and within 200 feet of the site, and the required VCs adjacent to them.

Two levels of investigation were used to evaluate the presence of Sensitive Areas. The first level included a review of existing available background data and maps. The second level consisted of an onsite evaluation.

Reviewed background data included the following information:

- Aerial Photography and Topography (Metro Data Resource Center's MetroMap, 2020);
- City of Sherwood Local Wetland Inventory (1992);
- Web Soil Survey of Washington County, Oregon (Natural Resource Conservation Service [NRCS], 2019).
- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Map Washington County, OR area (Wetlands Mapper, 2019)

ES&A conducted the site evaluation on May 26, 2020. The investigation focused on the subject tax lots and relevant field data was collected to determine the presence or absence of SAs. The surrounding areas, including the tax lot to the south where wetland was previously mapped as well as Rock Creek to the west, were investigated for possible connectivity to any onsite resources. One Data plot (DP-1) was taken at the topographic low point onsite to verify the absence of wetlands. The wetland determination data was collected using the methodology provided in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE, 2010).

The Sensitive Area boundaries and the data plot locations were surveyed using a Trimble Geo XH hand held GPS unit; the accuracy is estimated to be  $\pm$  two feet. A base map showing topography, roads, structures, and tax lot boundaries was provided by DOWL.

## SITE DESCRIPTION

The project site is bordered on the west by SW Tonquin Road, southeast of the intersection with SW Oregon Street (Figure 1). An extensive emergent and forest wetland complex along Rock Creek is located west of SW Tonquin (Figure 2). No structures are present within the project area currently, but extensive excavation and material storage and logging has taken place (Photos 1-6), which

has altered the historic vegetative cover, as shown in Figure 2 aerial imagery. On TL 100, the topography slopes down from the east to the west up to steeply sloped area along the edge of the SW Tonquin Road right-of-way. TL 400 generally slopes west with the highest topography on the east end and a broad flatter area in the middle of the lot (Figure 3).

Much of the site is bare ground and gravel where vegetation has been removed and dirt roads constructed. The vegetated areas are primarily weedy grasses including Soft Brome (*Bromus hordeaceus*), Tall Fescue (*Schedonorus arundinacea*), and Velvet Grass (*Holcus lanatus*) with little to no canopy cover, and other common weedy species such as Oxeye Daisy (*Leucanthemum vulgare*) and Common Mullein (*Verbascum thapsus*) throughout (Photo 7). The western site boundary along SW Tonquin Road, above the steep drop to the road, has native shrubs and several large trees including Tall Oregon Grape (*Mahonia aquifolium*), Serviceberry (*Amelanchier alnifolia*), Big Leaf Maple (*Acer macrophyllum*), and Oregon White Oak (*Quercus garryana*) (Photo 8, DP-1). The base of the steep slope is dominated by Reed Canary Grass and Himalayan Blackberry along the road within the road Right of Way (Photo 9).

Soil survey mapping indicates 3 soil types mapped onsite. Starting in the northern end of TL 100, the soil is mapped as the non-hydric Briedwell stony silt loam, 0 to 7 percent slopes (Map Unit 5B, Rating 0). Moving south along the northern portion of TL 400, the soil type is mapped as the non-hydric Laurelwood silt loam, 3 to 7 percent slopes (Map Unit 28B, Rating 0). The remainder of the site is mapped as the non-hydric Xerochrepts-Rock outcrop complex (Map Unit 47D, Rating 0). The nearest wetland soils are located west of the site along Rock Creek, where the soil is mapped as the hydric Cove silty clay loam (NRCS, Web Soil Survey, 2018). This area follows the lower topography along the stream corridor, west of Tonquin Road, and does not extend onto the site.

The NWI and MetroMap do not map any wetland resources onsite. The site is not located within an LWI study area.

## **OFFSITE SENSITIVE AREA AND VC**

Rock Creek, a perennial tributary to the Tualatin River, flows west of the site along SW Tonquin Road surrounded by emergent and forested wetland areas. The Rock Creek channel is approximately 100-300 feet west of the western boundary of the study area and is separated by the physical barrier of SW Tonquin Road. There would be no impacts to these Sensitive Areas and their associated Vegetated Corridors (VC) because SW Tonquin Road is a paved two-lane road with consistent traffic flow.

