

**Natural Resource Assessment**  
**Sherwood Industrial Park Phase 3 Development**  
**Site,**  
**Sherwood, Oregon**  
(Township 2 South, Range 1 West, Section 29D, Tax Lots 150)

**Prepared for**

**Brenda Christina**  
**ORWA Sherwood, LLC**  
8320 NE Highway 99  
Vancouver, WA 98665

**Prepared by**

Carlee Michelson  
Joe Thompson, Caroline Rim,  
John van Staveren  
**Pacific Habitat Services, Inc.**  
9450 SW Commerce Circle, Suite 180  
Wilsonville, Oregon 97070  
(503) 570-0800  
(503) 570-0855 FAX

**PHS Project Number: 7296**

**March 20, 2022**



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## **1.0 INTRODUCTION**

Pacific Habitat Services, Inc. (PHS) conducted a natural resource assessment for a portion of a property located along SW Century Drive in Sherwood, Oregon. See Figure 1 for limits of the study area; all figures are in Appendix A. Existing development on this parcel has occurred in accordance with previously issued Service Provider Letters, CWS file numbers 08-001036 and 13-002298.

This report presents the definitions and the methodology used to assess the natural resources within the project site as required by Clean Water Services (CWS) design and construction standards (R&O 19-05). The field component of the natural resource assessment for this site was completed on August 25, September 22, and October 6, 2021.

## **2.0 EXISTING CONDITIONS**

The study area is located directly east and south of SW Century Drive, and south of SW Tualatin-Sherwood Road in Washington County (tax lot 150). Topography is gently sloping east before a moderate decline in slope occurs toward a lower terrace surrounding Rock Creek, which flows north beyond study area. Elevations on-site range between approximately 190 feet and 130 feet (Oregon Metro LiDAR, 2014).

In the southwest portion of Tax Lot 150, the site contains four existing industrial buildings with adjacent parking lots, stormwater detention pond, truck turn-arounds, and loading docks. There is a railroad right-of-way (ROW) adjacent to a ditch bordering the southern study area; the ditch conveys stormwater east toward Rock Creek.

An examination of historical aerial photos shows that earthwork and vegetation clearing occurred on site between 2003 and 2005 ([www.historicaerials.com](http://www.historicaerials.com)). The stormwater detention basin and enhancement plantings (within Wetland A) were constructed between 2007 and 2008, while the existing industrial buildings and associated infrastructure followed between 2010 and 2016. The grass fields north of the detention basin are mowed regularly and consist mainly of invasive perennial grasses. Soils appear disturbed with some areas of mixed matrices and/or high-chroma soils.

Natural Resources Conservation Services (NRCS) mapped soils within the study area include Aloha silt loam, Quatama loam, Huberly silt loam, Briedwell stony silt loam, Wapato silty clay loam, urban land, and Cove clay. Cove clay, Huberly silt loam, and Wapato silty clay loam are hydric soils typically associated with wetland.

## **3.0 DISCUSSION OF ON AND OFF-SITE WATER QUALITY SENSITIVE AREAS**

A delineation of sensitive areas was conducted across tax lot 150. Two wetlands totaling 11.97 acres were identified and one waters of the State/US totaling 0.50 acres (Figure 2). Both wetlands were delineated based on the presence of wetland hydrology, hydric soils, and hydrophytic vegetation in accordance with the Routine On-site Determination, as described in

the *Corps of Engineers Wetland Delineation Manual, Wetlands Research Program Technical Report Y-87-1* (“The 1987 Manual”) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*.

### **Wetland A**

Wetland A (11.17 acres/ 486,682 square feet) is a palustrine forested-broad leaved deciduous, and emergent-persistent, seasonally flooded/saturated (PFO1/EM1E) wetland with a hydrogeomorphic (HGM) classification of Riverine. The wetland receives hydrology from seasonal overflow from Rock Creek, overland flow, direct precipitation, and stormwater from adjacent developments. Dominant vegetation consists of Pacific willow, Oregon ash, black cottonwood, Himalayan blackberry, tall Oregon grape, reed canarygrass, colonial bentgrass, lesser hawkbit, field meadow foxtail, and velvet grass. The majority of the central portion is PEM, with PFO along the wetland/upland boundary. Wetland A continues north and south beyond the study area.

Vegetation in the adjoining upland east and west of Wetland A consists of black cottonwood, Oregon ash, tall Oregon grape, Scotch broom, Himalayan blackberry, trailing blackberry, reed canarygrass, orchard grass, field horsetail, Canada thistle, brome, sweet vernal grass, and oxeye daisy (*Leucanthemum vulgare*). No hydric soils or hydrology were present in the upland.

### **Wetland Ditch**

Wetland Ditch (0.56 acres/ 24,194 square feet) exists in the southern study area and conveys seasonal runoff into Wetland A. Wetland Ditch is a palustrine scrub-shrub, broad leaved deciduous, seasonally flooded/saturated, excavated, partly drained/ditched (PSS1Exd) wetland with a HGM classification of Slope. The wetland receives hydrology from direct precipitation and overland flow, particularly stormwater accumulation. Dominant vegetation consists of Oregon ash, Himalayan blackberry, velvet grass, colonial bentgrass, spreading rush (*Juncus patens*), and Dewey’s sedge (*Carex deweyana*).

Vegetation in the upland consists of Oregon white oak, Douglas fir, Western hazelnut, Scouler’s willow, spirea, Scotch broom, tall Oregon grape, red alder, Himalayan blackberry, Douglas hawthorn, clustered rose, reed canarygrass, velvet grass, and bed straw. Wetland Ditch does not extend beyond the study area but does connect to Wetland A which is lower in elevation within the floodplain of Rock Creek.

### **Rock Creek**

Rock Creek (0.50 acres/ 21,944 square feet) is a perennial tributary of the Tualatin River residing within Wetland A. The creek flows north and continues beyond the study area. The creek is a riverine, lower perennial, unconsolidated bottom (R2UB) with a HGM classification of Riverine. Dominant vegetation along the banks of the creek consists of reed canarygrass, but trees and shrubs populate the bank near SW Tualatin-Sherwood Road. The channel width varies between approximately 20-25 feet with steep, almost vertical banks aerially aligned with OHW.



## **Storm Pond**

A Storm Pond (13,272 acres/ 0.30 square feet) exists directly north of existing development east of SW Century Drive. The pond is man-made (circa 2007) and designed to detain stormwater piped under SW Century Drive, as well as from development to the south. The Cowardin class is palustrine, aquatic bed, rooted vascular, artificially flooded, excavated (PAB3Kx) wetland with a HGM class of Depressional. The storm pond is excavated within upland and the edges are vegetated with Himalayan blackberry, some patchy reed canarygrass and other enhancement plantings, including spirea and Pacific willow. A stormwater pipe conveys overflow from the pond east, toward Rock Creek.

## **4.0 VEGETATED CORRIDOR ASSESSMENT**

### **4.1 Vegetated Corridor Width Determinations**

The slopes adjacent to the sensitive areas were assessed to determine the width of the vegetated corridor (VC). The area of VC within the study area totals 206,679 square feet (4.74 acres); the location of the VC, adjacent slopes, and corridor widths are shown on Figures 2A-2F.

The project VC widths are determined to be as follows:

**Table 1. Summary of VC Widths**

<b>Sensitive Area</b>	<b>VC Width</b>	<b>Justification</b>
Wetland A	Regulated: 50' to 35' beyond break in slope Actual: 50' to 65'*	<ul style="list-style-type: none"><li>• &gt; 0.5 acres and not isolated</li><li>• Slopes majority &lt; 25% ; areas &gt;25% to west</li></ul>
Wetland Ditch	Regulated: 50' Actual: 43-50*	<ul style="list-style-type: none"><li>• &lt; 0.5 acres and not isolated</li><li>• Slopes &lt; 25%</li></ul>
Stormwater Pond	0 -ft	<ul style="list-style-type: none"><li>• Artificially created Stormwater Feature</li></ul>

\*In some areas the regulated VC is truncated by existing development

Wetland A is greater than 0.5 acres and not isolated with slopes <25% throughout the majority of the site; an area southeast along Wetland A has slopes >25%- these areas have an extended VC that ends at the edge of existing development- parking lot. The width of VC ranges from 50-65 feet.

Wetland Ditch is less than 0.5 acres and not isolated with slopes <25%, which warrants a 50-ft buffer. In some areas the full width of regulated VC is not present due to existing development to the northwest.

As the stormwater pond is artificially constructed for stormwater infrastructure, no VC was placed around the feature. All VC width measurements are in accordance with Section 3.03.1 of CWS regulations.

## 4.2 Vegetated Corridor Plant Communities

There are three plant communities within the VC as described below and shown on Figure 3, and detail Figures 3A to 3F, along with vegetation sample points and photograph locations.

Plant Community A (143,309 sf / 3.29 acre) encompasses a portion of VC surrounding Wetland A within the study area. The community is mainly forested with 50% native species. There are many enhancement plantings remaining along the Wetland Ditch, represented by sample point 1.

Plant Community B (29,247 sf / 0.67 acre) encompasses a portion of VC along the northeast corner of Wetland A and in the southwest portion of the lot, where off-site wetland has a VC that extends slightly into the site. The community has no canopy and contains invasive shrubs like Scotch broom and Himalayan blackberry with an herbaceous layer comprised of perennial grasses and weedy forbs.

Plant Community C (31,126 sf / 0.71 acre) encompasses a portion of VC on each side of Wetland A dominated by Himalayan blackberry and other invasives.

See Appendix C for plant species and percent cover as documented in the plant community. Appendix C also includes photographs of the sensitive area and the VC.

## 4.3 Vegetated Corridor Plant Community Condition

Table 2 shows the percent composition of native versus non-native species and tree canopy cover within each plant community in accordance with Clean Water Services’ standards.

**Table 2. Summary of Plant Communities**

Corridor Condition		Plant Community		
		A	B	C
<b>Good</b>	>80% cover of native plants, and >50% tree canopy	<b>57% canopy cover</b>		
<b>Marginal</b>	50% - 80% cover of native plants, and 26-50% tree canopy	<b>50% native species</b>		
<b>Degraded</b>	<50% cover of native plants, and < 25% tree canopy		<b>0% canopy, 12% native species</b>	<b>0% canopy, 0% native species</b>

The condition of the vegetated corridor is defined by the percentages of native species and canopy cover. Plant Community A meets “Good Condition” while Plant Communities B and C meet “Degraded Condition”.

## 5.0 PROPOSED PROJECT

The proposed project includes the continuation of a phased development plan for Sherwood Industrial Park that avoids all impacts to adjacent VC. The development site will have street

frontage on SW Tualatin-Sherwood Road and along SW Century Drive. The proposal is to construct two new industrial buildings in the northwest corner of tax lot 150 (Figure 4).

The project infrastructure must comply with minimum parking, pedestrian and vehicle circulation, ingress/egress to circulatory streets, as well as stormwater treatment compliance with Standard Local Operating Procedure for Endangered Species (SLOPES V) standards. The project will adhere to Clean Water Services Design & Construction Standards R&O 19-05. During the past construction of Phase 1 (Figure 2-Existing Conditions), water quality treatment was built to treat future stormwater anticipated for future phases of development. minor grading updates are required for the existing stormwater detention pond, storm sewer lateral connections and/or extensions. This work will be addressed through the City’s Land Use Approval and review of stormwater management plan by CWS.

### 5.1 Vegetated Corridor Enhancement

No impacts are proposed to existing VC on site, and no mitigation is proposed. In accordance with CWS 3.06, the protection of sensitive areas and VC will be achieved through sediment control measures, including erosion control fencing, construction fencing, storm inlet protection, and other BMP’s.

All VC plant communities within tax lot 150 will be enhanced to “good” corridor condition to comply with CWS requirements outlined under Section 3.08 (Figure 5). Enhancement will include the removal of any non-native species and comply with density requirements outlined in Appendix A: Planting Requirements (R&O 19-5).

**Table 3 Appendix A: Planting Requirements and Vegetated Corridor Definitions**

Vegetated Corridor Condition Definition	Requirements of Vegetated Corridor, Enhancement, and/or Mitigation
<p><b>Good Corridor Condition:</b> Combination of native trees, shrubs, and groundcover covering greater than 80% of the area and greater than 50% tree canopy exists (areal measure)</p>	<ul style="list-style-type: none"> <li>• Provide certification to District, per Section 3.14.5, that the Vegetated Corridor meets condition criteria.</li> <li>• Remove any invasive non-native species within the corridor by hand and re-vegetate cleared area using low impact methods.</li> <li>• If impact is to occur, provide District with a native plant revegetation plan appropriate to the site conditions developed by an ecologist/biologist or landscape architect to restore condition. See Appendix A: Planting Requirements.</li> <li>• Re-vegetate impacted area per approved plan to re-establish Good Corridor Conditions</li> </ul>
<p><b>Degraded Corridor Condition:</b> Combination of native trees, shrubs, and groundcover covering is less than 50% of the area and less than 25% tree canopy exists (areal measure) (Enhancement up to Good Corridor Condition required regardless of planned impact)</p>	<ul style="list-style-type: none"> <li>• Provide certification to District, per Section 3.14.5, that the Vegetated Corridor meets condition criteria.</li> <li>• Remove any invasive non-native species within the corridor by hand or mechanically.</li> <li>• Provide District with a native plant re-vegetation plan appropriate to the site conditions developed by an ecologist/biologist or landscape architect to restore to a Good Corridor Condition. See Appendix A: Planting Requirements.</li> <li>• Vegetate Corridor to establish Good Corridor Condition</li> </ul>

A final planting plan will be submitted after the issuance of a Service Provider Letter; however, the table below provides a suggested planting list for the VC.

**Table 4. Proposed Plantings within Plant Community B and C: VC Enhancement Areas (63,370 square feet)\***

Botanical Name	Common Name	Minimum Rooting Size	Quantity
<b>TREES 634</b>			
<i>Rhamnus purshiana</i>	Cascara	2 gallon	54
<i>Prunus emarginata</i>	Bitter cherry	2 gallon	150
<i>Alnus rubra</i>	Red alder	1 gallon	330
<i>Thuja plicata</i>	Western red cedar	2 gallon	100
<b>SHRUBS 3,169</b>			
<i>Amelanchier alnifolia</i>	Western serviceberry	2 gallon	419
<i>Corylus cornuta</i>	Western hazelnut	1 gallon	400
<i>Lonicera involucrata</i>	Black twinberry	1 gallon	400
<i>Lonicera ciliosa</i>	Orange honeysuckle	2 gallon	350
<i>Mahonia aquifolium</i>	Tall Oregon grape	1 gallon	600
<i>Ribes sanguineum</i>	Red flowering currant	1 gallon	500
<i>Symphoricarpos albus</i>	Snowberry	1 gallon	500
<b>GRASS SEED</b>			
<i>Bromus carinatus</i>	California brome	Broadcast Seed as necessary	
<i>Elymus glaucus</i>	Blue wildrye	Broadcast Seed as necessary	

\* Does not include “Good Condition” areas , which will comply with the requirements outlined in the table below to prevent disturbance to previously enhanced buffers.

**Table 5. Proposed Enhancement within Plant Community A: VC Enhancement Area (143,309 square feet)**

Requirements of Vegetated Corridor, Enhancement, and/or Mitigation
<ul style="list-style-type: none"> <li>Remove any invasive non-native species within the corridor by hand and re-vegetate cleared area using low impact methods.</li> <li>Broadcast seed bare ground or disturbed areas from weed removal with grass seed mix described above.</li> </ul>

## 6.0 REFERENCES

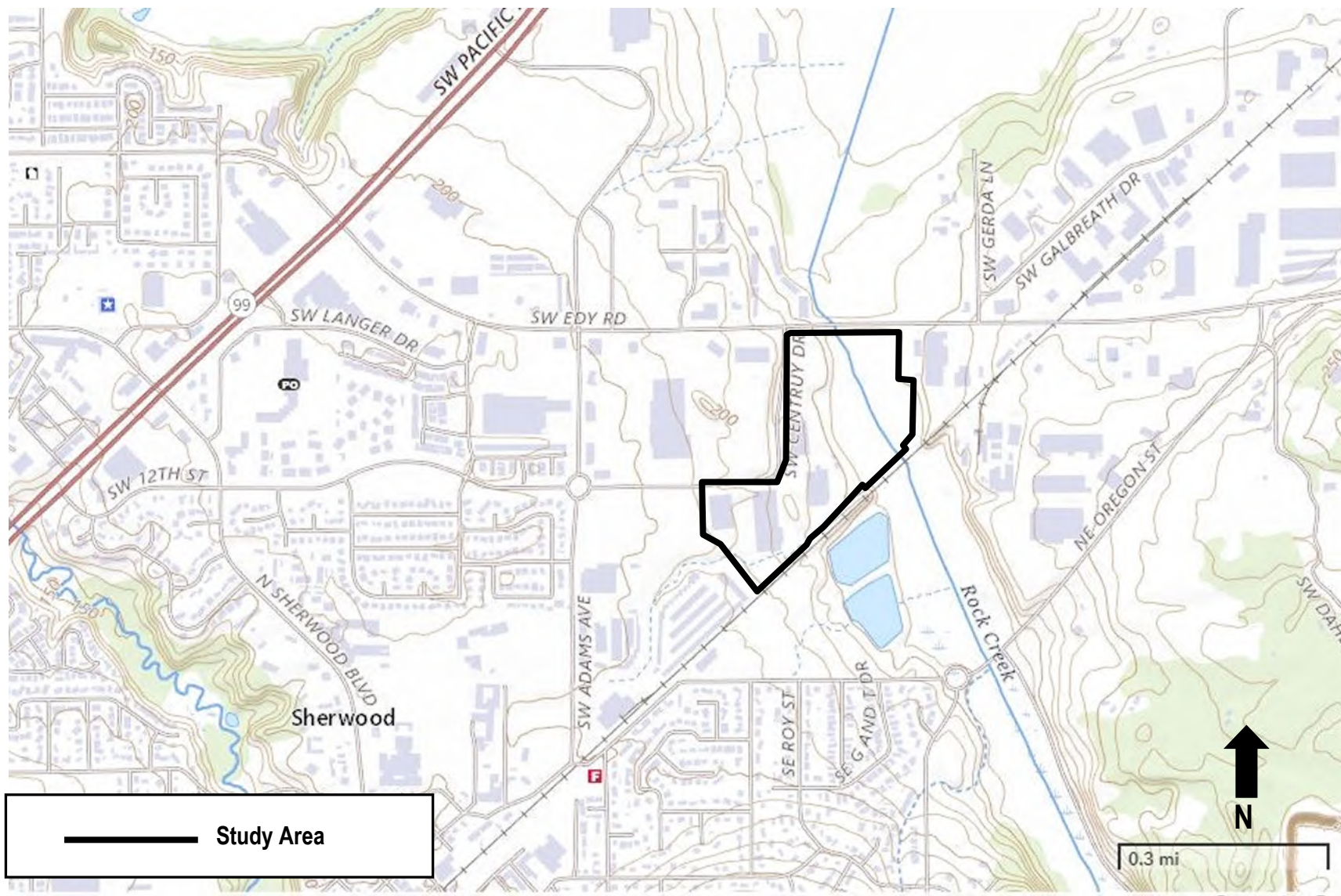
- Adamus, P.R. 2001. *Guidebook for Hydrogeomorphic (HGM)–based Assessment of Oregon Wetland and Riparian Sites: Statewide Classification and Profiles*. Oregon Division of State Lands, Salem, OR.
- Clean Water Services, 2021. *Design and Construction Standards (R&O 19-05)*.
- ORMAP tax maps, 2022. <http://www.ormap.net/>
- US Army Corps of Engineers, Environmental Laboratory, 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*.
- US Department of Agriculture, Natural Resources Conservation Service (NRCS), 2022. Web Soil Survey. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.html>
- US Geologic Survey, online, 2022. *7.5-minute topographic map, Sherwood, Oregon-Washington County quadrangle*.

# Appendix A

## Figures







Project #7296  
10/27/2021



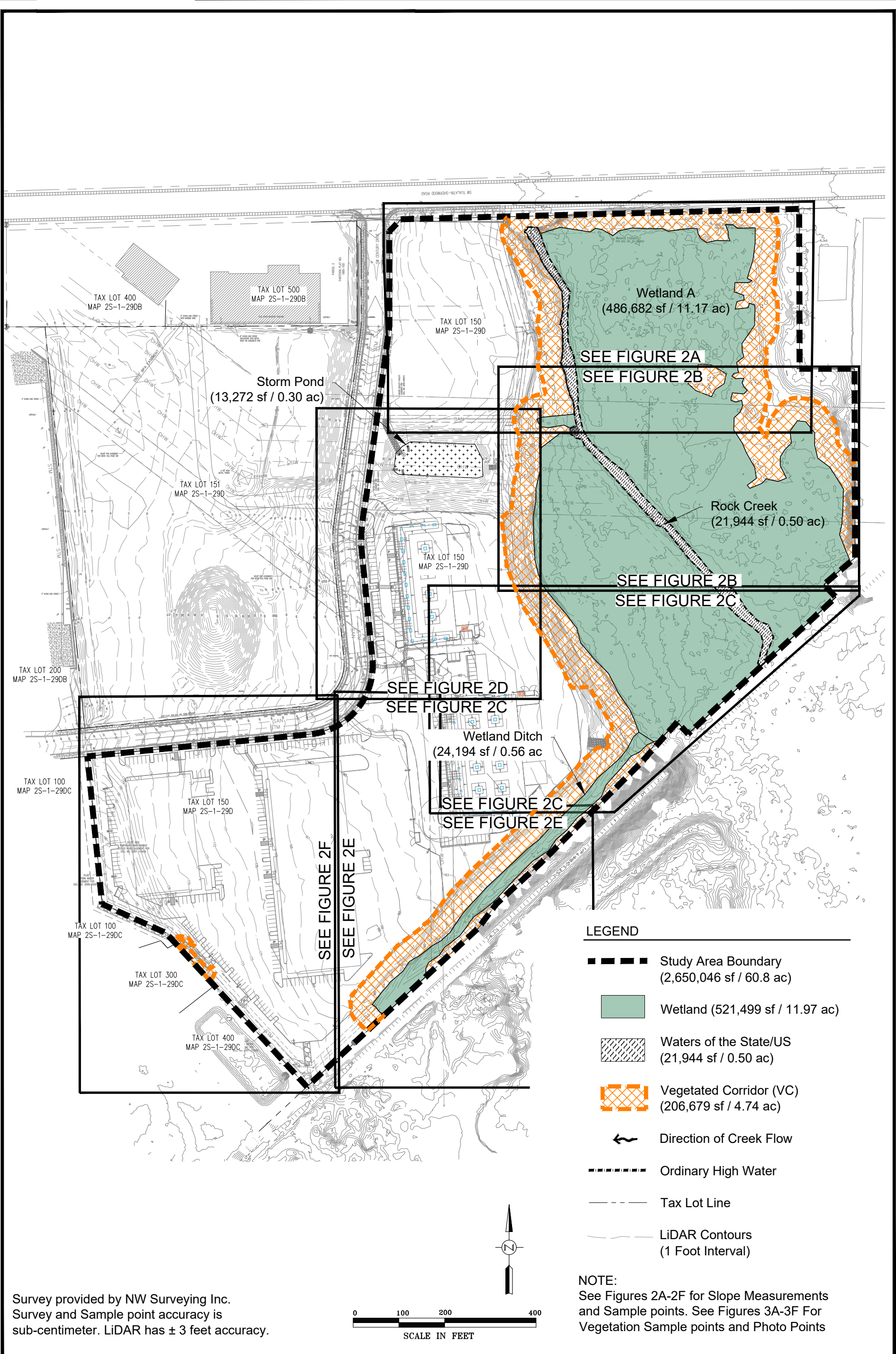
Pacific Habitat Services, Inc.  
9450 SW Commerce Circle, Suite 180  
Wilsonville, OR 97070

General Location and Topography  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon  
United States Geological Survey (USGS) Sherwood, Oregon 7.5 quadrangle, 2022  
(viewer.nationalmap.gov/basic)

FIGURE

1



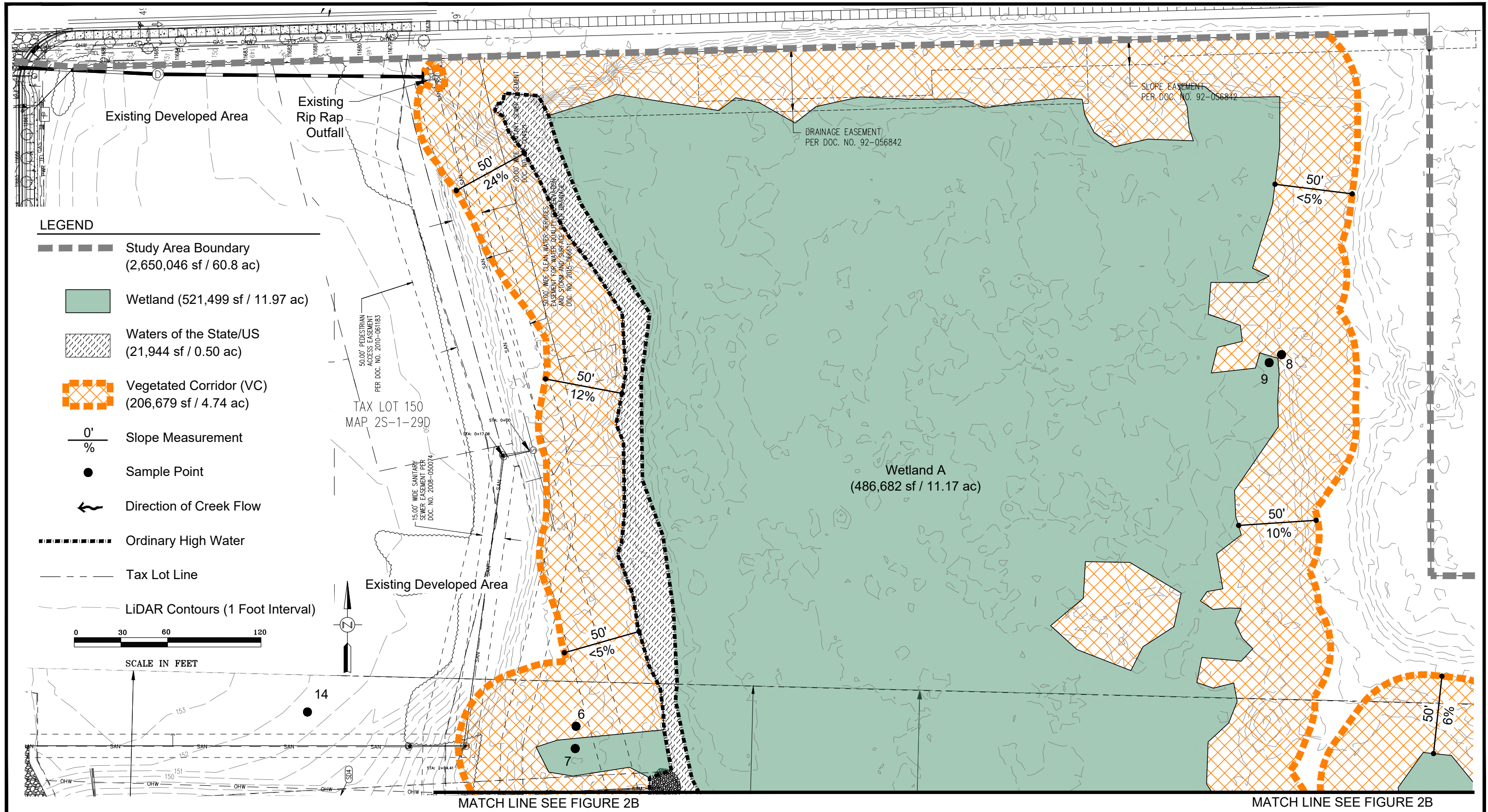


Existing Conditions Overview and Sheet Index  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

FIGURE  
**2**

3-18-2022





- LEGEND**
- Study Area Boundary (2,650,046 sf / 60.8 ac)
  - Wetland (521,499 sf / 11.97 ac)
  - Waters of the State/US (21,944 sf / 0.50 ac)
  - Vegetated Corridor (VC) (206,679 sf / 4.74 ac)
  - 0' / % Slope Measurement
  - Sample Point
  - ← Direction of Creek Flow
  - Ordinary High Water
  - - - Tax Lot Line
  - - - LiDAR Contours (1 Foot Interval)

MATCH LINE SEE FIGURE 2B

MATCH LINE SEE FIGURE 2B



Survey provided by NW Surveying Inc.  
Survey and Sample point accuracy is sub-centimeter. LIDAR has ± 3 feet accuracy.