There is a previously mapped 14,214 SF wetland in the adjacent southern tax lot, approximately 1000-feet south of the southern study area boundary mapped in December 2018 as part of a Significant Natural Resource review ES&A

conducted for the same client. There will be no impacts to this Sensitive Area or its associated VC.

Based on Clean Water Services requirements, Section 3.03.1, Table 3-1 of R&O 19-22, the VC boundary for Rock Creek and the wetlands surrounding it, as well as the small wetland area to the south, extends 50 feet from the Sensitive Area boundaries since no adjacent slopes exceed 25 percent. Slopes for the corridors were determined using MetroMap and field observations. The VC associated with Rock Creek and all nearby wetlands do not encroach into the study area (Figure 3).

## **SITE PLAN**

The proposed commercial development includes several gravel yards and 4 future buildings and a gravel access road from Tonquin Road onto the western-most lot (TL 2S133BB00100) from SW Tonquin Road. The gravel road would then extend to the eastern lot (TL 2S1330000400). Stormwater treatment is provided by rain garden swales along the western end of site (Figure 4).

## **CONCLUSION**

No Sensitive Areas were identified on site, and the 50-foot buffers associated with Rock Creek and surrounding wetlands do not extend into the study area. The proposed development at tax lots 2S133BB00100 and 2S1330000400 shown in Figure 4 of this report will not impact any Sensitive Areas or associated Vegetated Corridors.

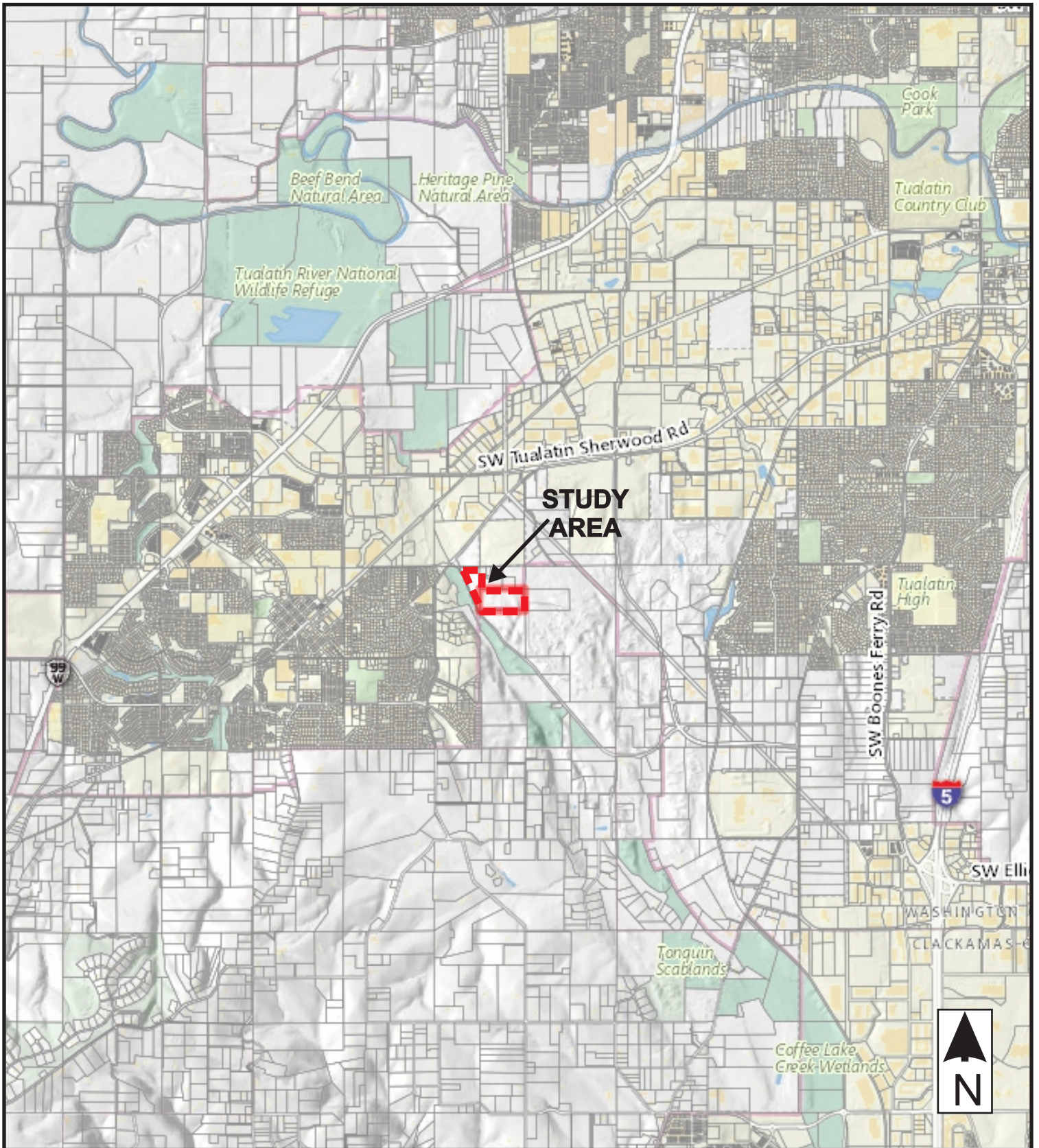
## REFERENCES

- Clean Water Services, 2020. Design and Construction Standards for Sanitary Sewer and Surface Water Management. R&O 19-5 as revised by R&O 19-22.
- MetroMap, 2020. Metro Data Resource Center's MetroMap. Available online at: <https://gis.oregonmetro.gov/metromap/>.
- Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at: <http://websoilsurvey.nrcs.usda.gov/>. Accessed May 2020.
- U.S. Army Corps of Engineers (USACE). 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*, ed. J.S. Wakeley, R. W. Lichvar, and C.V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

**ATTACHMENT A: FIGURES**

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Source: Metro Data Resource Center. <http://gis.oregonmetro.gov/metromap/>

Environmental  
Science &  
Assessment, LLC

Vicinity Map  
Kerr - Tonquin Road  
Washington County, Oregon

**Figure 1**

Approx. Scale:  
1" = 5000'



Source: Google Earth

Imagery Date: 5/8/2019

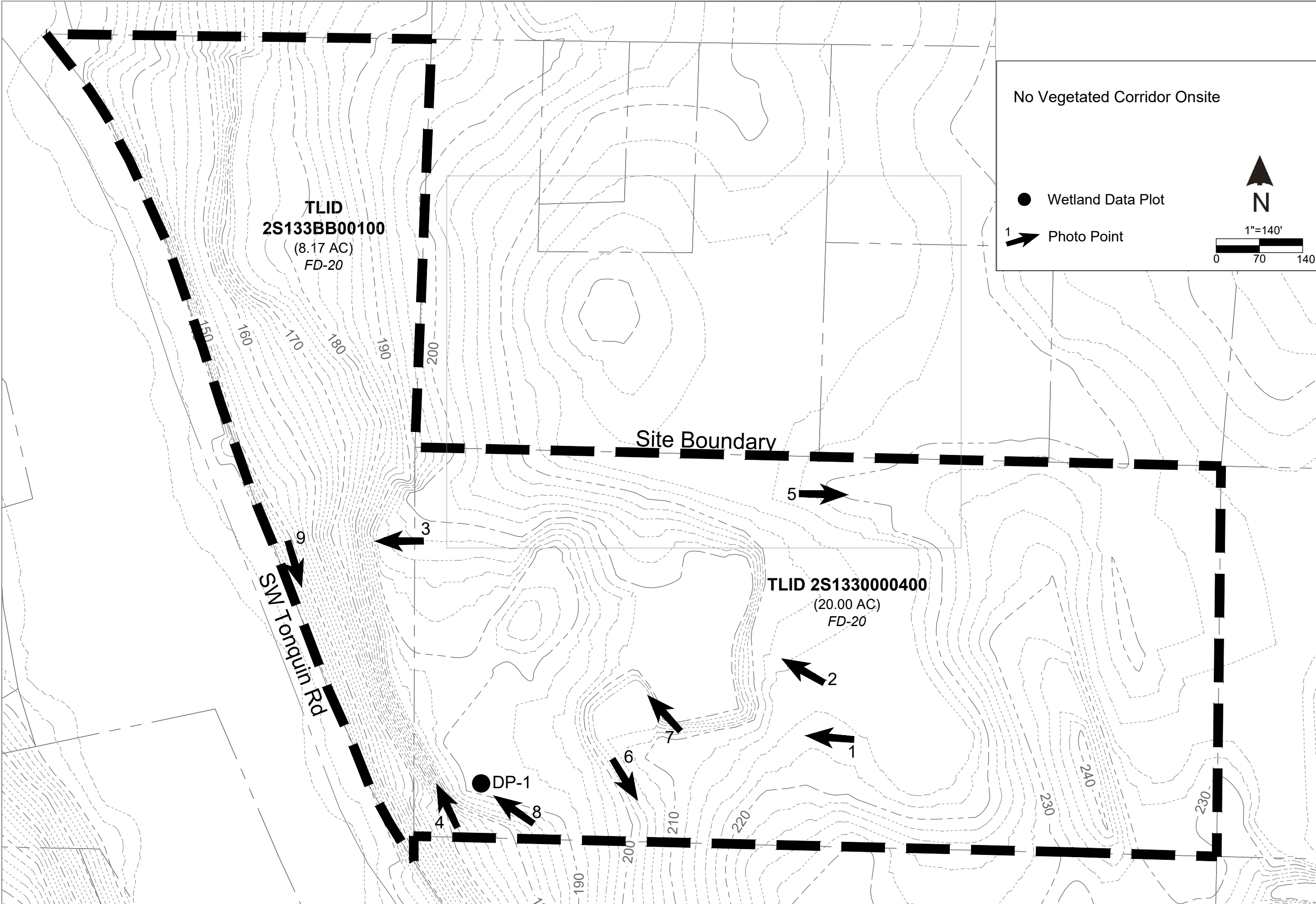
Environmental  
Science &  
Assessment, LLC