Existing Conditions  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

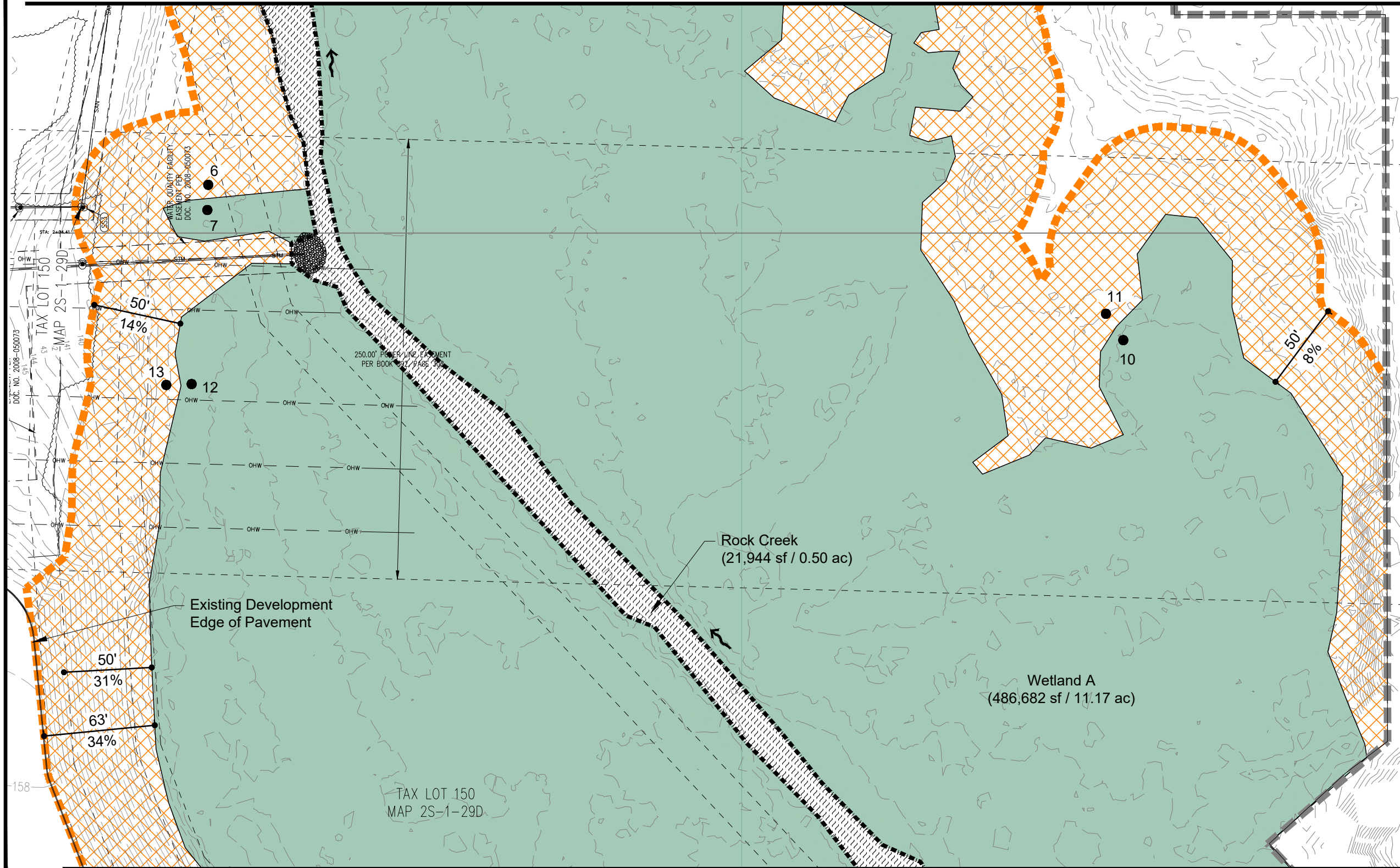
**FIGURE 2A**

3-18-2022



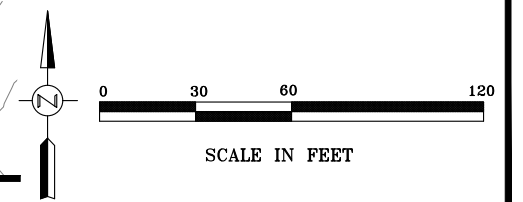
MATCH LINE SEE FIGURE 2A

MATCH LINE SEE FIGURE 2A



LEGEND

- Study Area Boundary (2,650,046 sf / 60.8 ac)
- Wetland (521,499 sf / 11.97 ac)
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- Storm Pond (13,272 sf / 0.30 ac)
- Vegetated Corridor (VC) (206,679 sf / 4.74 ac)
- Slope Measurement
- Sample Point
- Direction of Creek Flow
- Ordinary High Water
- Tax Lot Line
- LiDAR Contours (1 Foot Interval)



MATCH LINE SEE FIGURE 2C

MATCH LINE SEE FIGURE 2C

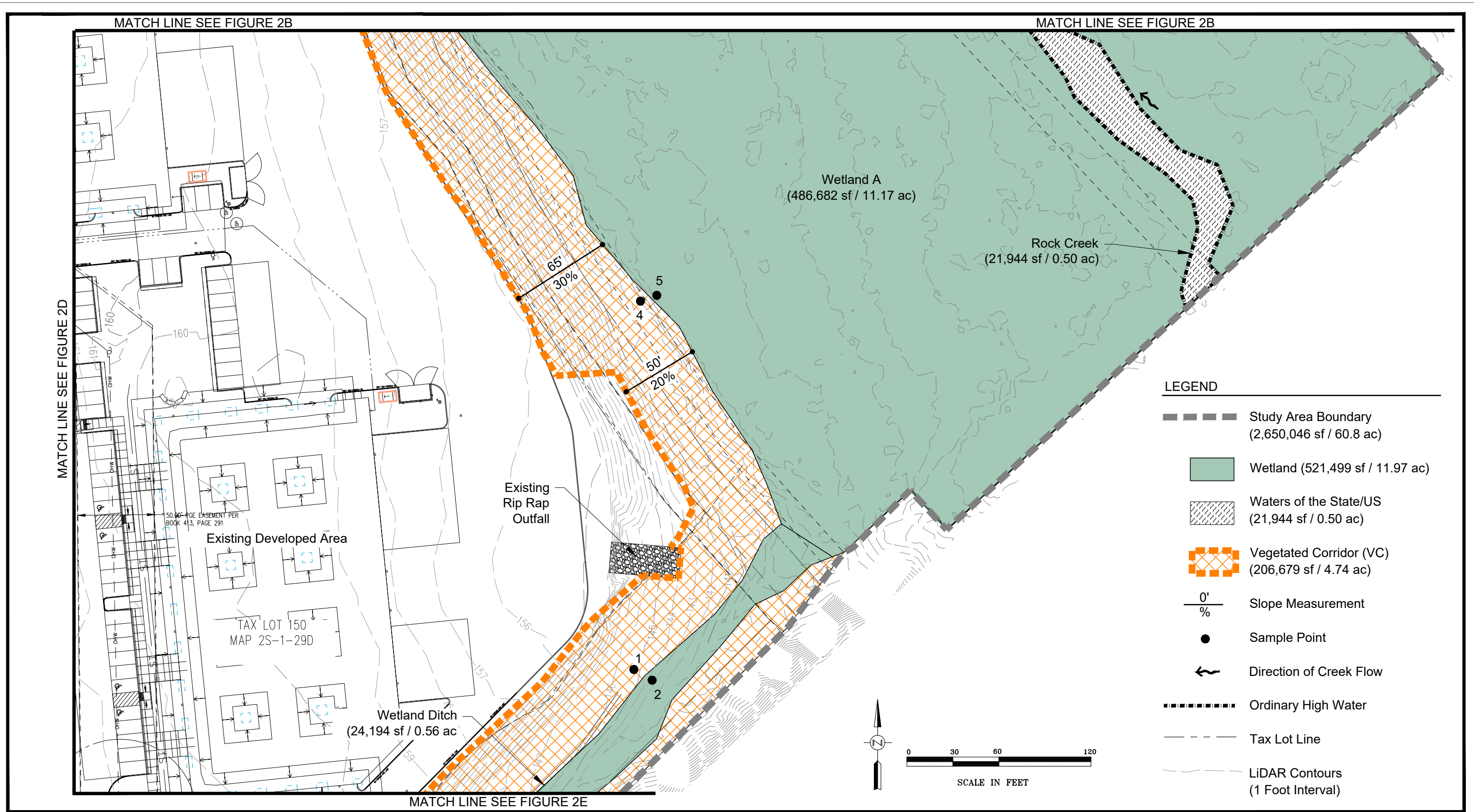


Survey provided by NW Surveying Inc.  
 Survey and Sample point accuracy is  
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Existing Conditions  
 Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

FIGURE  
**2B**

3-16-2022



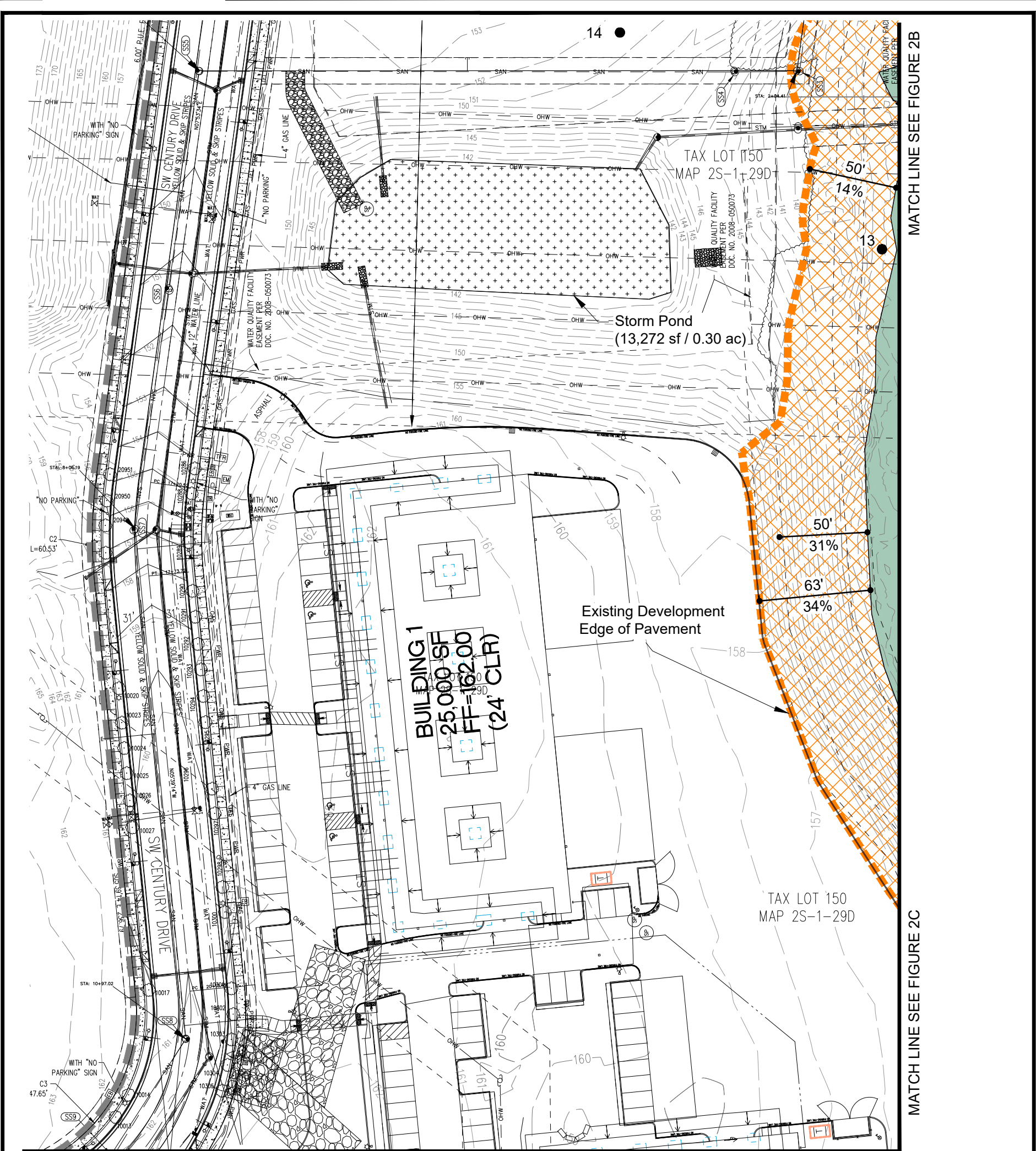
Survey provided by NW Surveying Inc.  
Survey and Sample point accuracy is  
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Existing Conditions  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

FIGURE  
2C

3-18-2022








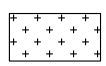



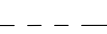

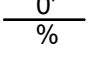

MATCH LINE SEE FIGURE 2B

MATCH LINE SEE FIGURE 2C

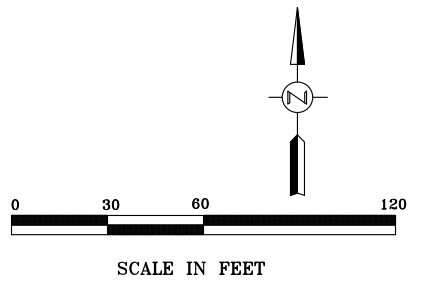
MATCH LINE SEE FIGURE 2F

MATCH LINE SEE FIGURE 2C

**LEGEND**

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-  Wetland (521,499 sf / 11.97 ac)
-  Waters of the State/US (21,944 sf / 0.50 ac)
-  Storm Pond (13,272 sf / 0.30 ac)
-  Vegetated Corridor (VC) (206,679 sf / 4.74 ac)
-  Direction of Creek Flow
-  Ordinary High Water
-  Tax Lot Line
-  LiDAR Contours (1 Foot Interval)
-  Slope Measurement
-  Sample Point

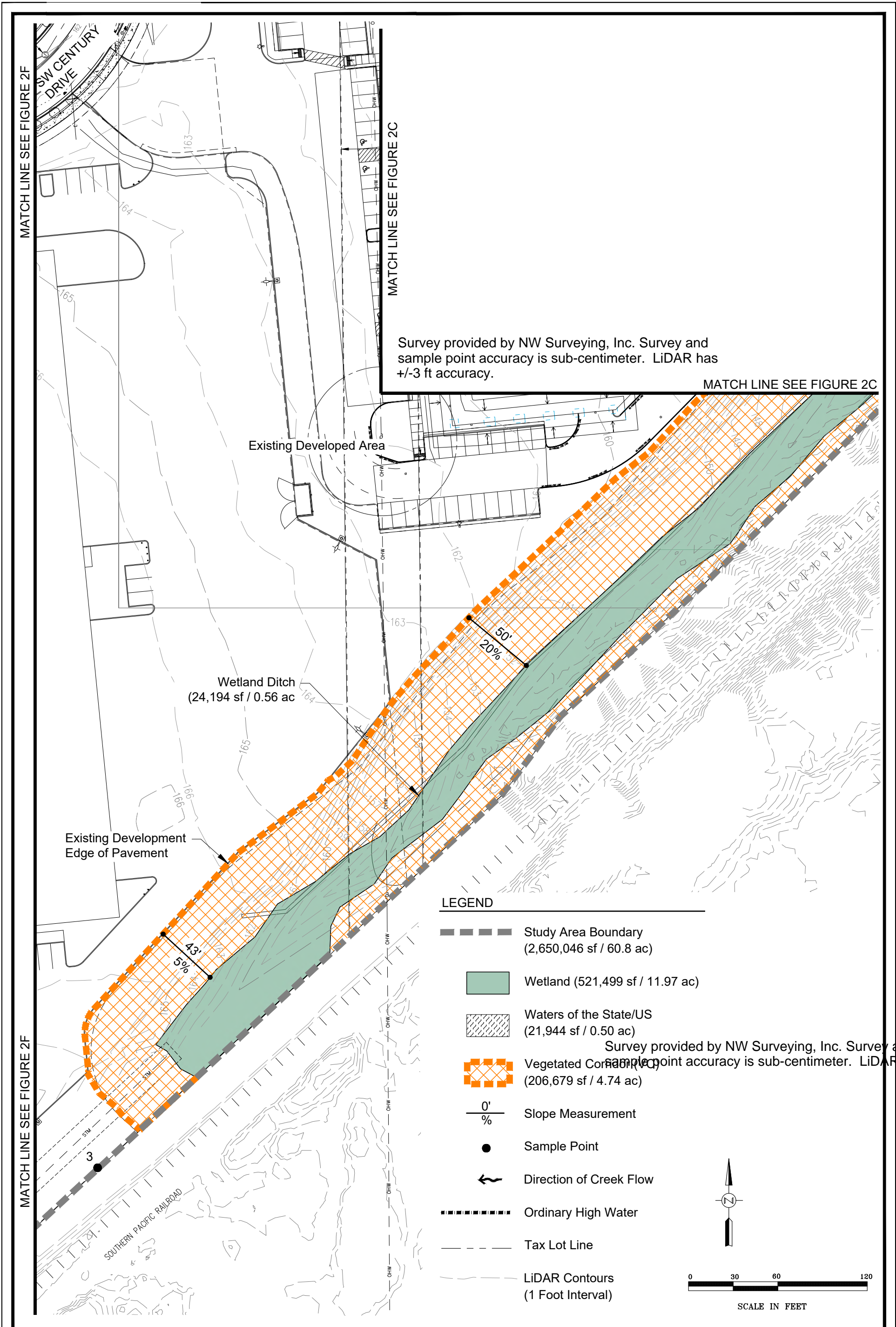
Survey provided by NW Surveying Inc.  
 Survey and Sample point accuracy is sub-centimeter. LiDAR has ± 3 feet accuracy.



**Existing Conditions**  
 Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

**FIGURE 2D**

3-18-2022



MATCH LINE SEE FIGURE 2F

MATCH LINE SEE FIGURE 2C

MATCH LINE SEE FIGURE 2C

MATCH LINE SEE FIGURE 2F



Existing Conditions  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

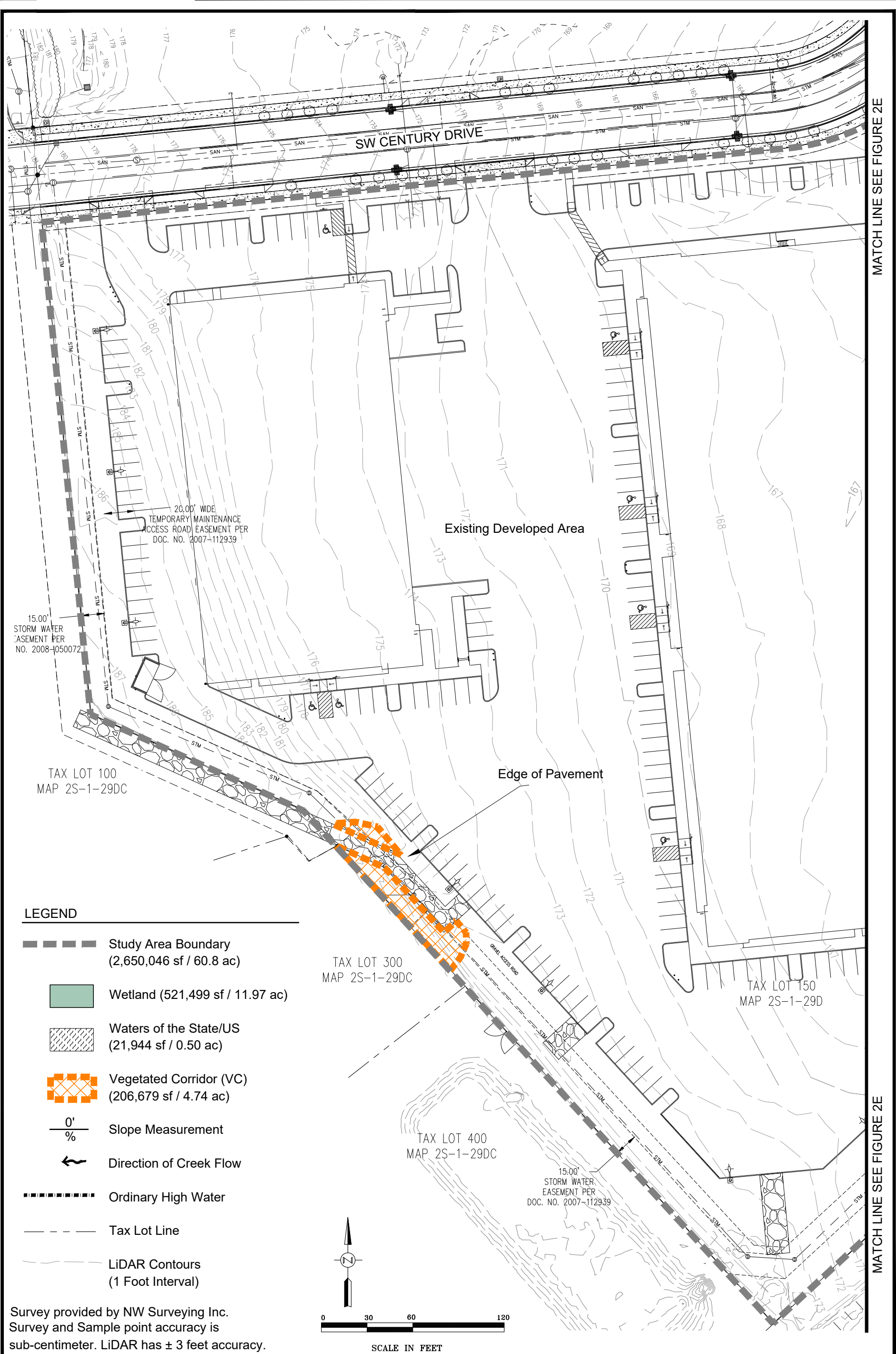
FIGURE  
**2E**

3-18-2022



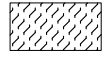

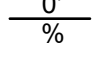






MATCH LINE SEE FIGURE 2E

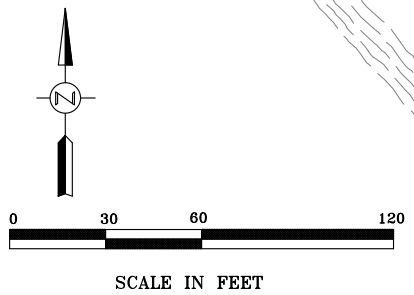
MATCH LINE SEE FIGURE 2E



**LEGEND**

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-  Vegetated Corridor (VC)  
(206,679 sf / 4.74 ac)
-  0' / % Slope Measurement
-  Direction of Creek Flow
-  Ordinary High Water
-  Tax Lot Line
-  LiDAR Contours  
(1 Foot Interval)

Survey provided by NW Surveying Inc.  
 Survey and Sample point accuracy is  
 sub-centimeter. LiDAR has ± 3 feet accuracy.