Aerial Image  
Kerr - Tonquin Road  
Washington County, Oregon

Approx. Scale:  
1" = 750'

Figure 2



4831 NE Fremont St.,  
 Suite 2B  
 Portland, OR 97213  
 Phone: 503.478.0424  
 www.esapdx.com

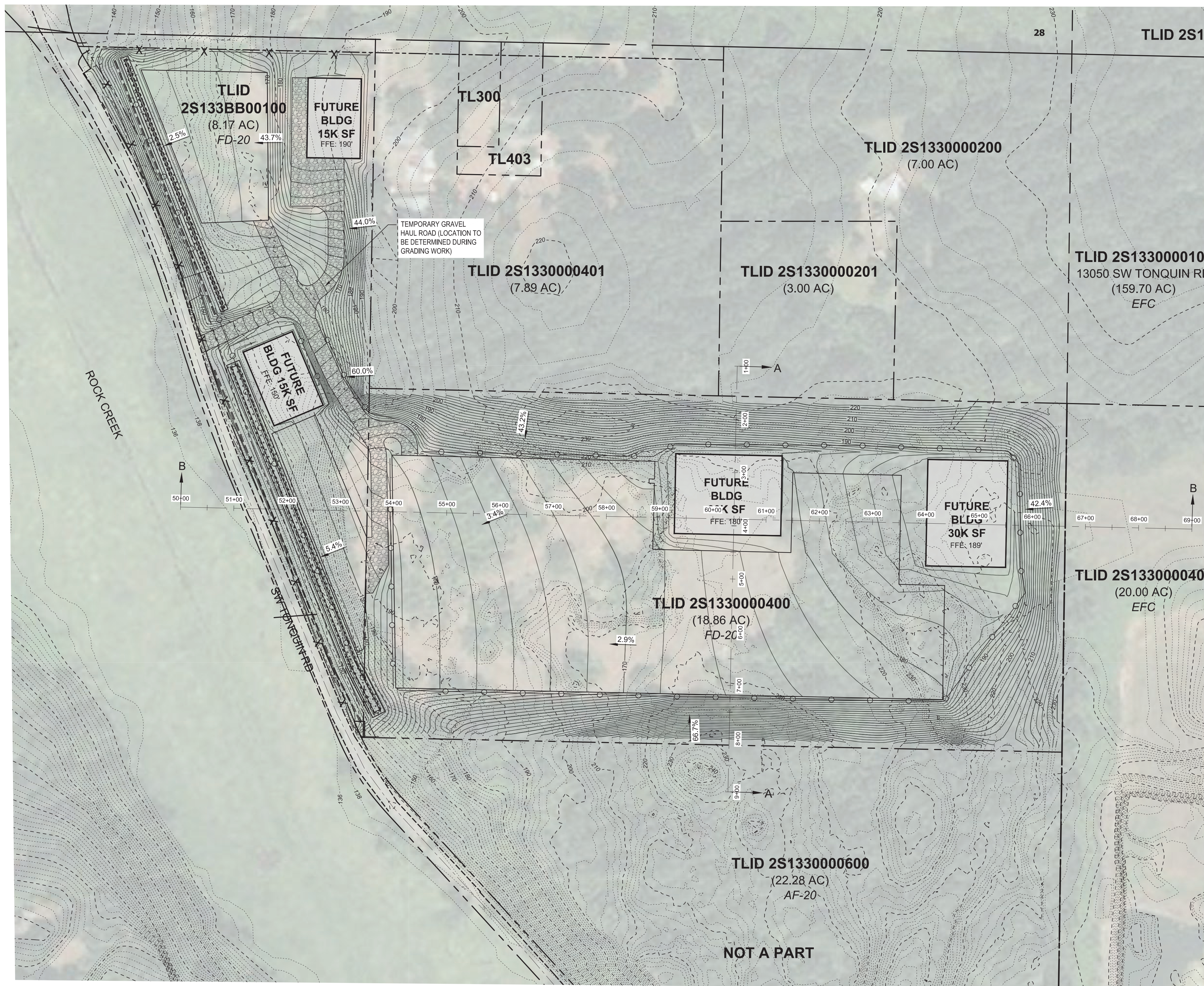
Environmental  
 Science &  
 Assessment, LLC

Existing Conditions Map  
 Tonquin Road  
 Washington County, Oregon

Base Map Source:	DOWL
Mod. By:	KR
Date:	5/2020
Job:	18047
Rev:	00/00

Fig. 3

G:\22\14483-01\65CAD\Civil\_CD\SC-CS-GR-14483.dwg PLOT DATE 2020-09-28 17:26 SAVED DATE 2019-07-09 15:20 USER: mtowie



**LEGEND**

	EXISTING PROPERTY LINE
	EXISTING CENTER LINE
	PROPOSED BUILDING
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	PROPOSED GRAVEL ACCESS ROAD
	PROPOSED SEDIMENT FENCE
	PROPOSED STRAW WATTLES

TOPS OF CUT SLOPES AND BOTTOMS OF FILLS ARE TO BE ROUNDED OFF TO A MINIMUM RADIUS OF FIVE (5) FEET TO BLEND WITH THE NATURAL TERRAIN.

**EARTHWORK QUANTITIES**

**OVERALL SITE**

PROPOSED CUT:	1,080,000 CY
PROPOSED FILL:	14,000 CY
PROPOSED NET EXPORT:	1,066,000 CY

**WITHIN SNRA**

PROPOSED CUT:	53,900 CY
PROPOSED FILL:	13,200 CY
PROPOSED NET EXPORT:	40,700 CY

- ASSUMPTIONS:**
- STRIPPING DEPTH EQUAL TO APPROXIMATELY 12"
  - SUBGRADE IS ROUGHLY 12" BELOW FINISHED GRADE

NOTE: ALL BUILDING SHOWN ARE CONCEPTUAL IN NATURE. NOT BUILDINGS ARE PLANNED WITH THIS APPLICATION

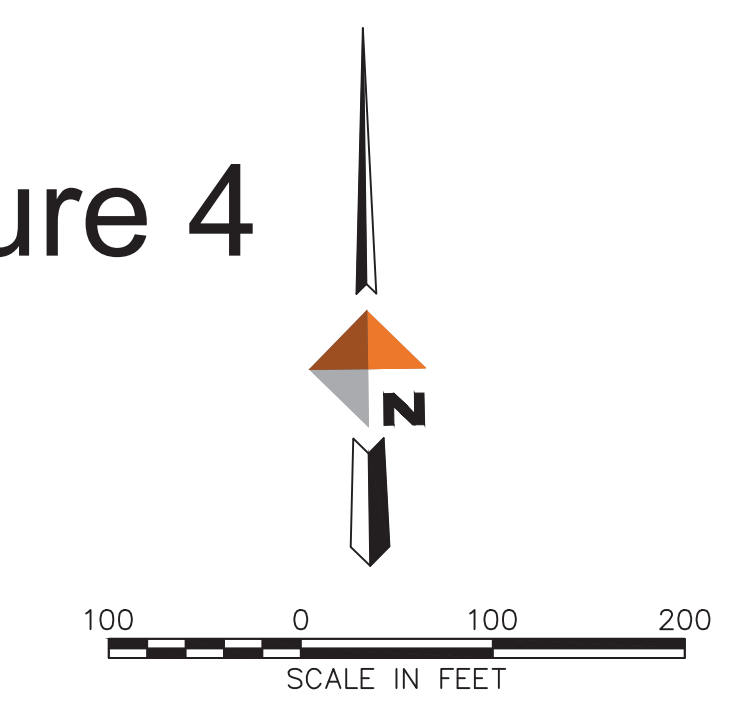
**SITE INFORMATION**

TOTAL SITE AREA = 28.22 AC  
TOTAL DISTURBED AREA = 28.15 AC

GROUNDWATER ELEVATION IS APPROXIMATELY 130'. MEASUREMENT TAKEN IN JUNE 2001 AT WELL LOG SITE WASH 1836.