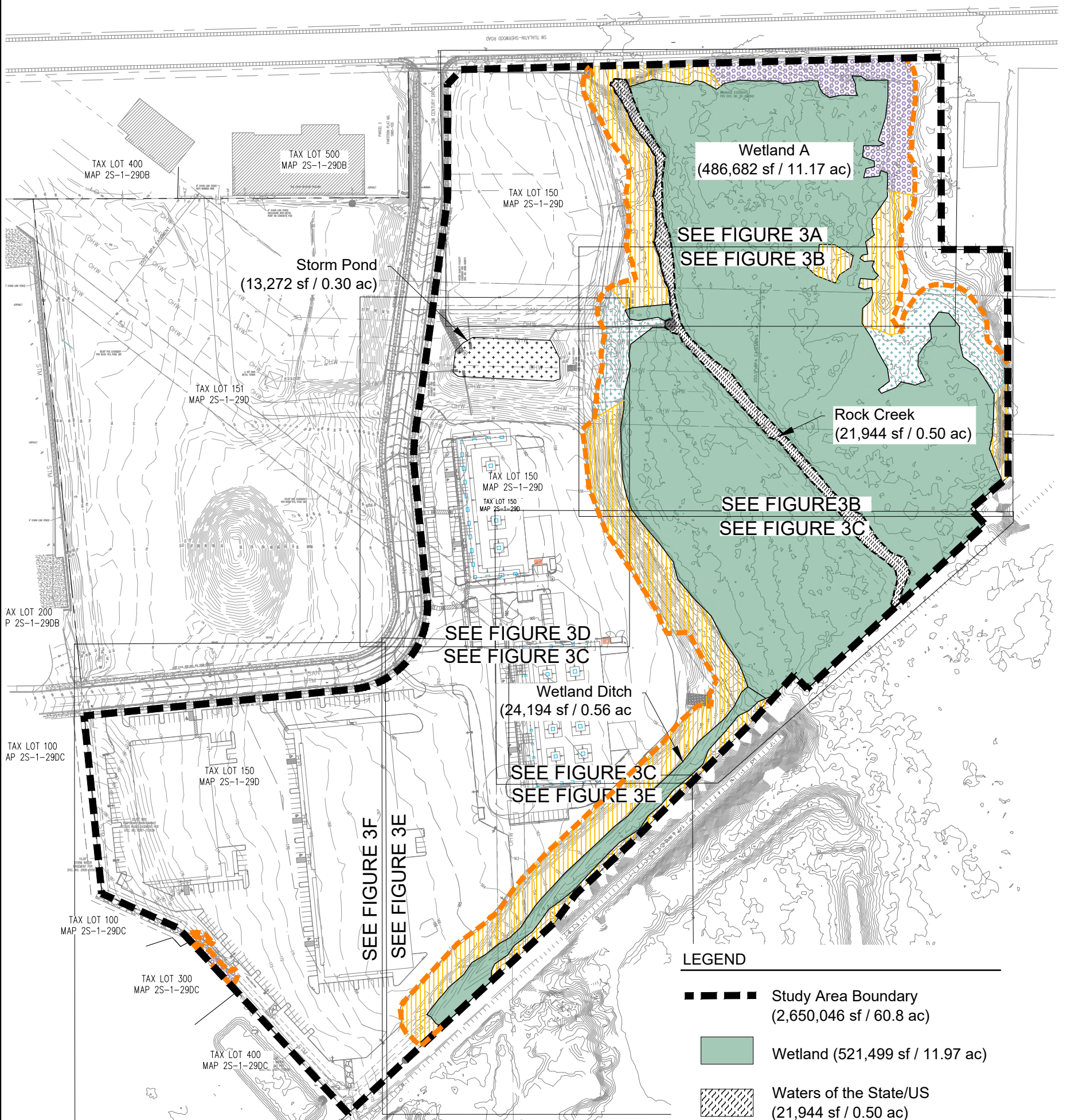


Existing Conditions  
 Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

FIGURE  
**2F**












3-18-2022

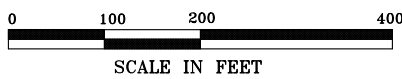
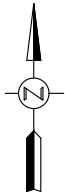




NOTE:  
See Figures 3A-3F for Vegetation Sample Points and Photo Points

LEGEND

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-  LiDAR Contours  
(1 Foot Interval)
-  Plant Community A (143,309 sf / 3.29 ac)  
Good Condition
-  Plant Community B (29,244 sf / 0.67 ac)  
Degraded Condition
-  Plant Community C (34,126 sf / 0.78 ac)  
Degraded Condition



Survey provided by NW Surveying Inc.  
Survey and Sample point accuracy is sub-centimeter. LiDAR has ± 3 feet accuracy.

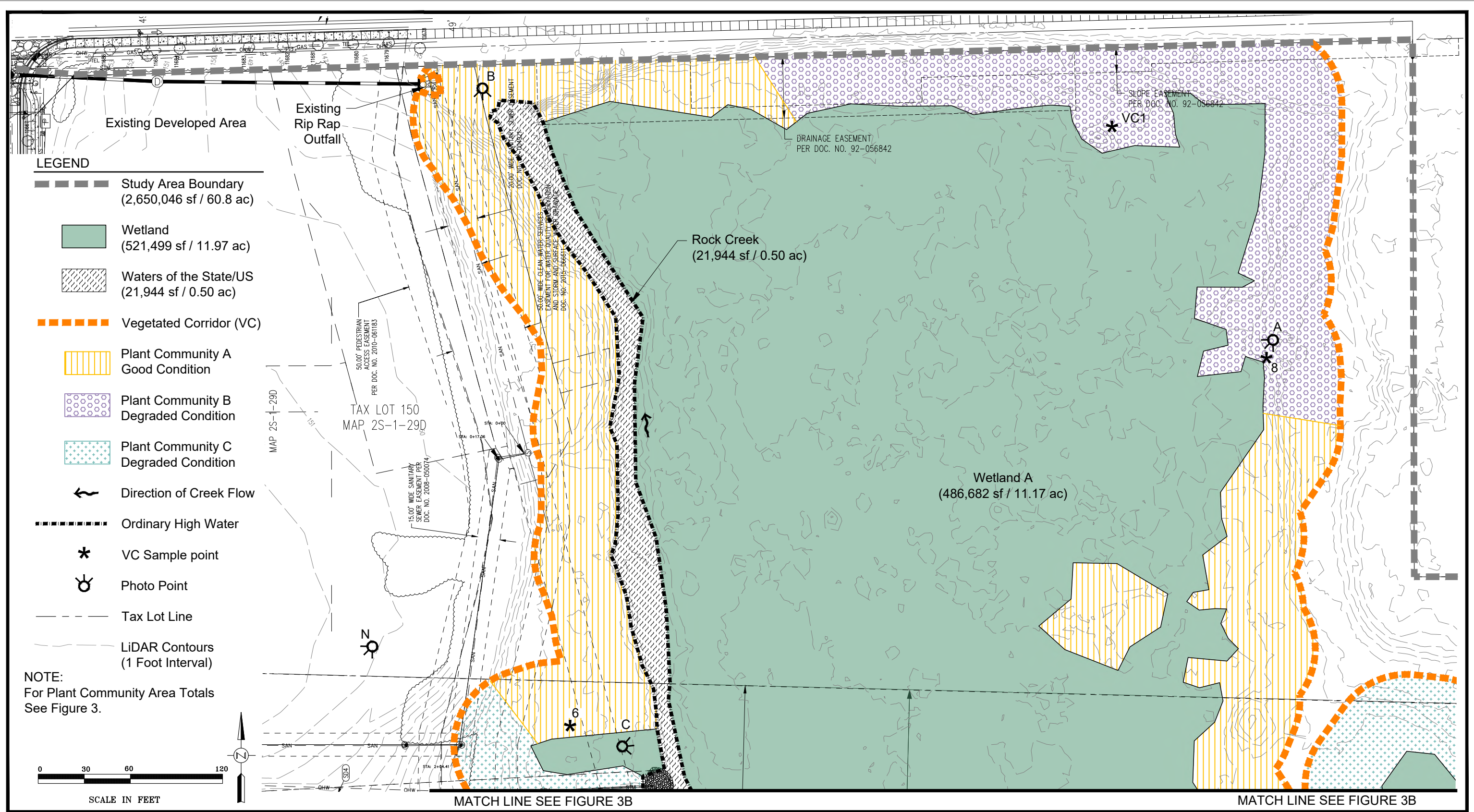


Vegetated Corridor Plant Communities Overview and Sheet Index  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

FIGURE  
**3**

3-23-2022





- LEGEND**
- Study Area Boundary (2,650,046 sf / 60.8 ac)
  - Wetland (521,499 sf / 11.97 ac)
  - Waters of the State/US (21,944 sf / 0.50 ac)
  - Vegetated Corridor (VC)
  - Plant Community A Good Condition
  - Plant Community B Degraded Condition
  - Plant Community C Degraded Condition
  - Direction of Creek Flow
  - Ordinary High Water
  - VC Sample point
  - Photo Point
  - Tax Lot Line
  - LiDAR Contours (1 Foot Interval)

NOTE:  
For Plant Community Area Totals  
See Figure 3.

MATCH LINE SEE FIGURE 3B

MATCH LINE SEE FIGURE 3B



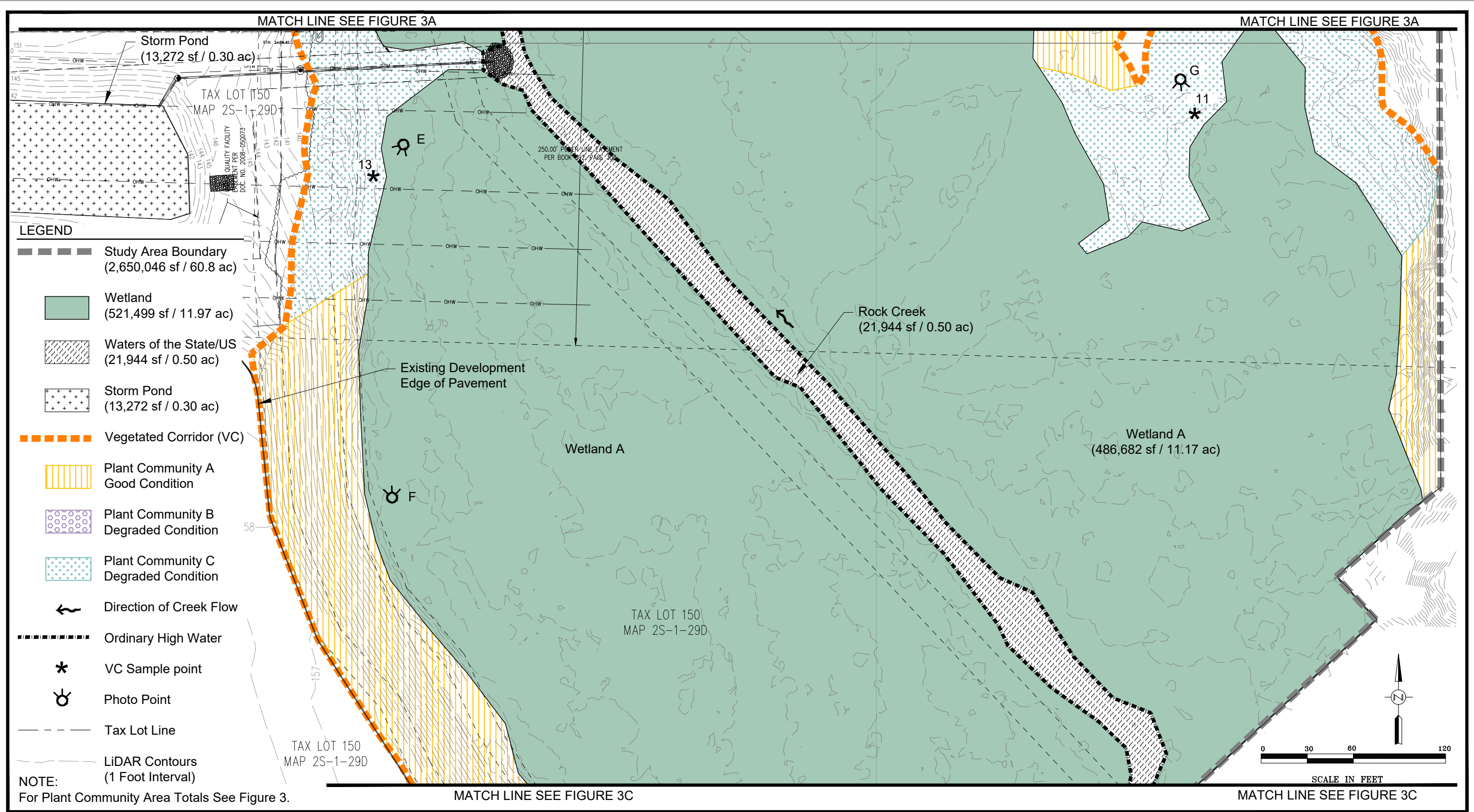
Survey provided by NW Surveying Inc.  
Survey and Sample point accuracy is  
sub-centimeter. LiDAR has ± 3 feet accuracy.

Vegetated Corridor Plant Communities  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

FIGURE  
**3A**

3-18-2022





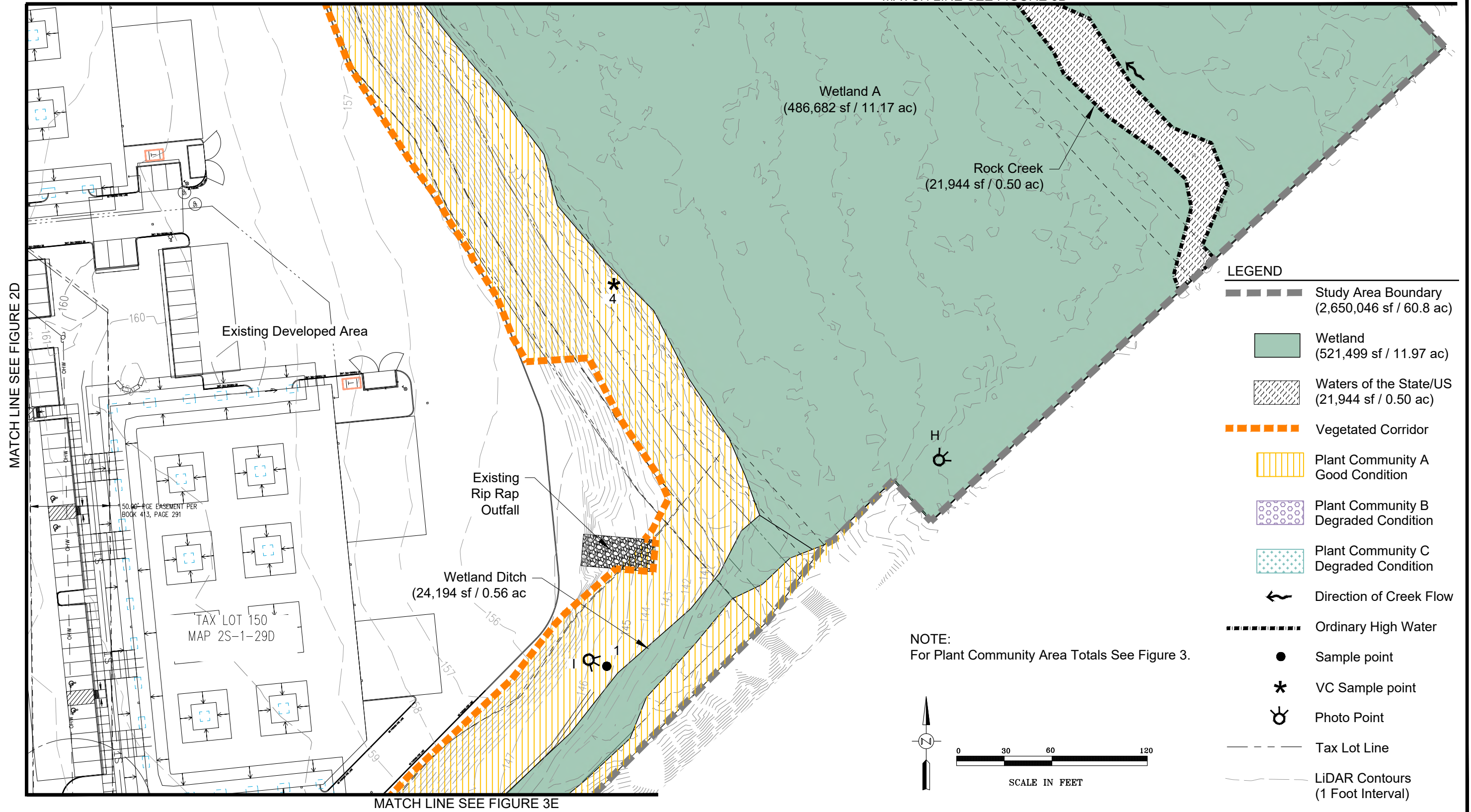
Survey provided by NW Surveying Inc.  
Survey and Sample point accuracy is sub-centimeter. LiDAR has ± 3 feet accuracy.

Vegetated Corridor Plant Communities  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

**FIGURE 3B**

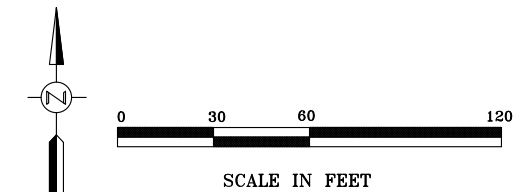
3-18-2022

MATCH LINE SEE FIGURE 3B



- LEGEND**
- Study Area Boundary (2,650,046 sf / 60.8 ac)
  - Wetland (521,499 sf / 11.97 ac)
  - Waters of the State/US (21,944 sf / 0.50 ac)
  - Vegetated Corridor
  - Plant Community A Good Condition
  - Plant Community B Degraded Condition
  - Plant Community C Degraded Condition
  - Direction of Creek Flow
  - Ordinary High Water
  - Sample point
  - VC Sample point
  - Photo Point
  - Tax Lot Line
  - LiDAR Contours (1 Foot Interval)

**NOTE:**  
For Plant Community Area Totals See Figure 3.



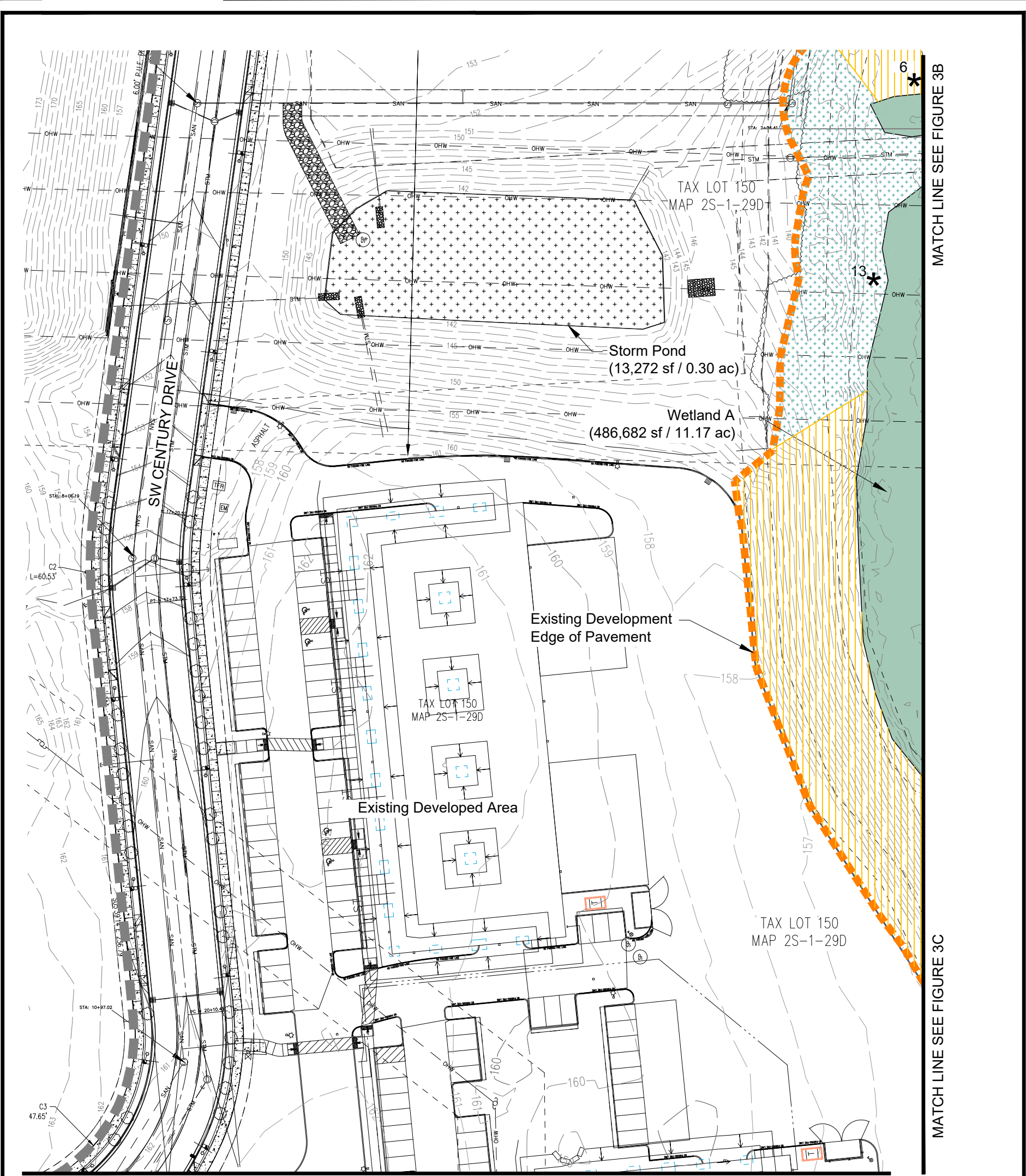
Survey provided by NW Surveying Inc.  
Survey and Sample point accuracy is sub-centimeter. LiDAR has ± 3 feet accuracy.

Vegetated Corridor Plant Communities  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

**FIGURE 3C**

3-18-2022


















MATCH LINE SEE FIGURE 3B

MATCH LINE SEE FIGURE 3C

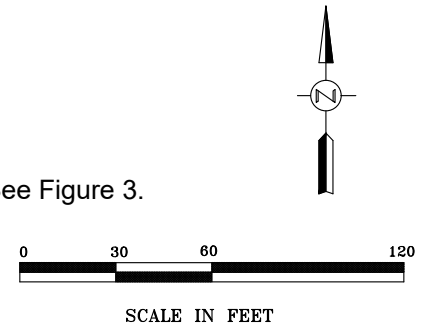
MATCH LINE SEE FIGURE 3F

MATCH LINE SEE FIGURE 3C

**LEGEND**

-  Study Area Boundary (2,650,046 sf / 60.8 ac)
-  Wetland (521,499 sf / 11.97 ac)
-  Waters of the State/US (21,944 sf / 0.50 ac)
-  Vegetated Corridor (VC)
-  Plant Community A Good Condition
-  Plant Community B Degraded Condition
-  Plant Community C Degraded Condition
-  Direction of Creek Flow
-  Ordinary High Water
-  VC Sample point
-  Photo Point
-  Tax Lot Line
-  LiDAR Contours (1 Foot Interval)

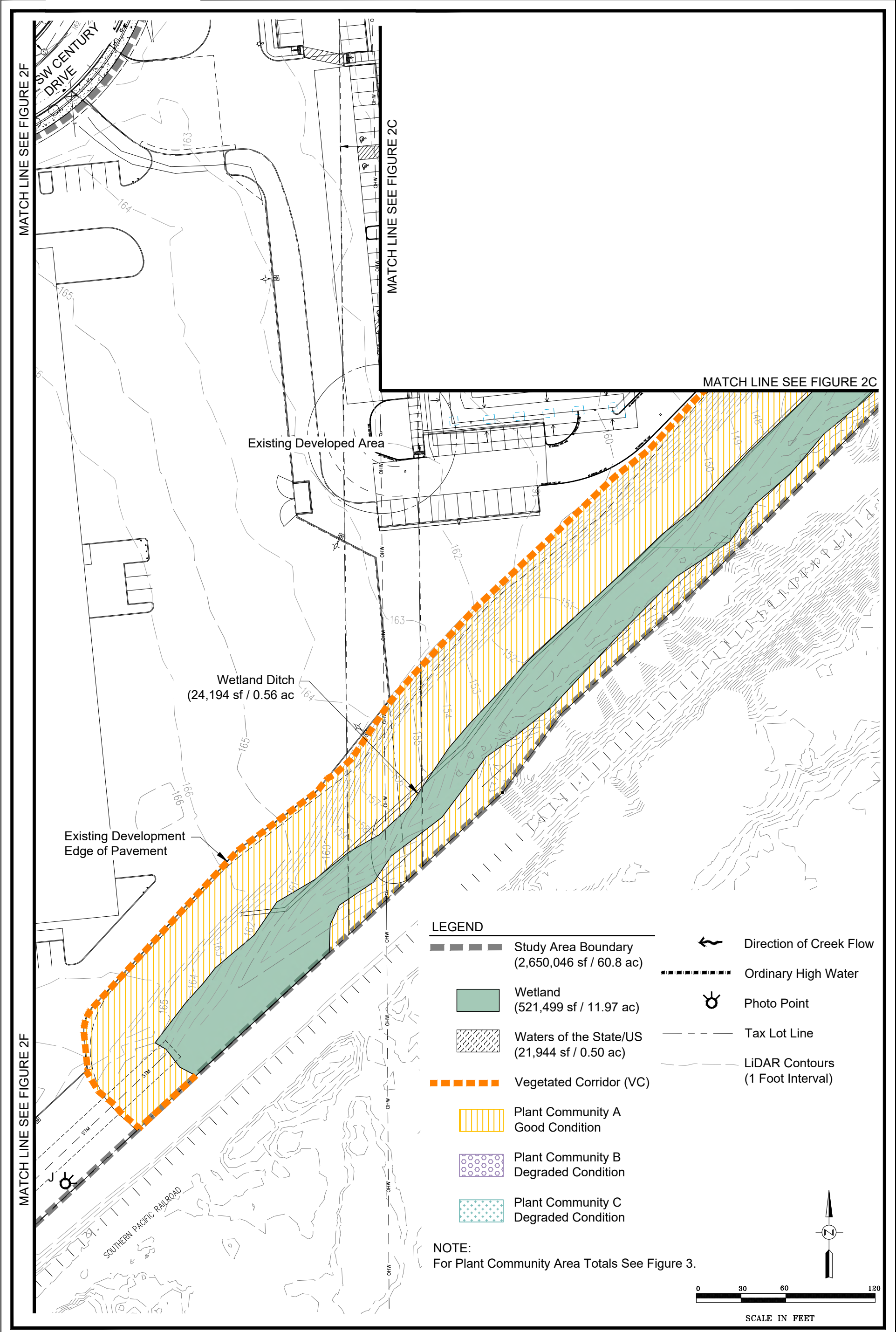
NOTE:  
For Plant Community Area Totals See Figure 3.



**Vegetated Corridor Plant Communities**  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

**FIGURE**  
**3D**

3-18-2022



**Vegetated Corridor Plant Communities**  
**Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon**

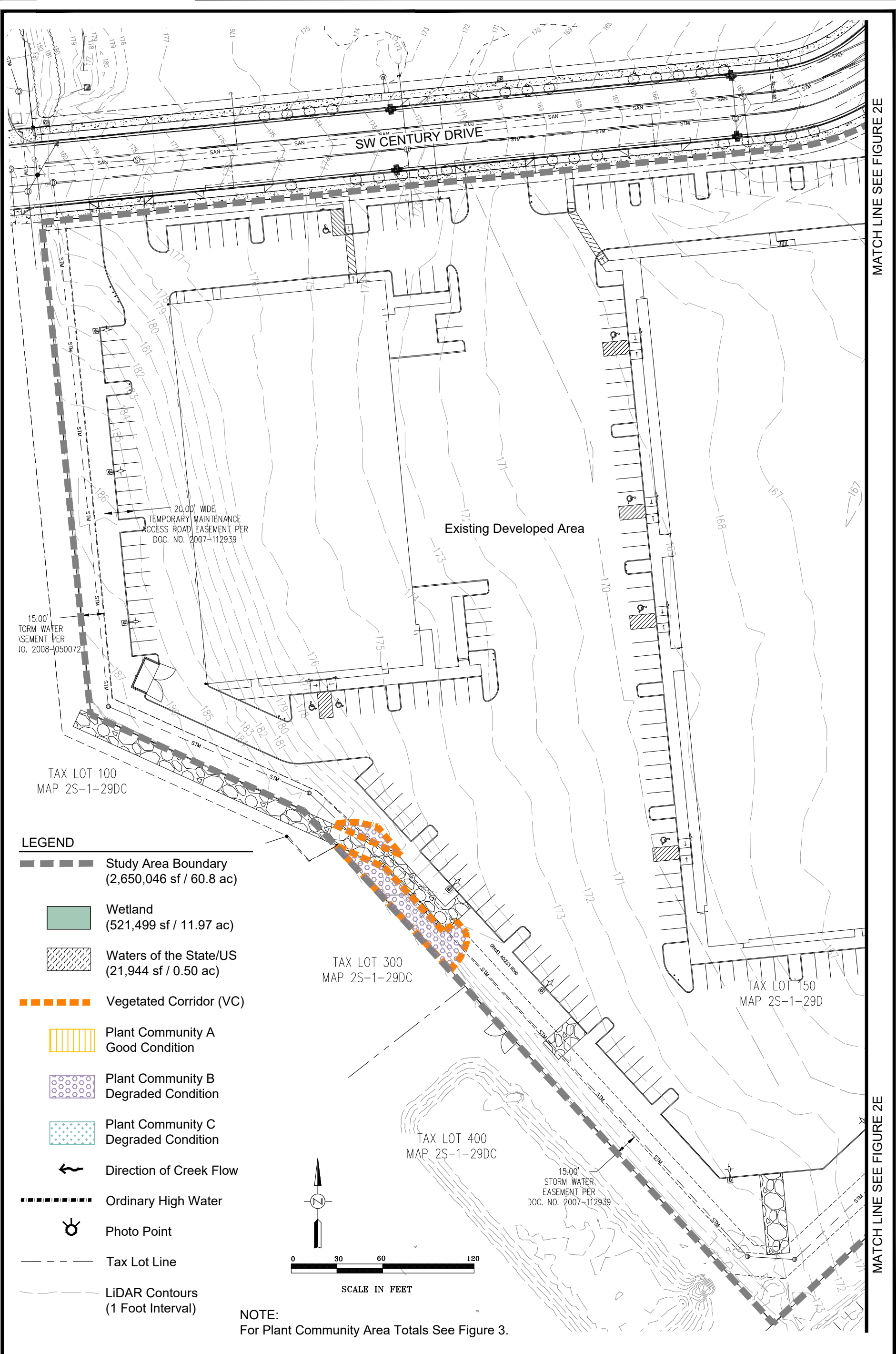
**FIGURE**  
**3E**

3-18-2022



MATCH LINE SEE FIGURE 2E

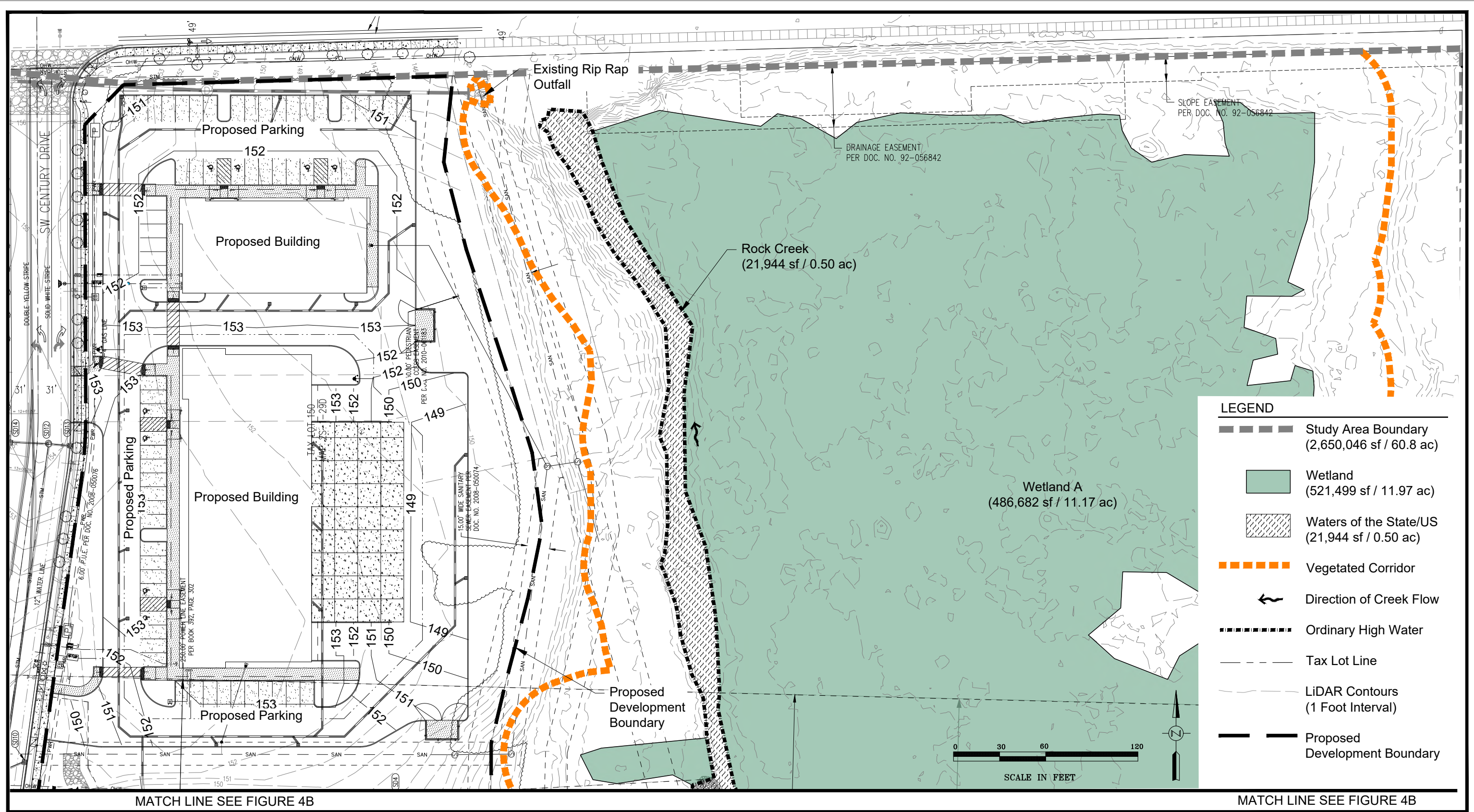
MATCH LINE SEE FIGURE 2E



**Vegetated Corridor Plant Communities**  
**Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon**

**FIGURE**  
**3F**

3-18-2022



**LEGEND**

- Study Area Boundary (2,650,046 sf / 60.8 ac)
- Wetland (521,499 sf / 11.97 ac)
- Waters of the State/US (21,944 sf / 0.50 ac)
- Vegetated Corridor
- Direction of Creek Flow
- Ordinary High Water
- Tax Lot Line
- LiDAR Contours (1 Foot Interval)
- Proposed Development Boundary



Plan provided by Mackenzie  
LiDAR has ± 3 feet accuracy.

Proposed Site Development Plan  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

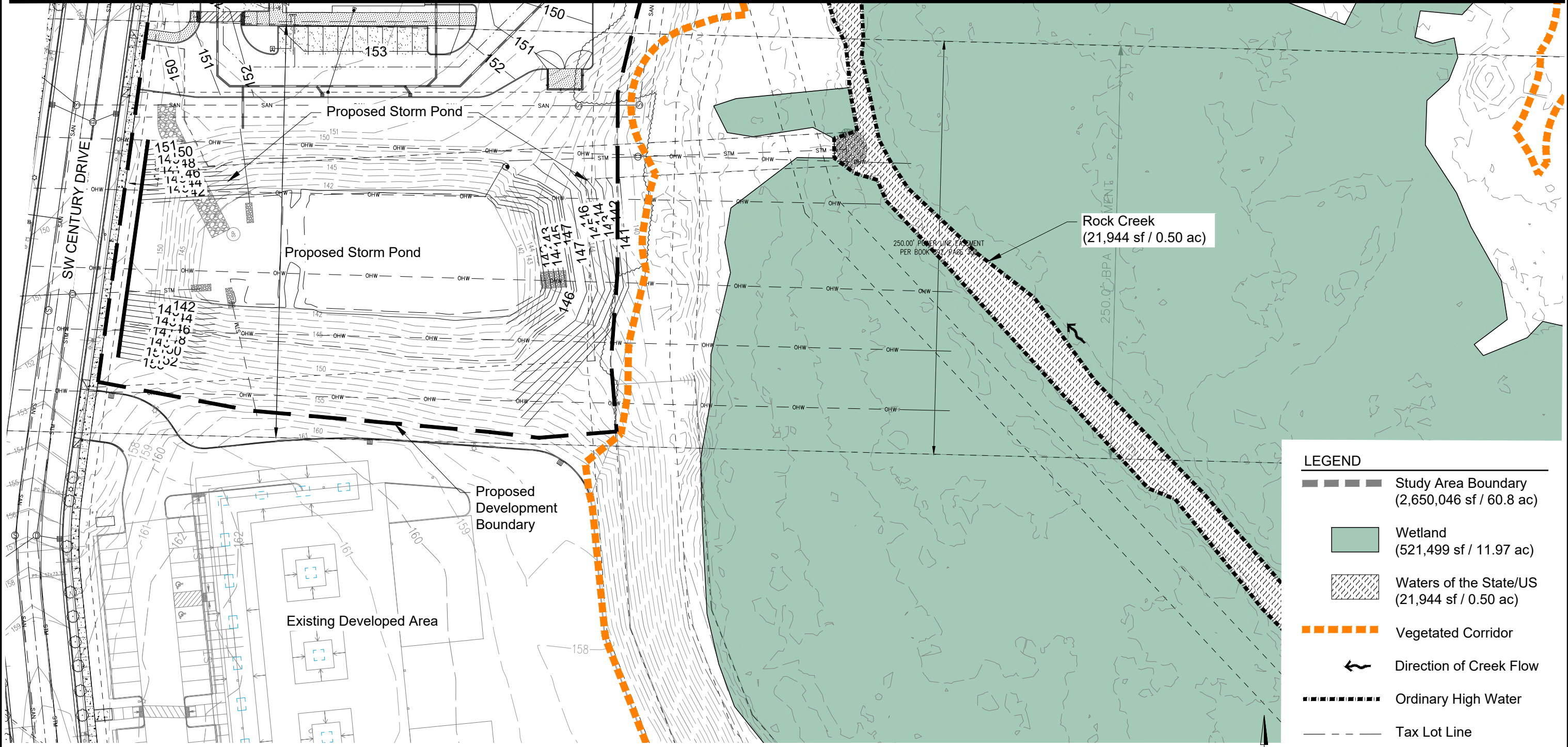
**FIGURE 4A**

3-18-2022











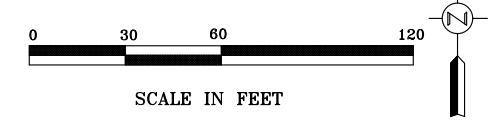
MATCH LINE SEE FIGURE 4A

MATCH LINE SEE FIGURE 4A



**LEGEND**

-  Study Area Boundary (2,650,046 sf / 60.8 ac)
-  Wetland (521,499 sf / 11.97 ac)
-  Waters of the State/US (21,944 sf / 0.50 ac)
-  Vegetated Corridor
-  Direction of Creek Flow
-  Ordinary High Water
-  Tax Lot Line
-  LiDAR Contours (1 Foot Interval)



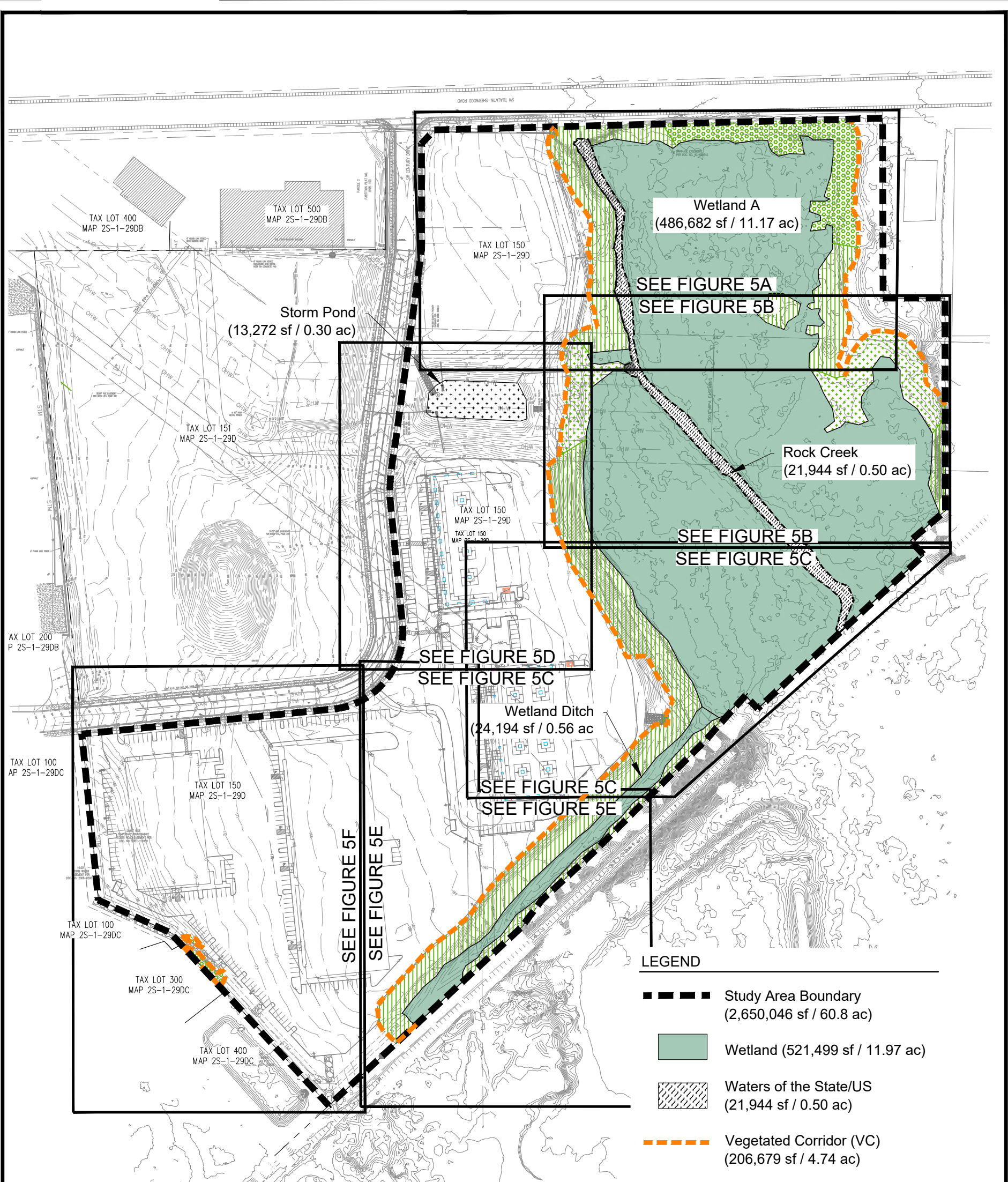
Plan provided by Mackenzie  
LiDAR has ± 3 feet accuracy.

Proposed Site Development Plan  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

**FIGURE 4B**

3-18-2022

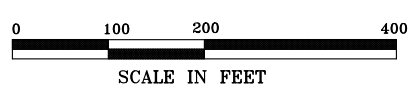
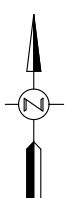




**LEGEND**

- Study Area Boundary (2,650,046 sf / 60.8 ac)
- Wetland (521,499 sf / 11.97 ac)
- Waters of the State/US (21,944 sf / 0.50 ac)
- Vegetated Corridor (VC) (206,679 sf / 4.74 ac)
- Direction of Creek Flow
- Ordinary High Water
- Tax Lot Line
- LiDAR Contours (1 Foot Interval)
- Plant Community A (143,309 sf / 3.29 ac) Good Condition
- Plant Community B (29,244 sf / 0.67 ac) Degraded Condition
- Plant Community C (34,126 sf / 0.78 ac) Degraded Condition

**NOTE:**  
SEE FIGURE 5F FOR VEGETATED CORRIDOR  
ENHANCEMENT AREAS PLANT LIST



Survey provided by NW Surveying Inc.  
Survey and Sample point accuracy is  
sub-centimeter. LiDAR has ± 3 feet accuracy.

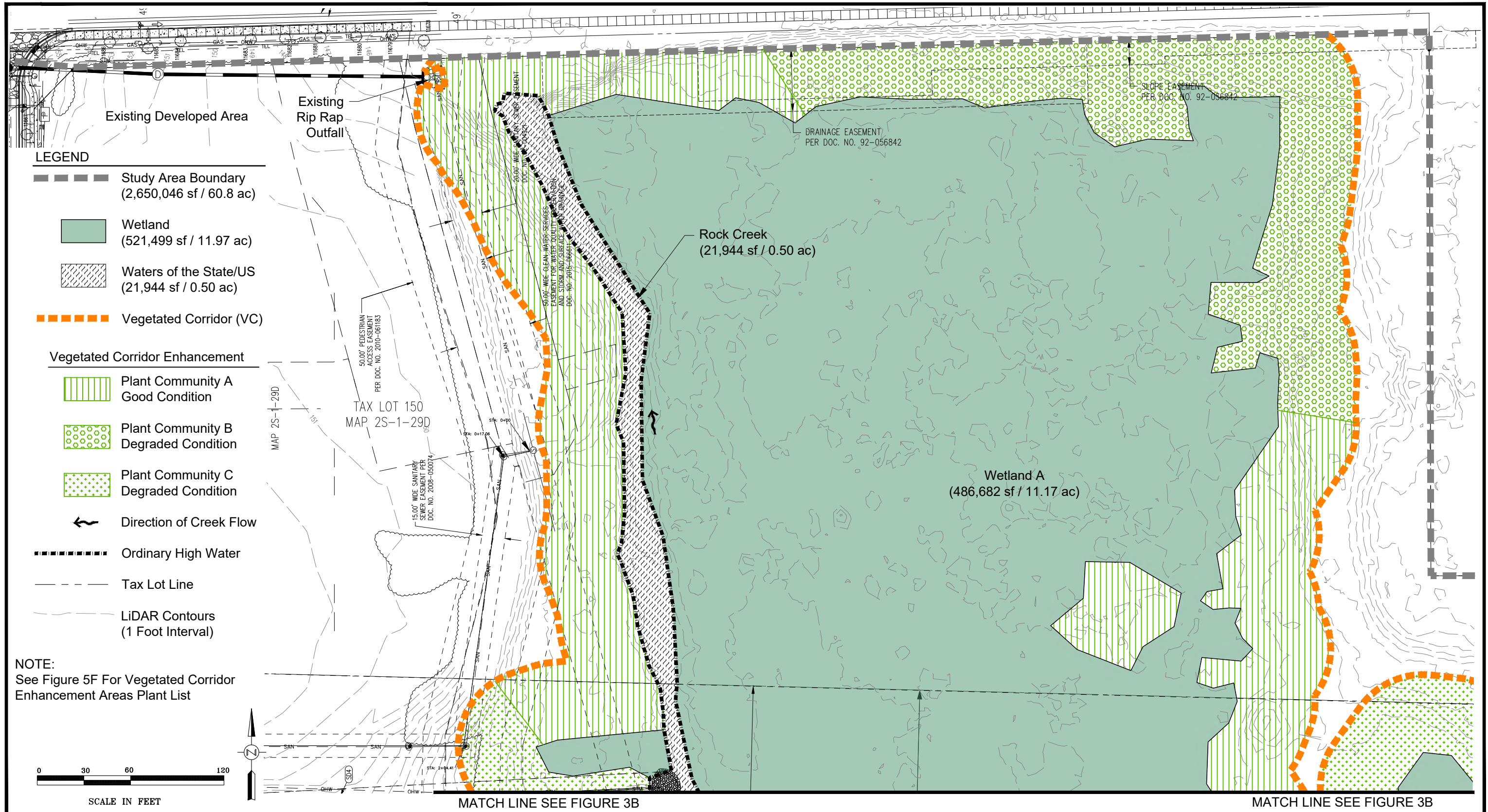


**Vegetated Corridor Mitigation Overview and Sheet Index**  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

**FIGURE**  
**5**

3-23-2022



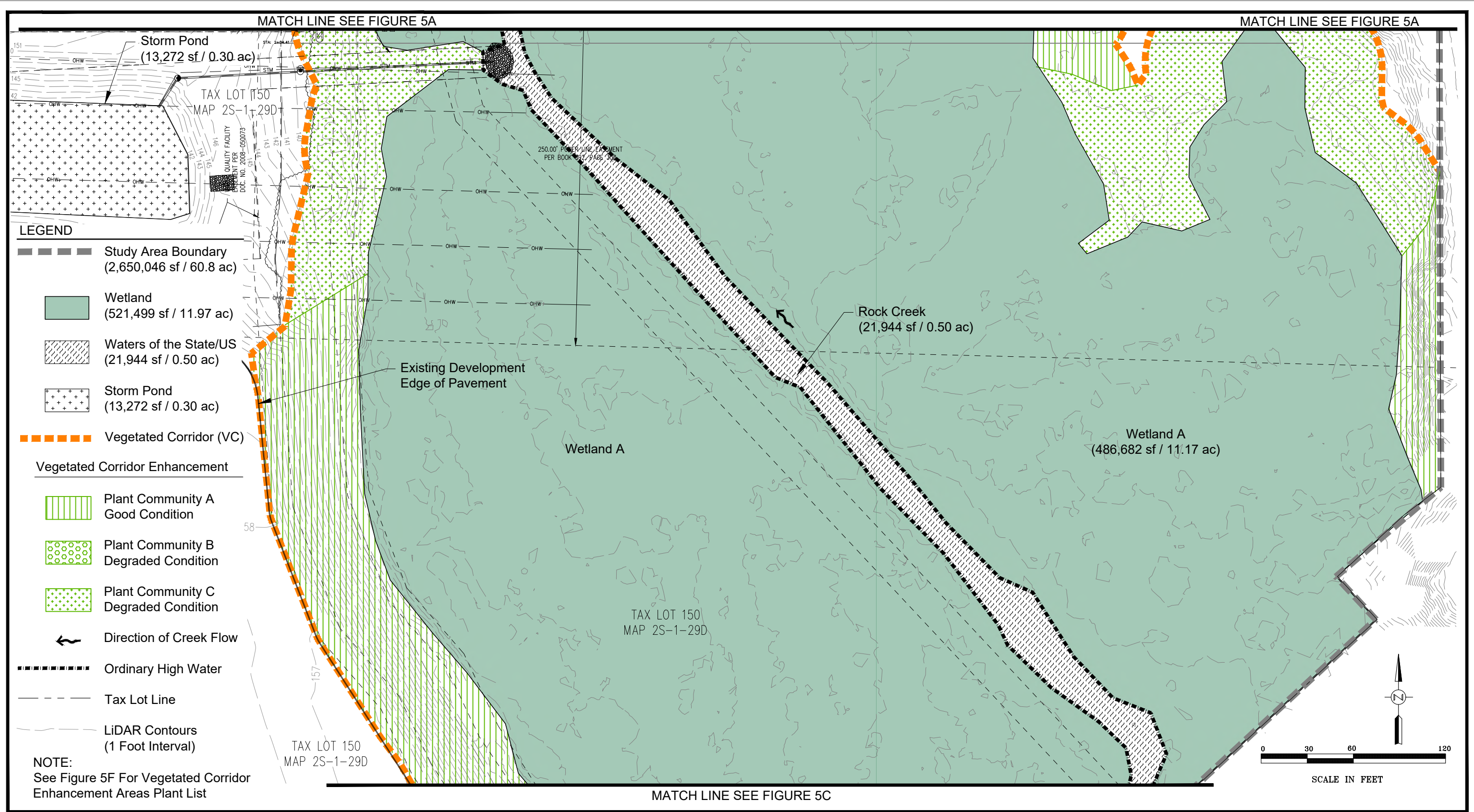


Survey provided by NW Surveying Inc.  
Survey and Sample point accuracy is sub-centimeter. LiDAR has ± 3 feet accuracy.

Vegetated Corridor Enhancement Areas  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

FIGURE  
**5A**

3-18-2022



Survey provided by NW Surveying Inc.  
Survey and Sample point accuracy is sub-centimeter. LiDAR has ± 3 feet accuracy.

Vegetated Corridor Enhancement Areas  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

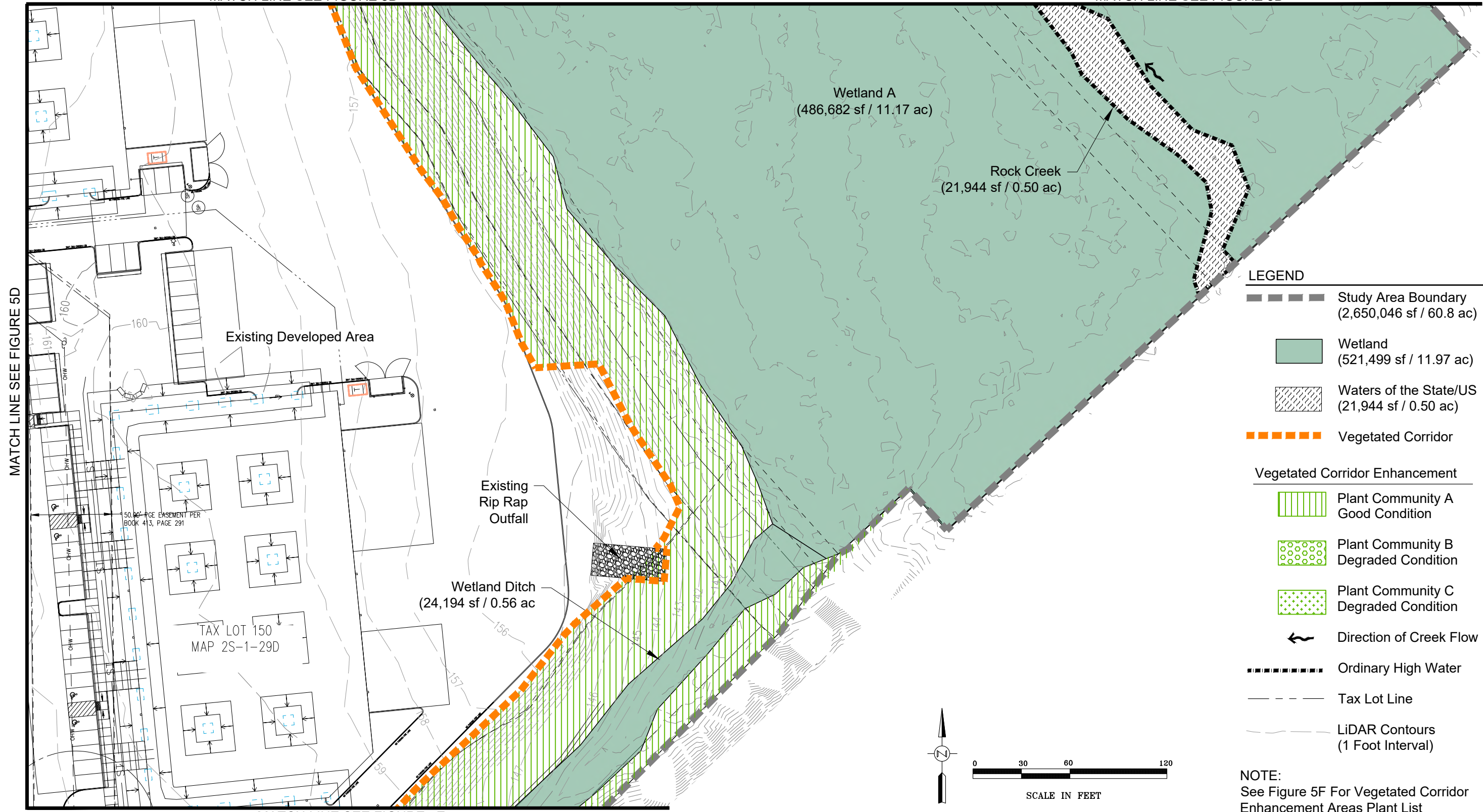
**FIGURE 5B**

3-18-2022



MATCH LINE SEE FIGURE 5B

MATCH LINE SEE FIGURE 5B



MATCH LINE SEE FIGURE 5D

Existing Developed Area

Existing Rip Rap Outfall

Wetland Ditch (24,194 sf / 0.56 ac)

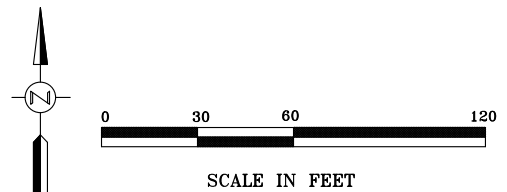
TAX LOT 150  
MAP 2S-1-29D

50.00' EASEMENT PER  
BOOK 413, PAGE 291

LEGEND

- Study Area Boundary (2,650,046 sf / 60.8 ac)
  - Wetland (521,499 sf / 11.97 ac)
  - Waters of the State/US (21,944 sf / 0.50 ac)
  - Vegetated Corridor
- Vegetated Corridor Enhancement**
- Plant Community A Good Condition
  - Plant Community B Degraded Condition
  - Plant Community C Degraded Condition
  - Direction of Creek Flow
  - Ordinary High Water
  - Tax Lot Line
  - LiDAR Contours (1 Foot Interval)

NOTE:  
See Figure 5F For Vegetated Corridor Enhancement Areas Plant List

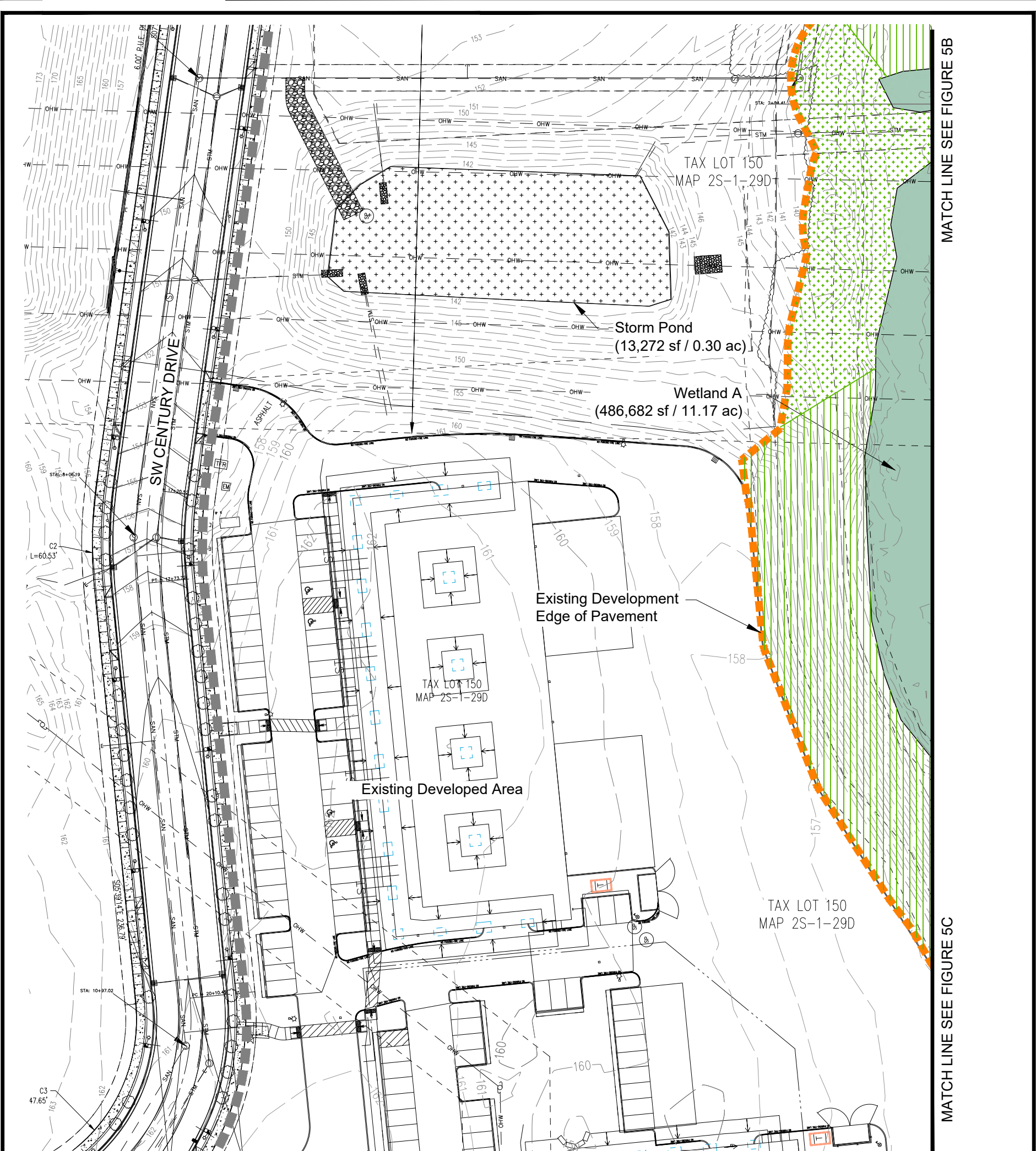


Survey provided by NW Surveying Inc.  
Survey and Sample point accuracy is  
sub-centimeter. LiDAR has ± 3 feet accuracy.

Vegetated Corridor Enhancement Areas  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

FIGURE  
**5C**

3-18-2022







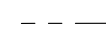
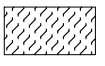

MATCH LINE SEE FIGURE 5B



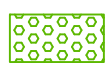

MATCH LINE SEE FIGURE 5C

MATCH LINE SEE FIGURE 5F

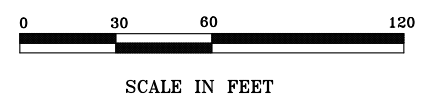
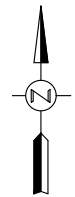
MATCH LINE SEE FIGURE 5C

**LEGEND**

-  Study Area Boundary (2,650,046 sf / 60.8 ac)
-  Direction of Creek Flow
-  Ordinary High Water
-  Wetland (521,499 sf / 11.97 ac)
-  Tax Lot Line
-  Waters of the State/US (21,944 sf / 0.50 ac)
-  LiDAR Contours (1 Foot Interval)

-  Vegetated Corridor (VC)
- Vegetated Corridor Enhancement**
-  Plant Community A Good Condition
-  Plant Community B Degraded Condition
-  Plant Community C Degraded Condition

**NOTE:**  
See Figure 5F For Vegetated Corridor Enhancement Areas Plant List



SCALE IN FEET



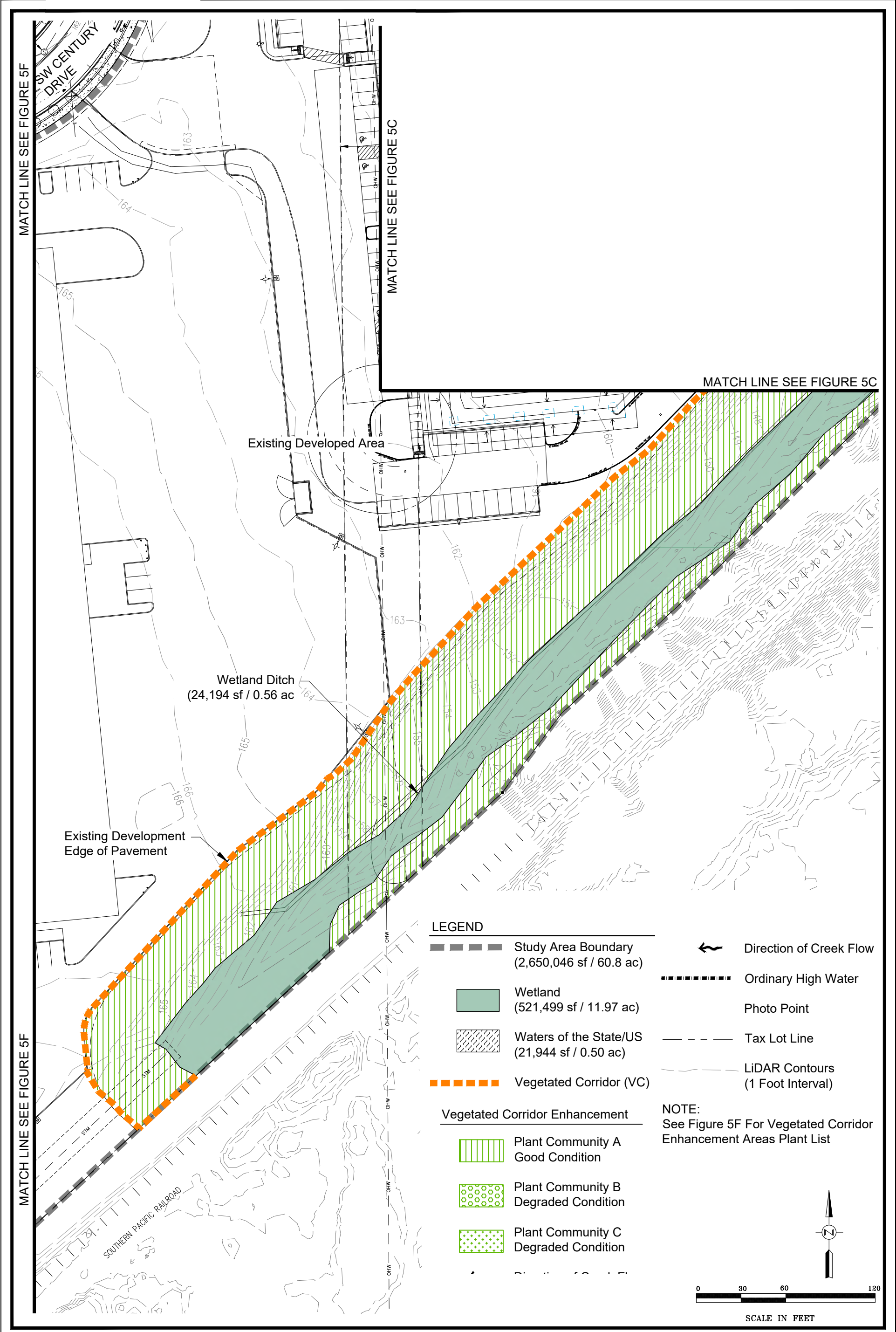
Pacific Habitat Services, Inc.  
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070  
Phone: (503) 570-0800 Fax: (503) 570-0855

**Vegetated Corridor Enhancement Areas**  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

**FIGURE 5D**

3-18-2022

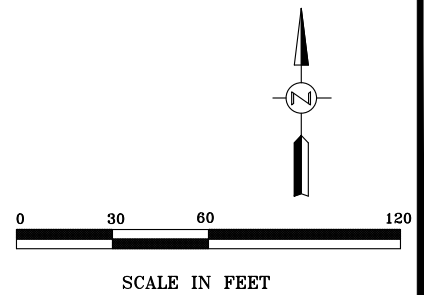




**LEGEND**

- Study Area Boundary (2,650,046 sf / 60.8 ac)
  - Wetland (521,499 sf / 11.97 ac)
  - Waters of the State/US (21,944 sf / 0.50 ac)
  - Vegetated Corridor (VC)
  - Direction of Creek Flow
  - Ordinary High Water
  - Photo Point
  - Tax Lot Line
  - LiDAR Contours (1 Foot Interval)
- Vegetated Corridor Enhancement**
- Plant Community A Good Condition
  - Plant Community B Degraded Condition
  - Plant Community C Degraded Condition

**NOTE:**  
See Figure 5F For Vegetated Corridor Enhancement Areas Plant List

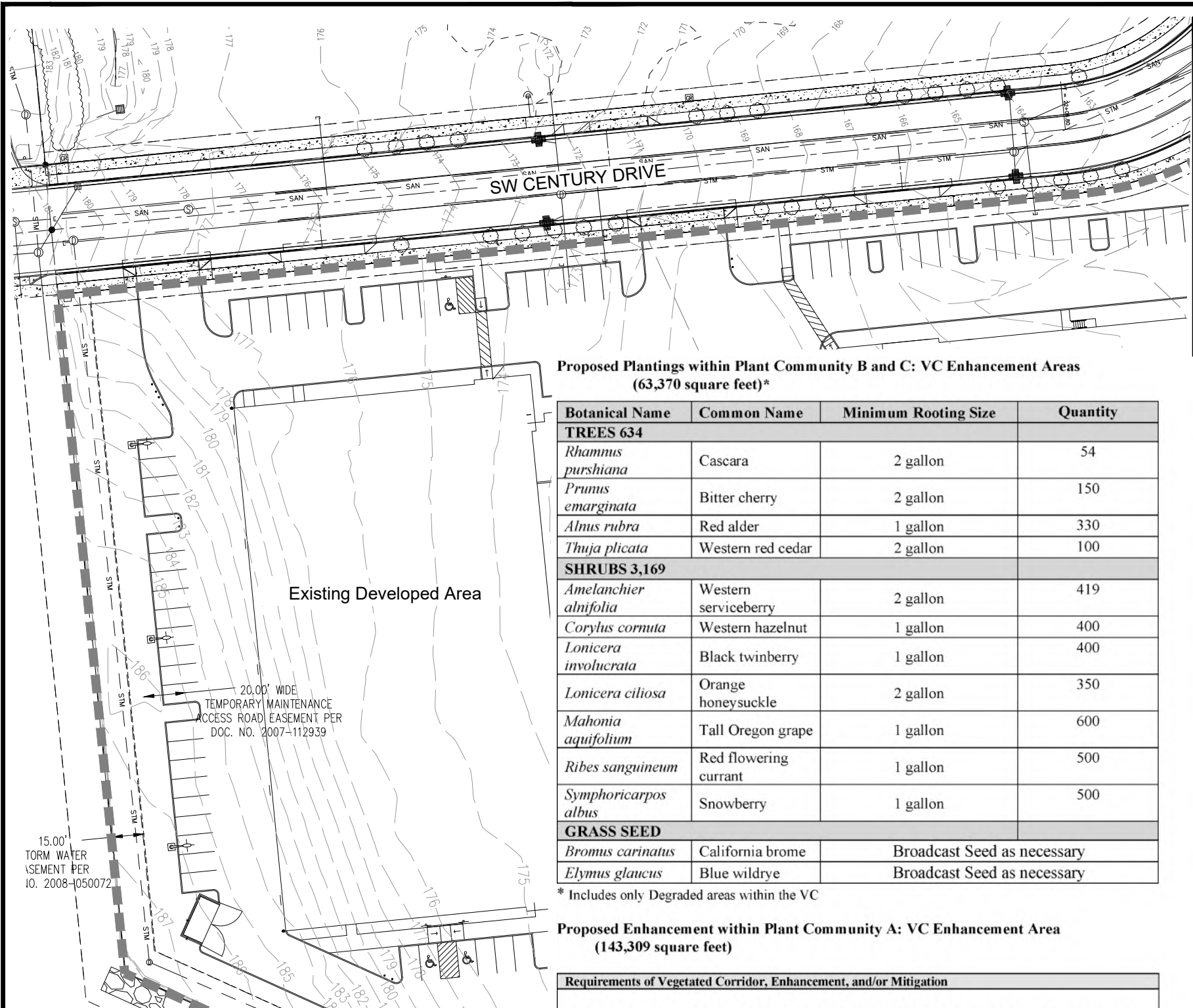


**Vegetated Corridor Enhancement Areas**  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

**FIGURE**  
**5E**

3-18-2022

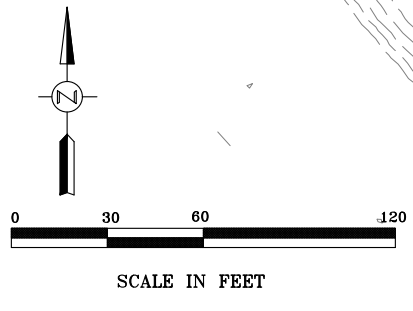
MATCH LINE SEE FIGURE 5E



**Proposed Enhancement within Plant Community A: VC Enhancement Area (143,309 square feet)**

Requirements of Vegetated Corridor, Enhancement, and/or Mitigation
<ul style="list-style-type: none"> <li>Remove any invasive non-native species within the corridor by hand and re-vegetate cleared area using low impact methods.</li> <li>Broadcast seed bare ground or disturbed areas from weed removal with grass seed mix described above.</li> </ul>

- LEGEND**
- Study Area Boundary (2,650,046 sf / 60.8 ac)
  - Wetland (521,499 sf / 11.97 ac)
  - Waters of the State/US (21,944 sf / 0.50 ac)
  - Vegetated Corridor (VC)
  - Vegetated Corridor Enhancement**
  - Plant Community B Degraded Condition
  - Direction of Creek Flow
  - Ordinary High Water
  - Tax Lot Line
  - LiDAR Contours (1 Foot Interval)



MATCH LINE SEE FIGURE 5E



**Vegetated Corridor Enhancement areas and Plant List**  
Sherwood Industrial Park Phase III Development Site - Sherwood, Oregon

**FIGURE 5F**

3-23-2022

# Appendix B

## Wetland Delineation Data Sheets





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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 8/25/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 1  
 Investigator(s): CM/CR Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope/Ditch Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): LRR A Lat: 45.3644 Long: -122.8281 Datum: WGS84  
 Soil Map Unit Name: Aloha silt loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (plot size: <u>30</u> )			
1 <u>Quercus garryana</u>	<u>30</u>	<u>X</u>	<u>FACU</u>
2 <u>Pseudotsuga menziesii</u>	<u>10</u>	<u>      </u>	<u>FACU</u>
3 <u>Corylus cornuta</u>	<u>10</u>	<u>      </u>	<u>FACU</u>
4 <u>Salix scouleriana</u>	<u>20</u>	<u>X</u>	<u>FAC</u>
	<u>65</u>	= Total Cover	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )			
1 <u>Spiraea douglasii</u>	<u>20</u>	<u>X</u>	<u>FACW</u>
2 <u>Cytisus scoparius</u>	<u>10</u>	<u>      </u>	<u>(UPL)</u>
3 <u>Mahonia aquifolium</u>	<u>10</u>	<u>      </u>	<u>FACU</u>
4 <u>Alnus rubra</u>	<u>30</u>	<u>X</u>	<u>FAC</u>
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
	<u>70</u>	= Total Cover	
<b>Herb Stratum</b> (plot size: <u>10</u> )			
1 <u>Phalaris arundinacea</u>	<u>40</u>	<u>X</u>	<u>FACW</u>
2 <u>Holcus lanatus</u>	<u>30</u>	<u>X</u>	<u>FAC</u>
3 <u>Galium aparine</u>	<u>20</u>	<u>X</u>	<u>FACU</u>
4 <u>Dipsacus fullonum</u>	<u>5</u>	<u>      </u>	<u>FAC</u>
5 <u>Poa pratensis</u>	<u>5</u>	<u>      </u>	<u>FAC</u>
6 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
7 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
8 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
	<u>100</u>	= Total Cover	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )			
1 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
	<u>0</u>	= Total Cover	
% Bare Ground in Herb Stratum <u>      </u>			

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 71% (A/B)

**Prevalence Index Worksheet:**

Total % Cover of	Multiply by:	
OBL Species <u>      </u>	x 1 =	<u>0</u>
FACW species <u>      </u>	x 2 =	<u>0</u>
FAC Species <u>      </u>	x 3 =	<u>0</u>
FACU Species <u>      </u>	x 4 =	<u>0</u>
UPL Species <u>      </u>	x 5 =	<u>0</u>
Column Totals <u>0</u> (A)		<u>0</u> (B)

Prevalence Index = B/A = #DIV/0!

**Hydrophytic Vegetation Indicators:**

X 1- Rapid Test for Hydrophytic Vegetation  
       2- Dominance Test is >50%  
       3-Prevalence Index is ≤ 3.0<sup>1</sup>  
       4-Morphological Adaptations<sup>1</sup> (provide supporting data in Remarks or on a separate sheet)  
       5- Wetland Non-Vascular Plants<sup>1</sup>  
       Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes X No       

Remarks: **Trees continued: Alnus rubra (FAC) 5%.**



**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>		
<b>0-4</b>	<b>10YR 2/2</b>	<b>100</b>					<b>Silt Loam</b>	
<b>4-12</b>	<b>10YR 2/2</b>	<b>98</b>	<b>10YR 3/3</b>	<b>2</b>	<b>C</b>	<b>M</b>	<b>Silt Loam</b>	<b>Fine</b>

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No **X**

Remarks: \_\_\_\_\_

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No **X** Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>12**  
 Saturation Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>12**  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes \_\_\_\_\_ No **X**

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

Remarks: \_\_\_\_\_

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 8/25/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 2  
 Investigator(s): CR/CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): LRR A Lat: 45.3644 Long: -122.8281 Datum: WGS84  
 Soil Map Unit Name: Aloha silt loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>X</u>	No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>      </u> )				Number of Dominant Species	
1				That are OBL, FACW, or FAC: <u>6</u> (A)	
2				Total Number of Dominant	
3				Species Across All Strata: <u>6</u> (B)	
4				Percent of Dominant Species	
	<u>0</u>	= Total Cover		That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				<b>Prevalence Index Worksheet:</b>	
1	<u>30</u>	<u>X</u>	<u>FACW</u>	Total % Cover of	Multiply by:
2	<u>10</u>	<u>X</u>	<u>FAC</u>	OBL Species	x 1 = <u>0</u>
3				FACW species	x 2 = <u>0</u>
4				FAC Species	x 3 = <u>0</u>
5				FACU Species	x 4 = <u>0</u>
	<u>40</u>	= Total Cover		UPL Species	x 5 = <u>0</u>
<b>Herb Stratum</b> (plot size: <u>10</u> )				Column Totals	<u>0</u> (A) <u>0</u> (B)
1	<u>25</u>	<u>X</u>	<u>FAC</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2	<u>20</u>	<u>X</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b>	
3	<u>20</u>	<u>X</u>	<u>FACW</u>	1- Rapid Test for Hydrophytic Vegetation	
4	<u>20</u>	<u>X</u>	<u>(FAC)</u>	<u>X</u> 2- Dominance Test is >50%	
5	<u>15</u>		<u>FACW</u>	3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
6	<u>10</u>		<u>FACW</u>	4-Morphological Adaptations <sup>1</sup> (provide supporting	
7	<u>5</u>		<u>FAC</u>	data in Remarks or on a separate sheet)	
8				5- Wetland Non-Vascular Plants <sup>1</sup>	
	<u>115</u>	= Total Cover		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
1				<b>Hydrophytic Vegetation Present?</b>	
2				Yes <u>X</u>	No <u>      </u>
	<u>0</u>	= Total Cover			
<b>% Bare Ground in Herb Stratum</b> <u>0</u>					

Remarks:

**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>		
0-14	10YR 3/2	87	7.5YR 4/6	10	C	M	Silt	Fine-medium
0-14			7.5YR 4/6	3	PL	M	Silt	Fine-medium

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**  
 Type: Rock  
 Depth (inches): 14

**Hydric Soil Present?** Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**  
 Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): >14  
 Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): >14

**Wetland Hydrology Present?**  
 Yes  No

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

Remarks:

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 8/25/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 3  
 Investigator(s): CM/CR Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): LRR A Lat: 45.3635 Long: -122.8294 Datum: WGS84  
 Soil Map Unit Name: Aloha silt loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>      </u> )				Number of Dominant Species	
1				That are OBL, FACW, or FAC: <u>4</u> (A)	
2				Total Number of Dominant	
3				Species Across All Strata: <u>4</u> (B)	
4				Percent of Dominant Species	
	<u>0</u>	= Total Cover		That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				<b>Prevalence Index Worksheet:</b>	
1	<u>40</u>	<u>X</u>	<u>FAC</u>	Total % Cover of	
2	<u>40</u>	<u>X</u>	<u>FAC</u>	Multiply by:	
3	<u>20</u>	<u>X</u>	<u>FAC</u>	OBL Species	<u>0</u>
4				FACW species	<u>0</u>
5				FAC Species	<u>0</u>
	<u>100</u>	= Total Cover		FACU Species	<u>0</u>
				UPL Species	<u>0</u>
<b>Herb Stratum</b> (plot size: <u>10</u> )				Column Totals	<u>0</u> (A) <u>0</u> (B)
1	<u>90</u>	<u>X</u>	<u>FACW</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2				<b>Hydrophytic Vegetation Indicators:</b>	
3				1- Rapid Test for Hydrophytic Vegetation	
4				<u>X</u> 2- Dominance Test is >50%	
5				3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
6				4-Morphological Adaptations <sup>1</sup> (provide supporting	
7				data in Remarks or on a separate sheet)	
8				5- Wetland Non-Vascular Plants <sup>1</sup>	
	<u>90</u>	= Total Cover		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless	
1				disturbed or problematic.	
2				<b>Hydrophytic Vegetation Present?</b>	
	<u>0</u>	= Total Cover		Yes <u>X</u>	No <u>      </u>
% Bare Ground in Herb Stratum <u>10</u>					

Remarks:

**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	7.5YR 2.5/2	100					Silt Loam	
12-17	7.5YR 2.5/2	98	10YR 4/6	2	C	M	Silt Loam	Fine
17-20	10YR 3/2	95	10YR 4/6	5	C	M	Silt Loam	Coarse

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No **X**

Remarks: \_\_\_\_\_

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No **X** Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>20**  
 Saturation Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>20**  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes **X** No \_\_\_\_\_

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

Remarks: \_\_\_\_\_



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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 8/25/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 4  
 Investigator(s): CM/CR Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): None Slope (%): 10  
 Subregion (LRR): LRR A Lat: 45.3651 Long: -122.8283 Datum: WGS84  
 Soil Map Unit Name: Aloha silt loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>30</u> )				Number of Dominant Species	
1 <u>Populus balsamifera</u>	<u>30</u>	<u>X</u>	<u>FAC</u>	That are OBL, FACW, or FAC: <u>5</u> (A)	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Total Number of Dominant	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Species Across All Strata: <u>7</u> (B)	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Percent of Dominant Species	
	<u>30</u>	= Total Cover		That are OBL, FACW, or FAC: <u>71%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				<b>Prevalence Index Worksheet:</b>	
1 <u>Rubus armeniacus</u>	<u>80</u>	<u>X</u>	<u>FAC</u>	Total % Cover of <u>      </u> Multiply by:	
2 <u>Populus balsamifera</u>	<u>20</u>	<u>      </u>	<u>FAC</u>	OBL Species <u>      </u> x 1 = <u>0</u>	
3 <u>Cytisus scoparius</u>	<u>20</u>	<u>      </u>	<u>(UPL)</u>	FACW species <u>      </u> x 2 = <u>0</u>	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FAC Species <u>      </u> x 3 = <u>0</u>	
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FACU Species <u>      </u> x 4 = <u>0</u>	
	<u>120</u>	= Total Cover		UPL Species <u>      </u> x 5 = <u>0</u>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				Column Totals <u>0</u> (A) <u>0</u> (B)	
1 <u>Phalaris arundinacea</u>	<u>10</u>	<u>X</u>	<u>FACW</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2 <u>Dactylis glomerata</u>	<u>10</u>	<u>X</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b>	
3 <u>Equisetum arvense</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	1- Rapid Test for Hydrophytic Vegetation	
4 <u>Cirsium arvense</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	<u>X</u> 2- Dominance Test is >50%	
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
6 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	4-Morphological Adaptations <sup>1</sup> (provide supporting	
7 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	data in Remarks or on a separate sheet)	
8 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	5- Wetland Non-Vascular Plants <sup>1</sup>	
	<u>40</u>	= Total Cover		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
1 <u>Rubus ursinus</u>	<u>30</u>	<u>X</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Present?</b>	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Yes <u>X</u> No <u>      </u>	
	<u>30</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>60</u>					

Remarks:

**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>		
<b>0-9</b>	<b>7.5YR 2.5/2</b>	<b>100</b>					<b>Silt Loam</b>	
<b>9-11</b>	<b>7.5YR 2.5/2</b>	<b>98</b>	<b>7.5YR 3/4</b>	<b>2</b>	<b>C</b>	<b>M</b>	<b>Silt Loam</b>	<b>Fine</b>
<b>11-16</b>	<b>7.5YR 2.5/2</b>	<b>90</b>	<b>7.5YR 3/4</b>	<b>10</b>	<b>C</b>	<b>M</b>	<b>Silt Loam</b>	<b>Fine</b>

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No **X**

Remarks: \_\_\_\_\_

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No **X** Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>16**  
 Saturation Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>16**  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes \_\_\_\_\_ No **X**

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

Remarks: \_\_\_\_\_

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 8/26/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 5  
 Investigator(s): CR/CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): LRR A Lat: 45.3652 Long: -122.8282 Datum: WGS84  
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>X</u>	No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (plot size: <u>30</u> )			
1 <u>Salix lasiandra</u>	<u>10</u>	<u>X</u>	<u>FACW</u>
2 <u>Fraxinus latifolia</u>	<u>30</u>	<u>X</u>	<u>FACW</u>
3 <u>      </u>			
4 <u>      </u>			
	<u>40</u>	= Total Cover	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )			
1 <u>Rubus armeniacus</u>	<u>35</u>	<u>X</u>	<u>FAC</u>
2 <u>Mahonia aquifolium</u>	<u>5</u>		<u>FACU</u>
3 <u>      </u>			
4 <u>      </u>			
5 <u>      </u>			
	<u>40</u>	= Total Cover	
<b>Herb Stratum</b> (plot size: <u>10</u> )			
1 <u>Phalaris arundinacea</u>	<u>35</u>	<u>X</u>	<u>FACW</u>
2 <u>Alopecurus arundinaceus</u>	<u>20</u>	<u>X</u>	<u>(FAC)</u>
3 <u>Holcus lanatus</u>	<u>20</u>	<u>X</u>	<u>FAC</u>
4 <u>Carex sp</u>	<u>10</u>		<u>(UPL)</u>
5 <u>Dipsacus fullonum</u>	<u>5</u>		<u>FAC</u>
6 <u>Juncus effusus</u>	<u>5</u>		<u>FACW</u>
7 <u>Juncus patens</u>	<u>5</u>		<u>FACW</u>
8 <u>      </u>			
	<u>100</u>	= Total Cover	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )			
1 <u>      </u>			
2 <u>      </u>			
	<u>0</u>	= Total Cover	
% Bare Ground in Herb Stratum <u>0</u>			

**Dominance Test worksheet:**

Number of Dominant Species  
That are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species  
That are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index Worksheet:**

Total % Cover of	Multiply by:	
OBL Species <u>      </u>	x 1 =	<u>0</u>
FACW species <u>      </u>	x 2 =	<u>0</u>
FAC Species <u>      </u>	x 3 =	<u>0</u>
FACU Species <u>      </u>	x 4 =	<u>0</u>
UPL Species <u>      </u>	x 5 =	<u>0</u>
Column Totals <u>0</u> (A)		<u>0</u> (B)

Prevalence Index = B/A = #DIV/0!

**Hydrophytic Vegetation Indicators:**

X 1- Rapid Test for Hydrophytic Vegetation  
       2- Dominance Test is >50%  
       3-Prevalence Index is ≤ 3.0<sup>1</sup>  
       4-Morphological Adaptations<sup>1</sup> (provide supporting data in Remarks or on a separate sheet)  
       5- Wetland Non-Vascular Plants<sup>1</sup>  
       Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes X No       

Remarks:

**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>		
0-13	10YR 3/2	95	7.5YR 3/4	5	C	M	Silt Loam	Fine-Medium

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: \_\_\_\_\_

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): >13

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): >13

**Wetland Hydrology Present?** Yes  No

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

Remarks: \_\_\_\_\_

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 8/26/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 6  
 Investigator(s): CM/CR Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Berm Local relief (concave, convex, none): Convex Slope (%): 5  
 Subregion (LRR): LRR A Lat: 45.3664 Long: -122.8287 Datum: WGS84  
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (plot size: <u>30</u> )			
1 <u>Fraxinus latifolia</u>	<u>20</u>	<u>X</u>	<u>FACW</u>
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
	<u>20</u>	= Total Cover	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )			
1 <u>Mahonia aquifolium</u>	<u>30</u>	<u>X</u>	<u>FACU</u>
2 <u>Rubus armeniacus</u>	<u>20</u>	<u>X</u>	<u>FAC</u>
3 <u>Salix lasiandra</u>	<u>20</u>	<u>X</u>	<u>FACW</u>
4 <u>Fraxinus latifolia</u>	<u>10</u>	<u>      </u>	<u>FACW</u>
5 <u>Populus balsamifera</u>	<u>5</u>	<u>      </u>	<u>FAC</u>
	<u>85</u>	= Total Cover	
<b>Herb Stratum</b> (plot size: <u>10</u> )			
1 <u>Holcus lanatus</u>	<u>25</u>	<u>X</u>	<u>FAC</u>
2 <u>Leucanthemum vulgare</u>	<u>20</u>	<u>X</u>	<u>FACU</u>
3 <u>Dactylis glomerata</u>	<u>20</u>	<u>X</u>	<u>FACU</u>
4 <u>Hypericum perforatum</u>	<u>10</u>	<u>      </u>	<u>FACU</u>
5 <u>Anthoxanthum odoratum</u>	<u>10</u>	<u>      </u>	<u>FACU</u>
6 <u>Daucus carota</u>	<u>10</u>	<u>      </u>	<u>FACU</u>
7 <u>Dipsacus fullonum</u>	<u>5</u>	<u>      </u>	<u>FAC</u>
8 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
	<u>100</u>	= Total Cover	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )			
1 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
	<u>0</u>	= Total Cover	
% Bare Ground in Herb Stratum	<u>0</u>		

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 57% (A/B)

**Prevalence Index Worksheet:**

Total % Cover of	Multiply by:	
OBL Species <u>      </u>	x 1 =	<u>0</u>
FACW species <u>      </u>	x 2 =	<u>0</u>
FAC Species <u>      </u>	x 3 =	<u>0</u>
FACU Species <u>      </u>	x 4 =	<u>0</u>
UPL Species <u>      </u>	x 5 =	<u>0</u>
Column Totals <u>0</u> (A)		<u>0</u> (B)

Prevalence Index = B/A = #DIV/0!

**Hydrophytic Vegetation Indicators:**

X 1- Rapid Test for Hydrophytic Vegetation  
       2- Dominance Test is >50%  
       3-Prevalence Index is ≤ 3.0<sup>1</sup>  
       4-Morphological Adaptations<sup>1</sup> (provide supporting data in Remarks or on a separate sheet)  
       5- Wetland Non-Vascular Plants<sup>1</sup>  
       Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes X No       

Remarks:

**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>		
<b>0-4</b>	<b>7.5YR 2.5/2</b>	<b>100</b>					<b>Silt Loam</b>	<b>20% cobble</b>
<b>4-14</b>	<b>7.5YR2.5/3</b>	<b>99</b>	<b>7.5YR 3/4</b>	<b>1</b>	<b>C</b>	<b>M</b>	<b>Silty Clay Loam</b>	<b>50% cobble; fine</b>

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No

Remarks: \_\_\_\_\_

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): >14  
 Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No  Depth (inches): >14

**Wetland Hydrology Present?**  
 Yes \_\_\_\_\_ No

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

Remarks: \_\_\_\_\_

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 8/26/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 7  
 Investigator(s): CM/CR Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): LRR A Lat: 45.3664 Long: -122.8287 Datum: WGS84  
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: None

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? (Y/N) Y  
 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 checked="" type="checkbox"/>	No <input type="checkbox"/>	Is Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (plot size: <u>30</u> )			
1 <u>Fraxinus latifolia</u>	<u>20</u>	<u>X</u>	<u>FACW</u>
2 <u>Salix lasiandra</u>	<u>20</u>	<u>X</u>	<u>FACW</u>
3 _____			
4 _____			
	<u>40</u>	= Total Cover	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )			
1 <u>Rubus armeniacus</u>	<u>20</u>	<u>X</u>	<u>FAC</u>
2 <u>Salix lasiandra</u>	<u>10</u>	<u>X</u>	<u>FACW</u>
3 <u>Fraxinus latifolia</u>	<u>10</u>	<u>X</u>	<u>FACW</u>
4 <u>Mahonia aquifolium</u>	<u>10</u>	<u>X</u>	<u>FACU</u>
5 _____			
	<u>50</u>	= Total Cover	
<b>Herb Stratum</b> (plot size: <u>10</u> )			
1 <u>Holcus lanatus</u>	<u>35</u>	<u>X</u>	<u>FAC</u>
2 <u>Agrostis capillaris</u>	<u>20</u>	<u>X</u>	<u>FAC</u>
3 <u>Leucanthemum vulgare</u>	<u>10</u>		<u>FACU</u>
4 <u>Leontodon saxatilis</u>	<u>15</u>	<u>X</u>	<u>FACU</u>
5 <u>Poa sp</u>	<u>10</u>		<u>(UPL)</u>
6 <u>Dipsacus fullonum</u>	<u>10</u>		<u>FAC</u>
7 <u>Equisetum arvense</u>	<u>5</u>		<u>FAC</u>
8 <u>Daucus carota</u>	<u>10</u>		<u>FACU</u>
	<u>115</u>	= Total Cover	
<b>Woody Vine Stratum</b> (plot size: _____)			
1 _____			
2 _____			
	<u>0</u>	= Total Cover	
<b>% Bare Ground in Herb Stratum</b> <u>0</u>			

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 78% (A/B)

**Prevalence Index Worksheet:**

Total % Cover of	Multiply by:	
OBL Species _____	x 1 =	<u>0</u>
FACW species _____	x 2 =	<u>0</u>
FAC Species _____	x 3 =	<u>0</u>
FACU Species _____	x 4 =	<u>0</u>
UPL Species _____	x 5 =	<u>0</u>
Column Totals <u>0</u> (A)		<u>0</u> (B)

Prevalence Index = B/A = #DIV/0!

**Hydrophytic Vegetation Indicators:**

1- Rapid Test for Hydrophytic Vegetation X

2- Dominance Test is >50% \_\_\_\_\_

3-Prevalence Index is ≤ 3.0<sup>1</sup> \_\_\_\_\_

4-Morphological Adaptations<sup>1</sup> (provide supporting data in Remarks or on a separate sheet) \_\_\_\_\_

5- Wetland Non-Vascular Plants<sup>1</sup> \_\_\_\_\_

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) \_\_\_\_\_

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No

Remarks:



**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>		
<b>0-4</b>	<b>7.5YR 2.5/2</b>			<b>100</b>			<b>Silt Loam</b>	
<b>4-7</b>	<b>10YR 3/3</b>	<b>99</b>	<b>10YR 3/6</b>	<b>1</b>	<b>C</b>	<b>M</b>	<b>Loam</b>	<b>Fine</b>
<b>7-12</b>	<b>7.5YR 3/2</b>	<b>95</b>	<b>7.5YR 3/4</b>	<b>5</b>	<b>C</b>	<b>M</b>	<b>Loam</b>	<b>Medium; 30% cobble</b>

<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.)**

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

**Secondary Indicators (2 or more required)**

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): >12  
 Saturation Present? Yes  No  Depth (inches): >12  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes  No

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

Remarks:

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 8/26/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 8  
 Investigator(s): CM/CR Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR): LRR A Lat: 45.3672 Long: -122.8269 Datum: WGS84  
 Soil Map Unit Name: Briedwell stony silt loam NWI Classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>      </u>	No <u>X</u>	Is Sampled Area within a Wetland?	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>		Yes <u>      </u>	No <u>X</u>
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>		Yes <u>      </u>	No <u>X</u>

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (plot size: <u>      </u> )				<b>Dominance Test worksheet:</b> Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That are OBL, FACW, or FAC: <u>50%</u> (A/B)
1				
2				
3				
4				
	<u>0</u>	= Total Cover		
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				
1	<u>5</u>		<u>FAC</u>	
2	<u>20</u>	<u>X</u>	<u>(UPL)</u>	
3	<u>10</u>	<u>X</u>	<u>FAC</u>	
4	<u>5</u>		<u>FACU</u>	
5	<u>5</u>		<u>FAC</u>	
	<u>45</u>	= Total Cover		
<b>Herb Stratum</b> (plot size: <u>10</u> )				
1	<u>25</u>	<u>X</u>	<u>FAC</u>	
2	<u>20</u>	<u>X</u>	<u>(FAC)</u>	
3	<u>15</u>		<u>FACU</u>	
4	<u>25</u>	<u>X</u>	<u>FACU</u>	
5	<u>5</u>		<u>FACU</u>	
6	<u>10</u>		<u>FACU</u>	
7				
8				
	<u>100</u>	= Total Cover		
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				
1	<u>10</u>	<u>X</u>	<u>FACU</u>	
2				
	<u>10</u>	= Total Cover		
<b>% Bare Ground in Herb Stratum</b> <u>0</u>				
<b>Prevalence Index Worksheet:</b> Total % Cover of <u>      </u> Multiply by: OBL Species <u>      </u> x 1 = <u>0</u> FACW species <u>      </u> x 2 = <u>0</u> FAC Species <u>      </u> x 3 = <u>0</u> FACU Species <u>      </u> x 4 = <u>0</u> UPL Species <u>      </u> x 5 = <u>0</u> Column Totals <u>0</u> (A) <u>0</u> (B)  Prevalence Index =B/A = <u>#DIV/0!</u>				
<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1- Rapid Test for Hydrophytic Vegetation <u>      </u> 2- Dominance Test is >50% <u>      </u> 3-Prevalence Index is ≤ 3.0 <sup>1</sup> <u>      </u> 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet) <u>      </u> 5- Wetland Non-Vascular Plants <sup>1</sup> <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. <b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>				

Remarks:

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>		
0-13	10YR 3/2	100					Silt Loam	

<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.) Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

Restrictive Layer (if present):  
Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Fac-Neutral Test (D5)
	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
	<input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations:  
Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): >13  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): >13  
(includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No X

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

Remarks:

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 8/26/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 9  
 Investigator(s): CM/CR Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): LRR A Lat: 45.3671 Long: -122.8269 Datum: WGS84  
 Soil Map Unit Name: Briedwell stony silt loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>X</u>	No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>30</u> )				Number of Dominant Species	
1 <u>Populus balsamifera</u>	<u>50</u>	<u>X</u>	<u>FAC</u>	That are OBL, FACW, or FAC: <u>3</u> (A)	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Total Number of Dominant	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Species Across All Strata: <u>3</u> (B)	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Percent of Dominant Species	
	<u>50</u>	= Total Cover		That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				<b>Prevalence Index Worksheet:</b>	
1 <u>Rubus armeniacus</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	Total % Cover of <u>      </u> Multiply by:	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	OBL Species <u>      </u> x 1 = <u>0</u>	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FACW species <u>      </u> x 2 = <u>0</u>	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FAC Species <u>      </u> x 3 = <u>0</u>	
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FACU Species <u>      </u> x 4 = <u>0</u>	
	<u>10</u>	= Total Cover		UPL Species <u>      </u> x 5 = <u>0</u>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				Column Totals <u>0</u> (A) <u>0</u> (B)	
1 <u>Phalaris arundinacea</u>	<u>80</u>	<u>X</u>	<u>FACW</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2 <u>Lotus corniculatus</u>	<u>5</u>	<u>      </u>	<u>FAC</u>		
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
6 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
7 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
8 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
	<u>85</u>	= Total Cover			
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				<b>Hydrophytic Vegetation Indicators:</b>	
1 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	1- Rapid Test for Hydrophytic Vegetation	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u> 2- Dominance Test is >50%	
	<u>0</u>	= Total Cover		<u>      </u> 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
% Bare Ground in Herb Stratum <u>15</u>				<u>      </u> 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet)	
Remarks:				<u>      </u> 5- Wetland Non-Vascular Plants <sup>1</sup>	
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>	

**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>		
0-4	7.5YR 2.5/2	90	7.5YR 5/8	5	C	PL	Silt Loam	Fine
0-4			7.5YR 5/8	5	C	M	Silt Loam	Fine
4-12	10YR 4/3	90	5YR 4/6	10	C	M	Silty Clay Loam	Medium

<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.)**

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

**Secondary Indicators (2 or more required)**

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): >12  
 Saturation Present? Yes  No  Depth (inches): >12  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes  No

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

Remarks:



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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 9/22/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 10  
 Investigator(s): JT/CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): LRR A Lat: 45.3663 Long: -122.8266 Datum: WGS84  
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>X</u>	No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>      </u> )				Number of Dominant Species	
1				That are OBL, FACW, or FAC: <u>1</u> (A)	
2				Total Number of Dominant	
3				Species Across All Strata: <u>1</u> (B)	
4				Percent of Dominant Species	
	<u>0</u>	= Total Cover		That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>      </u> )				<b>Prevalence Index Worksheet:</b>	
1				Total % Cover of <u>      </u> Multiply by:	
2				OBL Species <u>      </u> x 1 = <u>0</u>	
3				FACW species <u>      </u> x 2 = <u>0</u>	
4				FAC Species <u>      </u> x 3 = <u>0</u>	
5				FACU Species <u>      </u> x 4 = <u>0</u>	
	<u>0</u>	= Total Cover		UPL Species <u>      </u> x 5 = <u>0</u>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				Column Totals <u>0</u> (A) <u>0</u> (B)	
1	<u>100</u>	<u>X</u>	<u>FACW</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2				<b>Hydrophytic Vegetation Indicators:</b>	
3				<u>      </u> 1- Rapid Test for Hydrophytic Vegetation	
4				<u>X</u> 2- Dominance Test is >50%	
5				<u>      </u> 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
6				<u>      </u> 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet)	
7				<u>      </u> 5- Wetland Non-Vascular Plants <sup>1</sup>	
8				<u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
	<u>100</u>	= Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>	
1					
2					
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks: **Fraxinus latifolia (FACW) is less than 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>		
0-13	10YR 3/2	95	10YR 4/6	3	C	M	Silt Loam	Fine
0-13			10YR 4/6	2	C	PL	Silt Loam	Fine

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: \_\_\_\_\_

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input checked="" type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**  
 Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): >13  
 Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): >13

**Wetland Hydrology Present?**  
 Yes  No

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

Remarks: \_\_\_\_\_

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 9/22/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 11  
 Investigator(s): JT/CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 3  
 Subregion (LRR): LRR A Lat: 45.3664 Long: -122.8266 Datum: WGS84  
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: None

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? (Y/N) Y  
 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 checked="" type="checkbox"/>	No <input type="checkbox"/>	Is Sampled Area within a Wetland?	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: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: _____)				Number of Dominant Species	
1 _____	_____	_____	_____	That are OBL, FACW, or FAC: <u>3</u> (A)	
2 _____	_____	_____	_____	Total Number of Dominant	
3 _____	_____	_____	_____	Species Across All Strata: <u>3</u> (B)	
4 _____	_____	_____	_____	Percent of Dominant Species	
	<u>0</u>	= Total Cover		That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>15</u> )				<b>Prevalence Index Worksheet:</b>	
1 <u>Rubus armeniacus</u>	<u>50</u>	<u>X</u>	<u>FAC</u>	Total % Cover of _____ Multiply by:	
2 <u>Rubus laciniatus</u>	<u>5</u>	_____	<u>FACU</u>	OBL Species _____ x 1 = <u>0</u>	
3 <u>Crataegus monogyna</u>	<u>2</u>	_____	<u>FAC</u>	FACW species _____ x 2 = <u>0</u>	
4 _____	_____	_____	_____	FAC Species <u>65</u> x 3 = <u>195</u>	
5 _____	_____	_____	_____	FACU Species <u>70</u> x 4 = <u>280</u>	
	<u>57</u>	= Total Cover		UPL Species <u>20</u> x 5 = <u>100</u>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				Column Totals <u>155</u> (A) <u>575</u> (B)	
1 <u>Dipsacus fullonum</u>	<u>60</u>	<u>X</u>	<u>FAC</u>	Prevalence Index =B/A = <u>3.71</u>	
2 <u>Agrostis capillaris</u>	<u>30</u>	<u>X</u>	<u>FAC</u>		
3 <u>Phalaris arundinacea</u>	<u>10</u>	_____	<u>FACW</u>		
4 _____	_____	_____	_____		
5 _____	_____	_____	_____		
6 _____	_____	_____	_____		
7 _____	_____	_____	_____		
8 _____	_____	_____	_____		
	<u>100</u>	= Total Cover			
<b>Woody Vine Stratum</b> (plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b>	
1 _____	_____	_____	_____	_____ 1- Rapid Test for Hydrophytic Vegetation	
2 _____	_____	_____	_____	<u>X</u> 2- Dominance Test is >50%	
	<u>0</u>	= Total Cover		_____ 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
% Bare Ground in Herb Stratum <u>0</u>				_____ 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet)	
				_____ 5- Wetland Non-Vascular Plants <sup>1</sup>	
				_____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____	

Remarks:

**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>		
<b>0-16</b>	<b>2.5Y 3/2</b>	<b>100</b>					<b>Silt Loam</b>	

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No **X**

Remarks: \_\_\_\_\_

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No **X** Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>16**  
 Saturation Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>16**  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes \_\_\_\_\_ No **X**

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

Remarks: \_\_\_\_\_

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 9/22/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 12  
 Investigator(s): JT/CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): LRR A Lat: 45.3662 Long: -122.8286 Datum: WGS84  
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: None

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? (Y/N) Y  
 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 checked="" type="checkbox"/>	No <input type="checkbox"/>	Is Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: _____)				Number of Dominant Species	
1				That are OBL, FACW, or FAC: <u>1</u> (A)	
2				Total Number of Dominant	
3				Species Across All Strata: <u>1</u> (B)	
4				Percent of Dominant Species	
	<u>0</u>	= Total Cover		That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: _____)				<b>Prevalence Index Worksheet:</b>	
1				Total % Cover of	
2				Multiply by:	
3				OBL Species <u>        </u> x 1 = <u>0</u>	
4				FACW species <u>        </u> x 2 = <u>0</u>	
5				FAC Species <u>65</u> x 3 = <u>195</u>	
	<u>0</u>	= Total Cover		FACU Species <u>70</u> x 4 = <u>280</u>	
				UPL Species <u>20</u> x 5 = <u>100</u>	
				Column Totals <u>155</u> (A) <u>575</u> (B)	
				Prevalence Index =B/A = <u>3.71</u>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				<b>Hydrophytic Vegetation Indicators:</b>	
1	<u>85</u>	<u>X</u>	<u>FACW</u>	<u>        </u> 1- Rapid Test for Hydrophytic Vegetation	
2	<u>15</u>		<u>FAC</u>	<u>X</u> 2- Dominance Test is >50%	
3	<u>5</u>		<u>FAC</u>	<u>        </u> 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
4				<u>        </u> 4-Morphological Adaptations <sup>1</sup> (provide supporting	
5				data in Remarks or on a separate sheet)	
6				<u>        </u> 5- Wetland Non-Vascular Plants <sup>1</sup>	
7				<u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
8				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless	
	<u>105</u>	= Total Cover		disturbed or problematic.	
<b>Woody Vine Stratum</b> (plot size: _____)				<b>Hydrophytic Vegetation Present?</b>	
1				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2					
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

**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>		
0-6	10YR 3/2	100					Silt Loam	
6-12	10YR 3/2	85	7.5YR 4/6	10	C	M	Silt Loam	Coarse
6-12			7.5YR 4/6	5	C	PL	Silt Loam	Medium

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: \_\_\_\_\_

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**  
 Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): >12  
 Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): >12

**Wetland Hydrology Present?** Yes  No

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

Remarks: \_\_\_\_\_



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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 9/22/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 13  
 Investigator(s): JT/CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 10  
 Subregion (LRR): LRR A Lat: 45.3662 Long: -122.8287 Datum: WGS84  
 Soil Map Unit Name: Wapato silty clay loam NWI Classification: None

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? (Y/N) Y  
 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 checked="" type="checkbox"/>	No <input type="checkbox"/>	Is Sampled Area within a Wetland?	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: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: _____)				Number of Dominant Species	
1 _____	_____	_____	_____	That are OBL, FACW, or FAC: <u>4</u> (A)	
2 _____	_____	_____	_____	Total Number of Dominant	
3 _____	_____	_____	_____	Species Across All Strata: <u>4</u> (B)	
4 _____	_____	_____	_____	Percent of Dominant Species	
	<u>0</u>	= Total Cover		That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				<b>Prevalence Index Worksheet:</b>	
1 <u>Rubus armeniacus</u>	<u>100</u>	<u>X</u>	<u>FAC</u>	Total % Cover of _____ Multiply by:	
2 _____	_____	_____	_____	OBL Species _____ x 1 = <u>0</u>	
3 _____	_____	_____	_____	FACW species _____ x 2 = <u>0</u>	
4 _____	_____	_____	_____	FAC Species _____ x 3 = <u>0</u>	
5 _____	_____	_____	_____	FACU Species _____ x 4 = <u>0</u>	
	<u>100</u>	= Total Cover		UPL Species _____ x 5 = <u>0</u>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				Column Totals <u>0</u> (A) <u>0</u> (B)	
1 <u>Phalaris arundinacea</u>	<u>10</u>	<u>X</u>	<u>FACW</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2 <u>Dipsacus fullonum</u>	<u>10</u>	<u>X</u>	<u>FAC</u>		
3 <u>Cirsium arvense</u>	<u>5</u>	<u>X</u>	<u>FAC</u>		
4 _____	_____	_____	_____		
5 _____	_____	_____	_____		
6 _____	_____	_____	_____		
7 _____	_____	_____	_____		
8 _____	_____	_____	_____		
	<u>25</u>	= Total Cover			
<b>Woody Vine Stratum</b> (plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b>	
1 _____	_____	_____	_____	_____ 1- Rapid Test for Hydrophytic Vegetation	
2 _____	_____	_____	_____	<u>X</u> 2- Dominance Test is >50%	
	<u>0</u>	= Total Cover		_____ 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
% Bare Ground in Herb Stratum <u>75</u>				_____ 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet)	
				_____ 5- Wetland Non-Vascular Plants <sup>1</sup>	
				_____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Remarks:

**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>		
<b>0-9</b>	<b>7.5YR 3/2</b>	<b>100</b>					<b>Silt Loam</b>	
<b>9-13</b>	<b>7.5YR 3/2</b>	<b>98</b>	<b>7.5YR 4/6</b>	<b>2</b>	<b>C</b>	<b>M</b>	<b>Silt Loam</b>	<b>Fine</b>
<b>13-16</b>	<b>7.5YR 3/2</b>	<b>86</b>	<b>5YR 4/6</b>	<b>10</b>	<b>C</b>	<b>M</b>	<b>Silty Clay Loam</b>	<b>Medium</b>
<b>13-16</b>			<b>5YR 4/6</b>	<b>2</b>	<b>C</b>	<b>PL</b>	<b>Silty Clay Loam</b>	<b>Medium</b>
<b>13-16</b>			<b>5Y 4/1</b>	<b>2</b>	<b>D</b>	<b>M</b>	<b>Silty Clay Loam</b>	<b>Medium</b>

<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.)**

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No **X**

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

**Secondary Indicators (2 or more required)**

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No **X** Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>16**  
 Saturation Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>16**  
 (includes capillary fringe)

**Wetland Hydrology Present?**

Yes \_\_\_\_\_ No **X**

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

Remarks:

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 9/22/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 14  
 Investigator(s): JT/CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 10  
 Subregion (LRR): LRR A Lat: 45.3666 Long: -122.8292 Datum: WGS84  
 Soil Map Unit Name: Quatama loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation X Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>      </u> )				Number of Dominant Species	
1				That are OBL, FACW, or FAC: <u>2</u> (A)	
2				Total Number of Dominant	
3				Species Across All Strata: <u>2</u> (B)	
4				Percent of Dominant Species	
	<u>0</u>	= Total Cover		That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				<b>Prevalence Index Worksheet:</b>	
1	<u>10</u>	<u>X</u>	<u>FAC</u>	Total % Cover of	
2				Multiply by:	
3				OBL Species	x 1 = <u>0</u>
4				FACW species	x 2 = <u>0</u>
5				FAC Species	x 3 = <u>0</u>
	<u>10</u>	= Total Cover		FACU Species	x 4 = <u>0</u>
				UPL Species	x 5 = <u>0</u>
				Column Totals	<u>0</u> (A) <u>0</u> (B)
<b>Herb Stratum</b> (plot size: <u>10</u> )				Prevalence Index = B/A = <u>#DIV/0!</u>	
1	<u>60</u>	<u>X</u>	<u>(FAC)</u>	<b>Hydrophytic Vegetation Indicators:</b>	
2	<u>10</u>		<u>FACU</u>	<u>      </u> 1- Rapid Test for Hydrophytic Vegetation	
3	<u>10</u>		<u>FACU</u>	<u>X</u> 2- Dominance Test is >50%	
4	<u>10</u>		<u>FACU</u>	<u>      </u> 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
5	<u>5</u>		<u>FAC</u>	<u>      </u> 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet)	
6	<u>5</u>		<u>FACU</u>	<u>      </u> 5- Wetland Non-Vascular Plants <sup>1</sup>	
7				<u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
8				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
	<u>100</u>	= Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )					
1					
2					
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks: **Grass is mowed.**

**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>		
0-8	7.5YR 3/4	100					Silt Loam	20% gravel
8-16	7.5YR 3/4	60	10YR 4/6	5	C	M	Loam	Fine; 20% gravel; mixed matrix
8-16	10YR 6/4	30	10YR 4/6	5	C	M	Loam	Fine; 20% gravel; mixed matrix

<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.)**

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No **X**

Remarks:

**Soil is disturbed, but also there are no hydrology inputs outside of seasonal direct precipitation. At that point, the water infiltrates so quickly from being upslope that hydric soils cannot sustain.**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No **X** Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>16**

Saturation Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>16**  
(includes capillary fringe)

**Wetland Hydrology Present?**  
Yes \_\_\_\_\_ No **X**

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

Remarks:



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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 10/6/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 15  
 Investigator(s): CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2  
 Subregion (LRR): LRR A Lat: 45.3648 Long: -122.8309 Datum: WGS84  
 Soil Map Unit Name: Huberly silt loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation X Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>      </u>	No <u>X</u>	Is Sampled Area within a Wetland?	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>30</u> )				Number of Dominant Species	
1 <u>Populus balsamifera</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	That are OBL, FACW, or FAC: <u>3</u> (A)	
2 <u>Arbutus menziesii</u>	<u>5</u>	<u>X</u>	<u>(UPL)</u>	Total Number of Dominant Species Across All Strata: <u>7</u> (B)	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Percent of Dominant Species	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	That are OBL, FACW, or FAC: <u>43%</u> (A/B)	
	<u>25</u>	= Total Cover		<b>Prevalence Index Worksheet:</b>	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				Total % Cover of	
1 <u>Cytisus scoparius</u>	<u>20</u>	<u>X</u>	<u>(UPL)</u>	Multiply by:	
2 <u>Populus balsamifera</u>	<u>5</u>	<u>      </u>	<u>FAC</u>	OBL Species <u>      </u> x 1 = <u>0</u>	
3 <u>Rubus armeniacus</u>	<u>5</u>	<u>      </u>	<u>FAC</u>	FACW species <u>      </u> x 2 = <u>0</u>	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FAC Species <u>      </u> x 3 = <u>0</u>	
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FACU Species <u>      </u> x 4 = <u>0</u>	
	<u>30</u>	= Total Cover		UPL Species <u>      </u> x 5 = <u>0</u>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				Column Totals <u>0</u> (A) <u>0</u> (B)	
1 <u>Hypericum perforatum</u>	<u>30</u>	<u>X</u>	<u>FACU</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2 <u>Agrostis capillaris</u>	<u>30</u>	<u>X</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b>	
3 <u>Portulaca oleracea</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	_____ 1- Rapid Test for Hydrophytic Vegetation	
4 <u>Anthoxanthum odoratum</u>	<u>20</u>	<u>X</u>	<u>FACU</u>	_____ 2- Dominance Test is >50%	
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	_____ 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
6 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	_____ 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet)	
7 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	_____ 5- Wetland Non-Vascular Plants <sup>1</sup>	
8 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	_____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
	<u>100</u>	= Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>	
1 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

**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>		
0-5	7.5YR 2.5/2	99	5YR 3/4	1	C	M	Loam	Fine
5-6	10YR 3/3	100					Sand	
6-10	10YR 3/3	40					Sandy Clay Loam	Mixed Matrix
6-10	10YR 5/3	40					Sandy Clay Loam	Mixed Matrix
6-10	10YR 4/2	20					Sandy Clay Loam	Mixed Matrix
10-20	7.5YR 2.5/3	100					Sand	

<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.)**

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

**Secondary Indicators (2 or more required)**

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present?	Yes _____	No <u>X</u>	Depth (inches): _____
Water Table Present?	Yes _____	No <u>X</u>	Depth (inches): <u>&gt;20</u>
Saturation Present? (includes capillary fringe)	Yes _____	No <u>X</u>	Depth (inches): <u>&gt;20</u>

Wetland Hydrology Present?  
Yes \_\_\_\_\_ No X

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

Remarks:

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 10/6/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 16  
 Investigator(s): CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): LRR A Lat: 45.3651 Long: -122.8326 Datum: WGS84  
 Soil Map Unit Name: Quatama loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>30</u> )				Number of Dominant Species	
1 <u>Populus balsamifera</u>	<u>5</u>	<u>X</u>	<u>FAC</u>	That are OBL, FACW, or FAC: <u>5</u> (A)	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Total Number of Dominant	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Species Across All Strata: <u>5</u> (B)	
4 <u>      </u>	<u>5</u>	<u>      </u>	<u>      </u>	Percent of Dominant Species	
	<u>5</u>	<u>      </u>	<u>      </u>	That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				<b>Prevalence Index Worksheet:</b>	
1 <u>Populus balsamifera</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	Total % Cover of	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Multiply by:	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	OBL Species <u>      </u> x 1 = <u>0</u>	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FACW species <u>      </u> x 2 = <u>0</u>	
5 <u>      </u>	<u>10</u>	<u>      </u>	<u>      </u>	FAC Species <u>      </u> x 3 = <u>0</u>	
	<u>10</u>	<u>      </u>	<u>      </u>	FACU Species <u>      </u> x 4 = <u>0</u>	
	<u>10</u>	<u>      </u>	<u>      </u>	UPL Species <u>      </u> x 5 = <u>0</u>	
	<u>10</u>	<u>      </u>	<u>      </u>	Column Totals <u>0</u> (A) <u>0</u> (B)	
<b>Herb Stratum</b> (plot size: <u>10</u> )				Prevalence Index = B/A = <u>#DIV/0!</u>	
1 <u>Lotus corniculatus</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b>	
2 <u>Agrostis capillaris</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	<u>      </u> 1- Rapid Test for Hydrophytic Vegetation	
3 <u>Holcus lanatus</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	<u>X</u> 2- Dominance Test is >50%	
4 <u>Anthoxanthum odoratum</u>	<u>5</u>	<u>      </u>	<u>FACU</u>	<u>      </u> 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u> 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet)	
6 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u> 5- Wetland Non-Vascular Plants <sup>1</sup>	
7 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
8 <u>      </u>	<u>45</u>	<u>      </u>	<u>      </u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
	<u>45</u>	<u>      </u>	<u>      </u>	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )					
1 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
2 <u>      </u>	<u>0</u>	<u>      </u>	<u>      </u>		
	<u>0</u>	<u>      </u>	<u>      </u>		
% Bare Ground in Herb Stratum <u>55</u>					

Remarks: **Vegetation was only considered within the excavated ditch regime, so forested areas adjacent (Populus balsamifera) were not included in the canopy.**

**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>		
0-8	10YR 3/3	100					Sandy Loam	
8-13	10YR 3/4	90	10YR 3/6	10	C	M	Loamy Sand	Coarse
13-17	10YR 3/4	85	10YR 3/6	10	C	M	Loamy Sand	Coarse
13-17			10YR 6/4	5	C	M	Loamy Sand	Coarse

<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.)**

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No **X**

Remarks:

**Old remnant ditch present. Still appears to have storm flow periodically based on drainage patterns and soil cracks.**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

**Secondary Indicators (2 or more required)**

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No **X** Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>17**  
 Saturation Present? Yes **X** No \_\_\_\_\_ Depth (inches): **0-1;>17**  
 (includes capillary fringe)

**Wetland Hydrology Present?**

Yes **X** No \_\_\_\_\_

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

Remarks:



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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 10/6/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 17  
 Investigator(s): CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): LRR A Lat: 45.3656 Long: -122.8317 Datum: WGS84  
 Soil Map Unit Name: Aloha silt loam NWI Classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>30</u> )				Number of Dominant Species	
1 <u>Populus balsamifera</u>	<u>30</u>	<u>X</u>	<u>FAC</u>	That are OBL, FACW, or FAC: <u>5</u> (A)	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Total Number of Dominant	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Species Across All Strata: <u>8</u> (B)	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Percent of Dominant Species	
	<u>30</u>	= Total Cover		That are OBL, FACW, or FAC: <u>63%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				<b>Prevalence Index Worksheet:</b>	
1 <u>Populus balsamifera</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	Total % Cover of	
2 <u>Cytisus scoparius</u>	<u>5</u>	<u>X</u>	<u>(UPL)</u>	Multiply by:	
3 <u>Rubus armeniacus</u>	<u>5</u>	<u>X</u>	<u>FAC</u>	OBL Species <u>      </u> x 1 = <u>0</u>	
4 <u>Salix sp</u>	<u>2</u>	<u>      </u>	<u>(UPL)</u>	FACW species <u>      </u> x 2 = <u>0</u>	
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FAC Species <u>      </u> x 3 = <u>0</u>	
	<u>22</u>	= Total Cover		FACU Species <u>      </u> x 4 = <u>0</u>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				UPL Species <u>      </u> x 5 = <u>0</u>	
1 <u>Agrostis capillaris</u>	<u>60</u>	<u>X</u>	<u>FAC</u>	Column Totals <u>0</u> (A) <u>0</u> (B)	
2 <u>Holcus lanatus</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
3 <u>Leontodon saxatilis</u>	<u>20</u>	<u>X</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b>	
4 <u>Hypochaeris radicata</u>	<u>20</u>	<u>X</u>	<u>FACU</u>	1- Rapid Test for Hydrophytic Vegetation	
5 <u>Anthoxanthum odoratum</u>	<u>10</u>	<u>      </u>	<u>FACU</u>	<u>X</u> 2- Dominance Test is >50%	
6 <u>Hypericum perforatum</u>	<u>10</u>	<u>      </u>	<u>FACU</u>	<u>      </u> 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
7 <u>Lotus corniculatus</u>	<u>5</u>	<u>      </u>	<u>FAC</u>	<u>      </u> 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet)	
8 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u> 5- Wetland Non-Vascular Plants <sup>1</sup>	
	<u>145</u>	= Total Cover		<u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
1 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<b>Hydrophytic Vegetation Present?</b>	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Yes <u>X</u> No <u>      </u>	
	<u>0</u>	= Total Cover			
<b>% Bare Ground in Herb Stratum</b> <u>0</u>					

Remarks:

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

Table with columns: Depth (Inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type, Loc), Texture, Remarks. Rows include 0-5, 5-10, 10-12, 12-18 inch depths.

1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

2Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils3:

Table listing hydric soil indicators (Histosol, Histic Epipedon, etc.) and problematic hydric soil indicators (2 cm Muck, Red Parent Material, etc.) with checkboxes.

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

Restrictive Layer (if present):

Type: \_\_\_\_\_
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No **X**

Remarks:

Depleted below 12 inches but not below dark surface. This area appears to be dried out but still has relict redox features in the soil. The entire area is becoming inundated with Scotch broom and other upland shrubs.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

Table listing primary and secondary hydrology indicators (Surface Water, High Water Table, etc.) with checkboxes.

Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No **X** Depth (inches): \_\_\_\_\_
Water Table Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>18**
Saturation Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>18**

Wetland Hydrology Present? Yes \_\_\_\_\_ No **X**

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

Remarks:

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 10/6/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 18  
 Investigator(s): CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): LRR A Lat: 45.3670 Long: -122.8308 Datum: WGS84  
 Soil Map Unit Name: Quatama loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation X Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>      </u>	No <u>X</u>	Is Sampled Area within a Wetland?	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>30</u> )				Number of Dominant Species	
1 <u>Photinia sp</u>	<u>20</u>	<u>X</u>	<u>(UPL)</u>	That are OBL, FACW, or FAC: <u>2</u> (A)	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Total Number of Dominant	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Species Across All Strata: <u>4</u> (B)	
4 <u>      </u>	<u>20</u>	<u>      </u>	<u>      </u>	Percent of Dominant Species	
	<u>20</u>	<u>      </u>	<u>      </u>	That are OBL, FACW, or FAC: <u>50%</u> (A/B)	
	<u>20</u>	<u>      </u>	<u>      </u>	<b>Prevalence Index Worksheet:</b>	
	<u>20</u>	<u>      </u>	<u>      </u>	Total % Cover of <u>      </u> Multiply by:	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				OBL Species <u>      </u> x 1 = <u>0</u>	
1 <u>Rubus armeniacus</u>	<u>100</u>	<u>X</u>	<u>FAC</u>	FACW species <u>      </u> x 2 = <u>0</u>	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FAC Species <u>      </u> x 3 = <u>0</u>	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FACU Species <u>      </u> x 4 = <u>0</u>	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	UPL Species <u>      </u> x 5 = <u>0</u>	
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Column Totals <u>0</u> (A) <u>0</u> (B)	
	<u>100</u>	<u>      </u>	<u>      </u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
	<u>100</u>	<u>      </u>	<u>      </u>	<b>Hydrophytic Vegetation Indicators:</b>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				_____ 1- Rapid Test for Hydrophytic Vegetation	
1 <u>Daucus carota</u>	<u>5</u>	<u>X</u>	<u>FACU</u>	_____ 2- Dominance Test is >50%	
2 <u>Cirsium arvense</u>	<u>5</u>	<u>X</u>	<u>FAC</u>	_____ 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	_____ 4-Morphological Adaptations <sup>1</sup> (provide supporting	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	data in Remarks or on a separate sheet)	
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	_____ 5- Wetland Non-Vascular Plants <sup>1</sup>	
6 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	_____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
7 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless	
8 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	disturbed or problematic.	
	<u>10</u>	<u>      </u>	<u>      </u>	<b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>	
	<u>10</u>	<u>      </u>	<u>      </u>		
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )					
1 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
	<u>0</u>	<u>      </u>	<u>      </u>		
	<u>0</u>	<u>      </u>	<u>      </u>		
% Bare Ground in Herb Stratum <u>90</u>					
Remarks:					

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>		
0-11	7.5YR 3/2	99	7.5YR 3/4	1	C	M	Loamy Sand	Fine
11-16	10YR 3/3	94	7.5YR 3/4	5	C	M	Loamy Sand	Coarse
11-16			10YR 2/1	1	C	M	Loamy Sand	Coarse

<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.) Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No **X** Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>16**  
 Saturation Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>16**  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes \_\_\_\_\_ No **X**

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

Remarks:



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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 10/6/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 19  
 Investigator(s): CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): LRR A Lat: 45.3664 Long: -122.8325 Datum: WGS84  
 Soil Map Unit Name: Aloha silt loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>X</u>	No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>      </u> )				Number of Dominant Species	
1				That are OBL, FACW, or FAC: <u>1</u> (A)	
2				Total Number of Dominant	
3				Species Across All Strata: <u>1</u> (B)	
4				Percent of Dominant Species	
	<u>0</u>	= Total Cover		That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>      </u> )				<b>Prevalence Index Worksheet:</b>	
1				Total % Cover of <u>      </u> Multiply by:	
2				OBL Species <u>      </u> x 1 = <u>0</u>	
3				FACW species <u>      </u> x 2 = <u>0</u>	
4				FAC Species <u>      </u> x 3 = <u>0</u>	
5				FACU Species <u>      </u> x 4 = <u>0</u>	
	<u>0</u>	= Total Cover		UPL Species <u>      </u> x 5 = <u>0</u>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				Column Totals <u>0</u> (A) <u>0</u> (B)	
1	<u>100</u>	<u>X</u>	<u>FACW</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2	<u>5</u>		<u>FAC</u>		
3					
4					
5					
6					
7					
8					
	<u>105</u>	= Total Cover			
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				<b>Hydrophytic Vegetation Indicators:</b>	
1				<u>      </u> 1- Rapid Test for Hydrophytic Vegetation	
2				<u>X</u> 2- Dominance Test is >50%	
	<u>0</u>	= Total Cover		<u>      </u> 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
% Bare Ground in Herb Stratum <u>0</u>				<u>      </u> 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet)	
				<u>      </u> 5- Wetland Non-Vascular Plants <sup>1</sup>	
				<u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>	

Remarks:

**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>		
0-7	7.5YR 2.5/2	93	7.5YR 4/6	5	C	M	Sandy Loam	Fine
0-7			7.5YR 4/6	2	C	PL	Sandy Loam	Fine
7-16	7.5YR 3/2	90	7.5YR 3/4	10	C	M	Loamy Sand	Coarse

<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.)**

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

**Secondary Indicators (2 or more required)**

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): >16

Saturation Present? Yes  No  Depth (inches): >16  
(includes capillary fringe)

Wetland Hydrology Present? Yes  No

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

Remarks:

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 10/6/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 20  
 Investigator(s): CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2  
 Subregion (LRR): LRR A Lat: 45.3664 Long: -122.8325 Datum: WGS84  
 Soil Map Unit Name: Aloha silt loam NWI Classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland? Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>	

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (plot size: <u>30</u> )				<b>Dominance Test worksheet:</b> Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That are OBL, FACW, or FAC: <u>60%</u> (A/B)
1 <u><i>Populus balsamifera</i></u>	<u>5</u>	<u>X</u>	<u>FAC</u>	
2 <u><i>Alnus rubra</i></u>	<u>1</u>		<u>FAC</u>	
3 <u>      </u>				
4 <u>      </u>				
	<u>6</u>	= Total Cover		
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				<b>Prevalence Index Worksheet:</b> Total % Cover of <u>      </u> Multiply by: OBL Species <u>      </u> x 1 = <u>0</u> FACW species <u>      </u> x 2 = <u>0</u> FAC Species <u>      </u> x 3 = <u>0</u> FACU Species <u>      </u> x 4 = <u>0</u> UPL Species <u>      </u> x 5 = <u>0</u> Column Totals <u>0</u> (A) <u>0</u> (B)  Prevalence Index =B/A = <u>#DIV/0!</u>
1 <u><i>Rubus armeniacus</i></u>	<u>5</u>	<u>X</u>	<u>FAC</u>	
2 <u><i>Cytisus scoparius</i></u>	<u>5</u>	<u>X</u>	<u>(UPL)</u>	
3 <u>      </u>				
4 <u>      </u>				
5 <u>      </u>				
	<u>10</u>	= Total Cover		
<b>Herb Stratum</b> (plot size: <u>10</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1- Rapid Test for Hydrophytic Vegetation <u>X</u> 2- Dominance Test is >50% <u>      </u> 3-Prevalence Index is ≤ 3.0 <sup>1</sup> <u>      </u> 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet) <u>      </u> 5- Wetland Non-Vascular Plants <sup>1</sup> <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
1 <u><i>Anthoxanthum odoratum</i></u>	<u>30</u>	<u>X</u>	<u>FACU</u>	
2 <u><i>Agrostis capillaris</i></u>	<u>30</u>	<u>X</u>	<u>FAC</u>	
3 <u><i>Hypericum perforatum</i></u>	<u>20</u>		<u>FACU</u>	
4 <u><i>Madia glomerata</i></u>	<u>10</u>		<u>FACU</u>	
5 <u><i>Leucanthemum vulgare</i></u>	<u>10</u>		<u>FACU</u>	
6 <u><i>Daucus carota</i></u>	<u>10</u>		<u>FACU</u>	
7 <u><i>Plantago lanceolata</i></u>	<u>5</u>		<u>FACU</u>	
8 <u>      </u>				
	<u>115</u>	= Total Cover		
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				
1 <u>      </u>				
2 <u>      </u>				
	<u>0</u>	= Total Cover		
<b>% Bare Ground in Herb Stratum</b> <u>0</u>				

Remarks:

**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>		
<b>0-2</b>	<b>10YR 3/6</b>	<b>100</b>					<b>Loam</b>	
<b>2-6</b>	<b>10YR 3/6</b>	<b>99</b>	<b>10YR 4/2</b>	<b>1</b>	<b>D</b>	<b>M</b>	<b>Loam</b>	<b>Fine</b>
<b>6-16</b>	<b>10YR 4/3</b>	<b>95</b>	<b>5YR 3/4</b>	<b>5</b>	<b>C</b>	<b>M</b>	<b>Loamy Sand</b>	<b>Fine</b>

<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.)**

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No **X**

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

**Secondary Indicators (2 or more required)**

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No **X** Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>16**  
 Saturation Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>16**  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes \_\_\_\_\_ No **X**

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

Remarks:



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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 10/6/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 21  
 Investigator(s): CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2  
 Subregion (LRR): LRR A Lat: 45.3658 Long: -122.8316 Datum: WGS84  
 Soil Map Unit Name: Aloha silt loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>X</u>	No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>      </u> )				Number of Dominant Species	
1				That are OBL, FACW, or FAC: <u>1</u> (A)	
2				Total Number of Dominant	
3				Species Across All Strata: <u>1</u> (B)	
4				Percent of Dominant Species	
	<u>0</u>	= Total Cover		That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>      </u> )				<b>Prevalence Index Worksheet:</b>	
1				Total % Cover of <u>      </u> Multiply by:	
2				OBL Species <u>      </u> x 1 = <u>0</u>	
3				FACW species <u>      </u> x 2 = <u>0</u>	
4				FAC Species <u>      </u> x 3 = <u>0</u>	
5				FACU Species <u>      </u> x 4 = <u>0</u>	
	<u>0</u>	= Total Cover		UPL Species <u>      </u> x 5 = <u>0</u>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				Column Totals <u>0</u> (A) <u>0</u> (B)	
1	<u>90</u>	<u>X</u>	<u>FACW</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2	<u>10</u>		<u>FAC</u>		
3					
4					
5					
6					
7					
8					
	<u>100</u>	= Total Cover			
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				<b>Hydrophytic Vegetation Indicators:</b>	
1				<u>      </u> 1- Rapid Test for Hydrophytic Vegetation	
2				<u>X</u> 2- Dominance Test is >50%	
	<u>0</u>	= Total Cover		<u>      </u> 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
% Bare Ground in Herb Stratum <u>0</u>				<u>      </u> 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet)	
				<u>      </u> 5- Wetland Non-Vascular Plants <sup>1</sup>	
				<u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes X No       

Remarks:

**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>		
<b>0-5</b>	<b>7.5YR 3/2</b>	<b>100</b>					<b>Loam</b>	
<b>5-12</b>	<b>7.5YR 3/2</b>	<b>95</b>	<b>7.5YR 4/6</b>	<b>5</b>	<b>C</b>	<b>M</b>	<b>Sandy Loam</b>	<b>Coarse</b>

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present? Yes  No**

Remarks: \_\_\_\_\_

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**  
 Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): >12  
 Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): >12

**Wetland Hydrology Present? Yes  No**

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

Remarks: \_\_\_\_\_

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 10/6/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 22  
 Investigator(s): CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 3  
 Subregion (LRR): LRR A Lat: 45.3658 Long: -122.8317 Datum: WGS84  
 Soil Map Unit Name: Aloha silt loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>      </u> )				Number of Dominant Species	
1				That are OBL, FACW, or FAC: <u>2</u> (A)	
2				Total Number of Dominant	
3				Species Across All Strata: <u>2</u> (B)	
4				Percent of Dominant Species	
	<u>0</u>	= Total Cover		That are OBL, FACW, or FAC: <u>100%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (plot size: <u>      </u> )				<b>Prevalence Index Worksheet:</b>	
1				Total % Cover of <u>      </u> Multiply by:	
2				OBL Species <u>      </u> x 1 = <u>0</u>	
3				FACW species <u>      </u> x 2 = <u>0</u>	
4				FAC Species <u>      </u> x 3 = <u>0</u>	
5				FACU Species <u>      </u> x 4 = <u>0</u>	
	<u>0</u>	= Total Cover		UPL Species <u>      </u> x 5 = <u>0</u>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				Column Totals <u>0</u> (A) <u>0</u> (B)	
1	<u>75</u>	<u>X</u>	<u>FAC</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2	<u>25</u>	<u>X</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b>	
3				<u>      </u> 1- Rapid Test for Hydrophytic Vegetation	
4				<u>X</u> 2- Dominance Test is >50%	
5				<u>      </u> 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
6				<u>      </u> 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet)	
7				<u>      </u> 5- Wetland Non-Vascular Plants <sup>1</sup>	
8				<u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
	<u>100</u>	= Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>	
1					
2					
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

**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>		
<b>0-4</b>	<b>7.5YR 3/2</b>	<b>100</b>					<b>Silt Loam</b>	
<b>4-10</b>	<b>7.5YR 3/2</b>	<b>60</b>	<b>5YR 3/4</b>	<b>3</b>	<b>C</b>	<b>M</b>	<b>Silt Loam</b>	<b>Coarse/mixed matrix</b>
<b>4-10</b>	<b>10YR 3/3</b>	<b>36</b>	<b>5YR 3/4</b>	<b>1</b>	<b>C</b>	<b>M</b>	<b>Silt Loam</b>	<b>Coarse/mixed matrix</b>
<b>10-16</b>	<b>7.5YR 3/2</b>	<b>98</b>	<b>7.5YR 3/4</b>	<b>2</b>	<b>C</b>	<b>M</b>	<b>Loam</b>	<b>Fine</b>

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No

Remarks: \_\_\_\_\_

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): >16

Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): >16  
(includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No

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

Remarks: \_\_\_\_\_

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 10/6/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 23  
 Investigator(s): CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 3  
 Subregion (LRR): LRR A Lat: 45.3655 Long: -122.8321 Datum: WGS84  
 Soil Map Unit Name: Aloha silt loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>X</u>	No <u>      </u>	Is Sampled Area within a Wetland?	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b> (plot size: <u>30</u> )				Number of Dominant Species	
1 <u>Populus balsamifera</u>	<u>5</u>	<u>X</u>	<u>FAC</u>	That are OBL, FACW, or FAC: <u>6</u> (A)	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Total Number of Dominant Species Across All Strata: <u>7</u> (B)	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Percent of Dominant Species	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	That are OBL, FACW, or FAC: <u>86%</u> (A/B)	
	<u>5</u>	= Total Cover		<b>Prevalence Index Worksheet:</b>	
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				Total % Cover of	
1 <u>Crataegus monogyna</u>	<u>5</u>	<u>X</u>	<u>FAC</u>	Multiply by:	
2 <u>Rubus armeniacus</u>	<u>5</u>	<u>X</u>	<u>FAC</u>	OBL Species <u>      </u> x 1 = <u>0</u>	
3 <u>Prunus cerasifera</u>	<u>5</u>	<u>X</u>	<u>(UPL)</u>	FACW species <u>      </u> x 2 = <u>0</u>	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FAC Species <u>      </u> x 3 = <u>0</u>	
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FACU Species <u>      </u> x 4 = <u>0</u>	
	<u>15</u>	= Total Cover		UPL Species <u>      </u> x 5 = <u>0</u>	
<b>Herb Stratum</b> (plot size: <u>10</u> )				Column Totals <u>0</u> (A) <u>0</u> (B)	
1 <u>Agrostis capillaris</u>	<u>50</u>	<u>X</u>	<u>FAC</u>	Prevalence Index =B/A = <u>#DIV/0!</u>	
2 <u>Alopecurus pratensis</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b>	
3 <u>Holcus lanatus</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	<u>      </u> 1- Rapid Test for Hydrophytic Vegetation	
4 <u>Dipsacus fullonum</u>	<u>10</u>	<u>      </u>	<u>FAC</u>	<u>X</u> 2- Dominance Test is >50%	
5 <u>Hypericum perforatum</u>	<u>10</u>	<u>      </u>	<u>FACU</u>	<u>      </u> 3-Prevalence Index is ≤ 3.0 <sup>1</sup>	
6 <u>Anthoxanthum odoratum</u>	<u>10</u>	<u>      </u>	<u>FACU</u>	<u>      </u> 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet)	
7 <u>Portulaca oleracea</u>	<u>5</u>	<u>      </u>	<u>FAC</u>	<u>      </u> 5- Wetland Non-Vascular Plants <sup>1</sup>	
8 <u>Madia glomerata</u>	<u>5</u>	<u>      </u>	<u>FACU</u>	<u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
	<u>130</u>	= Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>	
1 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
	<u>0</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:



**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>		
<b>0-6</b>	<b>10YR 3/3</b>	<b>100</b>					<b>Silt Loam</b>	
<b>6-16</b>	<b>10YR 3/6</b>	<b>96</b>	<b>10YR 5/1</b>	<b>2</b>	<b>D</b>	<b>M</b>	<b>Loamy Sand</b>	<b>Fine</b>
<b>6-16</b>			<b>7.5YR 4/6</b>	<b>2</b>	<b>C</b>	<b>M</b>	<b>Loamy Sand</b>	<b>Fine</b>

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No

Remarks: \_\_\_\_\_

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): >16  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): >16  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes \_\_\_\_\_ No

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

Remarks: \_\_\_\_\_

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

Project/Site: Sherwood Industrial Park City/County: Sherwood/Washington Sampling Date: 10/6/2021  
 Applicant/Owner: OWRA Sherwood, LLC State: OR Sampling Point: 24  
 Investigator(s): CM Section, Township, Range: Section 29D, Township 2South, Range 1West  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 3  
 Subregion (LRR): LRR A Lat: 45.3652 Long: -122.8319 Datum: WGS84  
 Soil Map Unit Name: Huberly silt loam NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes        No X (if no, explain in Remarks)  
 Are vegetation        Soil        or Hydrology        significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y  
 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 <u>      </u> No <u>X</u>	Is Sampled Area within a Wetland? Yes <u>      </u> No <u>X</u>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>      </u> No <u>X</u>	

Remarks: **Precipitation is below normal, which is now common. As such, we make sure to evaluate a dry-season water table in areas of lower topography, or in areas where hydrophytic vegetation and hydric soils are present. The site is surrounded by new development. It is our BPJ that hydrology is slowly being diverted through stormwater infrastructure and storm facilities. The geomorphic position of gradual upland slopes on site are not conducive to retaining water, nor do they receive continual sheet flow from pervious upper slopes as before.**

**VEGETATION - Use scientific names of plants.**

	absolute % cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (plot size: <u>30</u> )				<b>Dominance Test worksheet:</b> Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>8</u> (B)  Percent of Dominant Species That are OBL, FACW, or FAC: <u>38%</u> (A/B)
1 <u>Populus balsamifera</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
	<u>20</u>	= Total Cover		
<b>Sapling/Shrub Stratum</b> (plot size: <u>30</u> )				<b>Prevalence Index Worksheet:</b> Total % Cover of <u>      </u> Multiply by: OBL Species <u>      </u> x 1 = <u>0</u> FACW species <u>      </u> x 2 = <u>0</u> FAC Species <u>      </u> x 3 = <u>0</u> FACU Species <u>      </u> x 4 = <u>0</u> UPL Species <u>      </u> x 5 = <u>0</u> Column Totals <u>0</u> (A) <u>0</u> (B)  Prevalence Index =B/A = <u>#DIV/0!</u>
1 <u>Cytisus scoparius</u>	<u>5</u>	<u>X</u>	<u>(UPL)</u>	
2 <u>Rubus armeniacus</u>	<u>5</u>	<u>X</u>	<u>FAC</u>	
3 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
4 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
5 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
	<u>10</u>	= Total Cover		
<b>Herb Stratum</b> (plot size: <u>10</u> )				<b>Hydrophytic Vegetation Indicators:</b> _____ 1- Rapid Test for Hydrophytic Vegetation _____ 2- Dominance Test is >50% _____ 3-Prevalence Index is ≤ 3.0 <sup>1</sup> _____ 4-Morphological Adaptations <sup>1</sup> (provide supporting data in Remarks or on a separate sheet) _____ 5- Wetland Non-Vascular Plants <sup>1</sup> _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>
1 <u>Hypochaeris radicata</u>	<u>5</u>	<u>      </u>	<u>FACU</u>	
2 <u>Daucus carota</u>	<u>10</u>	<u>X</u>	<u>FACU</u>	
3 <u>Holcus lanatus</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	
4 <u>Lactuca serriola</u>	<u>5</u>	<u>      </u>	<u>FACU</u>	
5 <u>Hypericum perforatum</u>	<u>10</u>	<u>X</u>	<u>FACU</u>	
6 <u>Anthoxanthum odoratum</u>	<u>20</u>	<u>X</u>	<u>FACU</u>	
7 <u>Portulaca oleracea</u>	<u>5</u>	<u>      </u>	<u>FAC</u>	
8 <u>Leucanthemum vulgare</u>	<u>10</u>	<u>X</u>	<u>FACU</u>	
	<u>85</u>	= Total Cover		
<b>Woody Vine Stratum</b> (plot size: <u>      </u> )				
1 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
2 <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
	<u>0</u>	= Total Cover		
% Bare Ground in Herb Stratum	<u>15</u>			

Remarks:

**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>		
<b>0-6</b>	<b>10YR 3/4</b>	<b>100</b>					<b>Loam</b>	
<b>6-14</b>	<b>10YR 3/4</b>	<b>70</b>	<b>10YR 4/2</b>	<b>10</b>	<b>D</b>	<b>M</b>	<b>Loamy Sand</b>	<b>Coarse; mixed matrix</b>
<b>6-14</b>	<b>10YR 3/3</b>	<b>20</b>					<b>Loamy Sand</b>	<b>Mixed matrix</b>

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No **X** \_\_\_\_\_

Remarks:  
**The matrix in this area is mixed, but generally high in chroma. There are no iron concentrations here, but rather a homogenous mixture of high chroma matrices.**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Fac-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): **>14** \_\_\_\_\_  
 Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): **>14** \_\_\_\_\_

**Wetland Hydrology Present?**  
 Yes \_\_\_\_\_ No **X** \_\_\_\_\_

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

Remarks:

# Appendix C

## Vegetated Corridor Data Sheet Site Photos



## Vegetated Corridor Sample Sites

### Sherwood Industrial Park Phase 3 Development Site

Plant Community	A			B		C				
	SP1	SP4	SP6	SP8	VC1	SP11	SP13			
<b>TREES</b>										
<b>Native</b>										
<i>Fraxinus latifolia</i>			20							
<i>Corylus cornuta</i>	10									
<i>Populus balsamifera</i>		30								
<i>Pseudotsuga menziesii</i>	10									
<i>Salix scouleriana</i>	20									
<i>Quercus garryana</i>	30									
<b>SHRUBS &amp; SAPLINGS</b>										
<b>Native</b>										
<i>Alnus rubra</i>	30									
<i>Populus balsamifera</i>		20	5	5						
<i>Salix lasiandra</i>			20							
<i>Mahonia aquifolium</i>	10		30							
<i>Quercus garryana</i>				5						
<i>Rubus ursinus</i>		30		10						
<i>Spirea douglasii</i>	20									
<i>Fraxinus latifolia</i>			10							
<b>Non native</b>										
<i>Crataegus monogyna</i>				5						
<b>Invasive</b>										
<i>Cytisus scoparius</i>	10	20		20	5					
<i>Rubus laciniatus</i>						5				
<i>Rubus armeniacus</i>		80	20	10	20	50	100			
<b>HERBS</b>										
<b>Native</b>										
<i>Equisetum arvense</i>		10								
<i>Madia glomerata</i>					5					
<i>Galium aparine</i>	20									
<i>Hypericum perforatum</i>			10	5	5					
<b>Non native</b>										
<i>Holcus lanatus</i>	30		25	25	30					
<i>Agrostis capillaris</i>					10	30				
<i>Dactylis glomerata</i>		10	20	10						
<i>Leucanthemum vulgare</i>			20	15						
<i>Anthoxanthum odoratum</i>			10	25						
<i>Daucus carota</i>			10		20					
<i>Poa pratensis</i>	5									
<i>Bromus sp.</i>				20	20					
<b>Invasive</b>										
<i>Dipsacus fullonum</i>	5		5			60	10			
<i>Cirsium arvense</i>		10			5		10			
<i>Phalaris arundinacea</i>	40	10			20	10	10			
	<b>A</b>			<b>Average</b>	<b>B</b>		<b>Average</b>	<b>C</b>		<b>Average</b>
<b>*Canopy cover</b>	60	60	50	57	0	0	0	0	0	0
<b>% Native Species</b>	63	41	46	50	16	7	12	0	0	0
<b>% Invasive Species</b>	23	55	12	30	19	36	28	81	100	90
<b>Total cover</b>	240	220	205	222	155	140	148	155	130	143
<b>Condition: Canopy/Natives</b>	Good			Degraded		Degraded				

\*Canopy cover totals reflect multi-layer coverage





**Photo A:**

Looking southwest at sample points 8 and 9 and the east side of Wetland A.

Photo date: September 22, 2021

**Photo B:**

Looking south at current trunk sewer work along Rock Creek, which has reduced the slope below 25% in this VC area (SPL20-0667).

Photo date: August 25, 2021



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10/20/2021



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Wilsonville, OR 97070

Photo documentation

Sherwood Industrial Park Phase 3 Development Site, Sherwood, Oregon





**Photo C:**

Looking east where a storm culvert outfalls toward Rock Creek.

Photo date: September 22, 2021

**Photo D:**

Looking southwest at sample point 14 with the storm detention pond in the background.

Photo date: September 22, 2021



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Photo documentation

Sherwood Industrial Park Phase 3 Development Site, Sherwood, Oregon



**Photo E:**

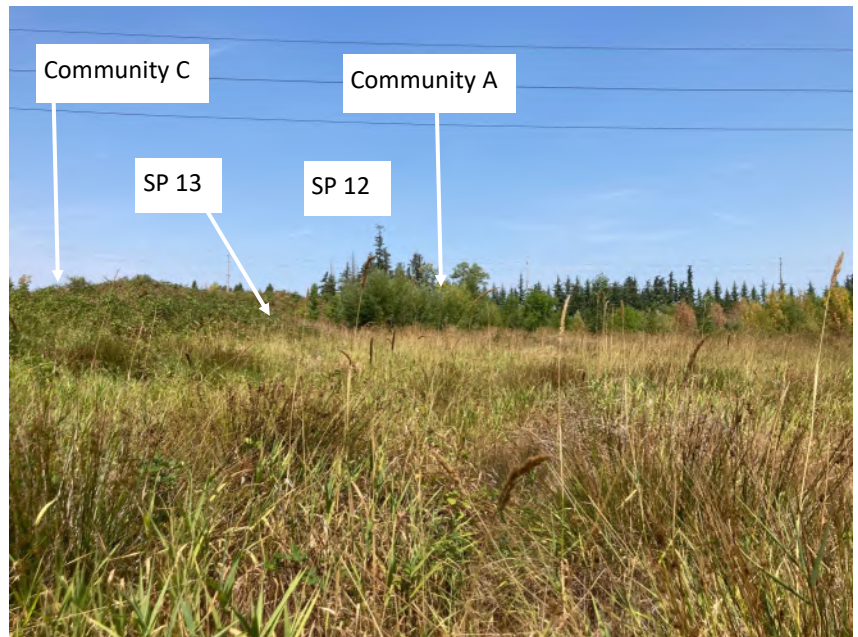
Looking southwest at Sample points 12 and 13 and Plant Community C.

Photo date: September 22, 2021

**Photo F:**

Looking north at Wetland A and Plant Community C and A. Sample points 12 and 13 are in the distance.

Photo date: August 25, 2021



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Photo documentation

Sherwood Industrial Park Phase 3 Development Site, Sherwood, Oregon





**Photo G:**

Looking south at sample points 10 and 11 from within Plant Community C.

Photo date: August 25, 2021

**Photo H:**

Looking northeast at the wetland terrace adjacent to Rock Creek.

Photo date: August 25, 2021



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Wilsonville, OR 97070

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**Photo I:**

Looking southeast at sample points 1 and 2 and the ditched portion of Wetland A.

Photo date: August 25, 2021

**Photo J:**

Looking northeast at sample point 3 in a remnant ditch.

Photo date: August 25, 2021



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9450 SW Commerce Circle, Suite 180  
Wilsonville, OR 97070

Photo documentation

Sherwood Industrial Park Phase 3 Development Site, Sherwood, Oregon



# Appendix D

## NRA Definitions and Methodology



# NATURAL RESOURCE ASSESSMENT (NRA)

## Regulatory Jurisdiction

Clean Water Services, as part of their revised Design and Construction Standards, requires that natural resource assessments be conducted for Sensitive Natural Resource Areas within their jurisdiction. Sensitive Natural Resource Areas include intermittent and perennial creeks, wetlands, springs, and seeps, and associated vegetated corridors. The intent of these requirements is to "...prevent or reduce adverse impacts to the drainage system and water resources of the Tualatin River Basin" (CWS 2017). CWS requires a wetland determination/delineation and vegetated corridor assessment on projects that contain or are within 200 feet of a Sensitive Area.

## Natural Resource Assessment Methodology

The Natural Resource Assessment (NRA) contains two components: a delineation of the water quality sensitive areas and a vegetated corridor evaluation. A detailed discussion of the methodology is included in Chapter 3 of CWS's revised Design and Construction Standards (CWS, 2017). A brief description of each component is included below.

### *Delineation of water quality sensitive areas*

A delineation of all on-site water quality sensitive areas (wetland, intermittent/perennial streams, springs, and natural lakes or ponds) must be conducted. For wetlands, the required criteria, and suggested methodologies of the *Corps of Engineers Wetland Delineation Manual Technical Report Y-87-1*, (Environmental Laboratory, 1987) must be used to delineate the boundaries. This manual defines wetlands as requiring indicators of hydric soils, a dominance of hydrophytic vegetation, and wetland hydrology. A determination as to whether streams are intermittent or perennial must be made. The extent of all streams, springs, and natural lakes or ponds must also be determined.

When known sensitive areas exist on adjacent properties, an attempt must be made by the applicant to obtain access to delineate the limits of these off-site features, especially if vegetated corridors associated with an off-site sensitive area may extend onto a proposed development site.

### *Determine Vegetated Corridor Width and Condition*

The width of the vegetated corridor must be determined at least every 100 feet along the boundary of the water quality sensitive area. The corridor width can range between 15 and 200 feet and is measured horizontally from the outer edge of the water quality sensitive area. The boundaries of the sensitive areas and their vegetated corridors must be staked, surveyed, and mapped within the property and within 200 feet of the property line on a base map. The vegetated corridor width is based on the type of water resource (wetland, lake, stream), the size and nature of the water resource (acreage and/or perennial/intermittent), the size of the watershed, and the adjacent slope.

Upon identification of the regulated vegetated corridor boundary, the existing condition of the vegetated corridor must also be determined. This is accomplished by 1) identifying the plant community types present in the vegetated corridor, 2) documenting representative sample points, 3) characterizing each plant community type, 4) determining the cover by native species, invasive species, and noxious plants, and 5) based on this information determining whether the existing vegetated corridor condition for each plant community is good, marginal, or degraded.