SEE DRAINAGE REPORT TECHNICAL APPENDIX FOR SOILS INFORMATION FROM USGS SOIL SURVEY.

Figure 4



REV	DATE	DESCRIPTION



**DOWL**

720 SW Washington Street, #750  
Portland, Oregon 97205  
971-280-8641

TONQUIN ROAD GRADING PERMIT  
LAND USE DEVELOPMENT PLANS  
**GRADING & EROSION CONTROL PLAN**

PROJECT 14483.01  
DATE 07/09/2019

© DOWL 2019  
SHEET

**C3.0**

**ATTACHMENT B: SITE PHOTOGRAPHS**

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Photo 1: TL 100 view west along rock pit.  
Imagery date: December 2018



Photo 2: TL 100 view northwest of  
excavated pit.  
Imagery date: December 2018



Photo 3: View west of north end off site  
and off-site wetland along SW Tonquin  
Road.  
Imagery date: December 2018



Photo 4: View northwest along steep slope within County mapped riparian habitat.  
Imagery date: December 2018



Photo 5: View east of north end of site.  
Imagery date: December 2018



Photo 6: View south of south end - note recent logging and site grubbing.  
Imagery date: December 2018



Photo 7: View northwest showing typical vegetation onsite  
Imagery date: May 2020



Photo 8: View from DP-1 at low point onsite, showing shrub edge along road  
Imagery date: May 2020



Photo 9: View south along western site edge  
Imagery date: May 2020



**ATTACHMENT C: WETLAND DETERMINATION DATA FORM**

## WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Kerr - Tonquin City/County: Washington Sampling Date: 5/26/2020  
 Applicant/Owner: Tim Kerr - Kerr Contractors State: OR Sampling Point: DP-1  
 Investigator(s): K. Sanderford, E. Dalton Section, Township, Range: T2S R1W S33  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10%  
 Subregion (LRR): A-Northwest Forests and Coasts Lat: 45.35672° Long: 122.82056° Datum: NAD 1983  
 Soil Map Unit Name: Xerochrepts-Rock outcrop complex, map unit 47D, rating 0 NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30' diameter</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25</u> (A/B)	
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
= Total Cover					Total % Cover of: _____ Multiply by: _____
<b>Sapling/Shrub Stratum (Plot size: <u>30' diameter</u>)</b>				OBL species _____ x 1 = _____	
1. <u>Mahonia aquifolium</u>	40	Y	FACU	FACW species _____ x 2 = _____	
2. <u>Toxicodendron diversilobum</u>	15		FAC	FAC species _____ x 3 = _____	
3. <u>Rosa pisocarpa</u>	10		FAC	FACU species _____ x 4 = _____	
4. <u>Corylus cornuta</u>	10		FACU	UPL species _____ x 5 = _____	
5. <u>Oemleria cerasiformis</u>	10		FACU	Column Totals: _____ (A) _____ (B)	
= Total Cover				Prevalence Index = B/A = _____	
<b>Herb Stratum (Plot size: <u>5' diameter</u>)</b>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Holcus lanatus</u>	30	Y	FAC		<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Bromus hordeaceus</u>	30	Y	FACU		<input type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Vicia sativa</u>	30	Y	UPL		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. _____	_____	_____	_____		<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____		<input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>
6. _____	_____	_____	_____		<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
7. _____	_____	_____	_____		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
= Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
<b>Woody Vine Stratum (Plot size: _____)</b>					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
= Total Cover					
% Bare Ground in Herb Stratum _____					
Remarks:					

**SOIL**

Sampling Point: DP-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12"	7.5 YR 2.5/3	100						1-4" diameter rocks make up 25% of top 12"

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: rocks  
Depth (inches): 12"

**Hydric Soil Present?** Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Stunted or Stressed Plants (D1) (**LRR A**)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (**LRR A**)
- Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: