



**Request for Clean Water Act
Section 401 Water Quality Certification
Washington State Department of Ecology**
Phone: (360) 407-6076 or E-mail: ecyrefedpermits@ecy.wa.gov

AGENCY USE ONLY	
Date Received:	8/6/2024
Aquatics ID No.:	142279
County:	Clark
Complete Request:	8/6/2024

This Section 401 Water Quality Certification (WQC) request form must be submitted as part of a WQC request and identifies information needed for review. Please see Department of Ecology's (Ecology) [webpage](#)¹ for more information about the WQC request process and additional information regarding the request requirements.

Submit this WQC Request form along with the supporting information² to ecyrefedpermits@ecy.wa.gov.

Request packages should be sent in by email, mail submissions will not be accepted. Supporting information should not be consolidated into one large file, if your documents are consolidated into one file, please separate them before submitting.

Per the 2023 EPA Water Quality Certification rule, the certifying authority may identify the contents of a request for certification relevant to water quality related impacts from the activity. Items listed in Section D are always required for a complete application. If notified by Ecology prior to submittal of this request, items listed in Section E are also required. If this information has been provided to Ecology as part of your federal permit application, you do not need to submit them again. However, please indicate in Section D how they were provided. Ecology will provide acknowledgement of receipt of a complete WQC request to the project proponent. Once Ecology confirms we have received all the required information, our review time will begin.

A. Project Information

Project Name: Heritage Farm Wetland Restoration

Ecology Aquatics ID Number: 142279

Project Location (Please attach a project location map when submitting this form):

Project Address: 1919 NE 78th St, Vancouver, WA 98665 County: Clark

B. Federal Permit or License Reference Number, if known: NWS-2023-613 (previously assigned)

Federal Agency: ☒ U.S. Army Corps of Engineers (Corps) ☐ U.S. Coast Guard
☐ Federal Energy Regulatory Commission ☐ Environmental Protection Agency (EPA)
☐ Other:

Identify the U.S. Army Corps permit, if applicable: ☒ Nationwide Permit ☐ Individual ☐ Other: _____
 If Nationwide Permit which one(s)? NWP(s) # 27, 14, 12

¹ <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/401-Water-quality-certification>

² To submit documents over 25MB, e-mail ecyrefedpermits@ecy.wa.gov to request a secure link. Ecology does not accept outside links. Please include the Aquatics ID and project name when requesting a link.

To request an ADA accommodation, contact Ecology by phone at (360) 407-6076 or email at ecyrefedpermits@ecy.wa.gov, or visit <https://ecology.wa.gov/accessibility>.
 For Relay Service or TTY call 711 or 877-833-6341.

Si necesita este formulario en español, por favor, llámenos a (360) 407-6076
 o envíenos un correo electrónico a: ecyrefedpermits@ecy.wa.gov

C. Was a Pre-Filing Meeting Request submitted to Ecology prior to submitting this WQC request?

☒ Yes, a pre-filing meeting request was submitted on date: 12/27/2022

D. Required for all projects requesting an individual WQC. Please check the boxes below indicating where the following documents can be found within this WQC request.

	Within WQC request	Within federal permit application	Previously submitted to Ecology and is still up to date	Notes to find information within the submission
Copy of the federal permit application package for the federal permit or license	☒			
Complete up to date JARPA or other accepted application form	☐	☒	☐ Date:	
Status of State Environmental Policy Act (SEPA) determination and/or exemption	☐	☒	☐ Date:	On JARPA form
Project location map and drawings	☐	☒	☐ Date:	JARPA Figures
Best management practices (BMPs)	☐	☒	☐ Date:	Plan sheets
Construction methodologies	☐	☒	☐ Date:	JARPA narrative and plan sheets
Requirements for In-Water Work				
Water quality monitoring plan	☐	☐	☐ Date:	NA
Aquatic resource avoidance and minimization identified (e.g. eelgrass)	☐	☐	☐ Date:	NA
Riparian revegetation, restoration, and management measures	☐	☐	☐ Date:	NA
Requirements for Work in Wetlands				
Wetland delineation report with data sheets	☐	☒	☐ Date:	
Wetland ratings	☐	☒	☐ Date:	
Wetland mitigation plan, including avoidance and minimization measures, for wetland, stream, and/or other aquatic resources	☐	☒	☐ Date:	JARPA narrative
Riparian planting and monitoring and measures	☐	☒	☐ Date:	Planting sheets

E. Required by project type or when identified by Ecology. Please check the boxes below indicating where the following documents can be found within this WQC request.

	Within WQC request	Within federal permit application	Previously submitted to Ecology and is still up to date	Notes to find information within the submission
Mitigation				
Wetland mitigation bank use plan	☐	☐	☐ Date:	NA
In-lieu (ILF) use plan	☐	☐	☐ Date:	NA
Water Quality Monitoring				
Water quality monitoring and protection plan	☐	☐	☐ Date:	NA
Spill prevention control and countermeasures plan	☐	☐	☐ Date:	To be done by contractor
Upland Work				
Erosion and sediment control plan	☐	☒	☐ Date:	
Stormwater pollution prevention plan	☐	☐	☐ Date:	To be done prior to bidding
De-Watering				
Flow diversion, cofferdam, and dewatering system plan	☐	☐	☐ Date:	NA
Stream bypass plan	☐	☐	☐ Date:	NA
Water dispersion/ infiltration plan	☐	☐	☐ Date:	NA
Culverts and Bridges				
Bridge demolition and construction plan	☐	☐	☐ Date:	NA
Culvert removal and replacement plan	☐	☐	☐ Date:	NA
Dredging				
Dredging and excavation plans	☐	☐	☐ Date:	NA
Suitability determination	☐	☐	☐ Date:	NA
Soils testing and characterization reports	☐	☐	☐ Date:	NA
Other				
Stone column installation plan	☐	☐	☐ Date:	NA
Horizontal direction drill (HDD) inadvertent return plan	☐	☐	☐ Date:	NA
Levee repair and bank stabilization plan	☐	☐	☐ Date:	NA
Piling removal and installation plan	☐	☐	☐ Date:	NA
Wastewater servicing for marina operations	☐	☐	☐ Date:	NA

Aquatic invasive species management plan	☐	☐	☐ Date:	NA
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F. Project Proponent Information

Project Proponent

First/Last Name: Kenneth A. Lader, Public Works Director/County Engineer
Organization: Clark County Public Works
Phone #: 564-397-4185 E-mail: ken.lader@clark.wa.gov

Agent/Consultant

First/Last Name: Pam Schense, Environmental Permit Coordinator
Organization: Clark County Public Works
Phone #: 564-397-4865 E-mail: pam.schense@clark.wa.gov

G. Required Certification Statements:

The project proponent hereby certifies that all information contained herein is true, accurate, and complete, to the best of my knowledge and belief.

The project proponent hereby requests that the certifying authority review and take action on this WQC request within the applicable reasonable period of time.

Signature: Kenneth A. Lader Date: 08/06/24
Print Name: Kenneth A. Lader



WASHINGTON STATE

Joint Aquatic Resources Permit Application (JARPA) Form^{1,2} [\[help\]](#)

USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.



US Army Corps
of Engineers®
Seattle District

AGENCY USE ONLY

Date received: 8/6/2024 edoc
Rec'd WQC Request Form

Agency reference #: _____

Tax Parcel #(s): _____

Part 1—Project Identification

1. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [\[help\]](#)

Heritage Farm Wetland Restoration

Part 2—Applicant

The person and/or organization responsible for the project. [\[help\]](#)

2a. Name (Last, First, Middle)

Kenneth A. Lader, P.E. – Public Works Director / County Engineer

2b. Organization (If applicable)

Clark County Public Works

2c. Mailing Address (Street or PO Box)

PO Box 9810

2d. City, State, Zip

Vancouver, WA 98660-9810

2e. Phone (1)

2f. Phone (2)

2g. Fax

2h. E-mail

(564) 397-4185

ken.lader@clark.wa.gov

¹Additional forms may be required for the following permits:

- If your project may qualify for Department of the Army authorization through a Regional General Permit (RGP), contact the U.S. Army Corps of Engineers for application information (206) 764-3495.
- Not all cities and counties accept the JARPA for their local Shoreline permits. If you need a Shoreline permit, contact the appropriate city or county government to make sure they accept the JARPA.

²To access an online JARPA form with [\[help\]](#) screens, go to

http://www.epermitting.wa.gov/site/alias_resourcecenter/jarpa_jarpa_form/9984/jarpa_form.aspx.

For other help, contact the Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.

Part 3—Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b of this application.) [\[help\]](#)

3a. Name (Last, First, Middle)			
Pam Schense			
3b. Organization (If applicable)			
Clark County Public Works			
3c. Mailing Address (Street or PO Box)			
PO Box 9810			
3d. City, State, Zip			
Vancouver, WA 98660-9810			
3e. Phone (1)	3f. Phone (2)	3g. Fax	3h. E-mail
564-397-4865			pam.schense@clark.wa.gov

Part 4—Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. Consider both **upland and aquatic** ownership because the upland owners may not own the adjacent aquatic land. [\[help\]](#)

- ☒ Same as applicant. (Skip to Part 5.)
- ☐ Repair or maintenance activities on existing rights-of-way or easements. (Skip to Part 5.)
- ☐ There are multiple upland property owners. Complete the section below and fill out [JARPA Attachment A](#) for each additional property owner.
- ☐ Your project is on Department of Natural Resources (DNR)-managed aquatic lands. If you don't know, contact the DNR at (360) 902-1100 to determine aquatic land ownership. If yes, complete [JARPA Attachment E](#) to apply for the Aquatic Use Authorization.

4a. Name (Last, First, Middle)			
Kathleen Otto – County Manager			
4b. Organization (If applicable)			
Clark County			
4c. Mailing Address (Street or PO Box)			
PO Box 9810			
4d. City, State, Zip			
Vancouver, WA 98660-9810			
4e. Phone (1)	4f. Phone (2)	4g. Fax	4h. E-mail
(564) 397-2458			kathleen.otto@clark.wa.gov

Part 5–Project Location(s)

Identifying information about the property or properties where the project will occur. [\[help\]](#)

- ☐ There are multiple project locations (e.g. linear projects). Complete the section below and use [JARPA Attachment B](#) for each additional project location.

5a. Indicate the type of ownership of the property. (Check all that apply.) [\[help\]](#)

- ☐ Private
- ☐ Federal
- ☒ Publicly owned (state, county, city, special districts like schools, ports, etc.)
- ☐ Tribal
- ☐ Department of Natural Resources (DNR) – managed aquatic lands (Complete [JARPA Attachment E](#))

5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.) [\[help\]](#)

1919 Northeast 78th Street

5c. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [\[help\]](#)

Vancouver, WA 98665

5d. County [\[help\]](#)

Clark

5e. Provide the section, township, and range for the project location. [\[help\]](#)

¼ Section	Section	Township	Range
	11	2N	1E

5f. Provide the latitude and longitude of the project location. [\[help\]](#)

- Example: 47.03922 N lat. / -122.89142 W long. (Use decimal degrees - NAD 83)

45.677683 N lat. / -122.646454 W long.

5g. List the tax parcel number(s) for the project location. [\[help\]](#)

- The local county assessor's office can provide this information.

148084000

5h. Contact information for all adjoining property owners. (If you need more space, use [JARPA Attachment C.](#)) [\[help\]](#)

Name	Mailing Address	Tax Parcel # (if known)
Kobernick, Theodore & Kobernick, Paula	1709 NE 78TH ST UNIT 157 VANCOUVER, WA 98665	600993000
Sims, James & Sims, Barbara	1709 NE 78TH ST UNIT 26 VANCOUVER, WA 98665	600813000
Nutt, Betty & Nutt, Larry	1709 NE 78TH ST UNIT 130 VANCOUVER, WA 98665	601000000
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5i. List all wetlands on or adjacent to the project location. [\[help\]](#)

There is one wetland features within the project area, i.e., Wetland A

5j. List all waterbodies (other than wetlands) on or adjacent to the project location. [\[help\]](#)

No waterbodies are present

5k. Is any part of the project area within a 100-year floodplain? [\[help\]](#)

☐ Yes ☒ No ☐ Don't know

5l. Briefly describe the vegetation and habitat conditions on the property. [\[help\]](#)

The study site consists of upland and wetland habitats, with areas of agricultural farmland.

The vegetation within the upland areas includes tall fescue (*Schedonorus arundinaceus*), catsear (*Hypochaeris radicata*), sweet vernal grass (*Anthoxanthum odoratum*), ribwort plantain (*Plantago lanceolata*), and velvetgrass (*Holcus lanatus*). The vegetation within the wetland area includes Scouler willow (*Salix scouleriana*), Himalayan blackberry (*Rubus armeniacus*), reed canary-grass (*Phalaris arundinacea*), field horsetail (*Equisetum arvense*), broadleaf cattail (*Typha latifolia*), meadow foxtail (*Alopecurus pratensis*), and bird's-foot trefoil (*Lotus corniculatus*) among other plant species.

5m. Describe how the property is currently used. [\[help\]](#)

The Heritage Farm site consists of 79 acres and is currently use for agriculture research and education, local agriculture and business development, youth development, food safety and nutrition workshops, food preservation education, and health and wellness education. The property is owned by Clark County and managed by Washington State University's Research Extension office. The site consists of gently sloping hills, fields and existing historic structures, and retains its historic roots as an agricultural research facility. In 2012 the farm was placed on the Washington Historic Register.

5n. Describe how the adjacent properties are currently used. [\[help\]](#)

Surrounding land use includes residential, commercial, recreation, and light agricultural and industrial use. On the north side of NE 78th Street is a mixture of light industrial and mixed residential use that includes commercial businesses and single and multi-family units. To the west is a single and multi-family residential area. To the south is single family residences and recreation at Hazel Dell Park, along NE 68th Street. To the east is commercial and residential areas that include forested parcels and light agricultural usage.

5o. Describe the structures (above and below ground) on the property, including their purpose(s) and current condition. [\[help\]](#)

Structures are located in the northern portion of the project area and include the historic farmhouse building currently used as an administration building for Washington State University's extension programs and four other historic structures, including a garage, milk house, and agricultural shop. The historic garage and milk house are currently used for storage. East of the historic structures are greenhouses used for a variety of workshops and plant sales, and maintenance buildings. Two access roads cross the existing ditched wetland to access the southern portions of the property. Additionally, a historic weather station that has been collecting weather data for more than 125 years is located just west of the western access road.

5p. Provide driving directions from the closest highway to the project location, and attach a map. [\[help\]](#)

- From Vancouver take I-5 North for 3.8 miles
- Take Exit 4 for NE 78th Street and head east
- After 0.6 miles 1919 NE 78th Street will be on the south side of street

Part 6–Project Description

6a. Briefly summarize the overall project. You can provide more detail in 6b. [\[help\]](#)

The restoration project is a Clark County Public Works Clean Water Division project, partially funded by a grant from Washington Department of Ecology. The project proposes to restore historic headwater wetlands by constructing shallow wetland benches within and adjacent to existing ditched wetlands. The grading plan creates shallow wetland cells and a meandering channel along the wetland that will replicate the natural retention and treatment functions of the historic wetlands that once existed on-site. The restored wetland will collect overland flows and restore the natural groundwater recharge, reduce stormwater runoff volumes that flow to the creek, and reduce ongoing stream erosion, which will improve water quality and reduce peak flows of runoff entering the wetland and flowing downstream into Cougar Creek. Six earthen berms with gate valves for controlling water will be constructed across the wetland at different locations, which will separate the cells and control seasonal flows. The two existing access roads that cross the wetland will be improved and expanded to cross the restored wetland area. Riprap pads will be located on either side of the berms at the end of pipes used to control water levels as well as on either end of the culverts that will be placed under the two existing access roads.

Another integral component of the project includes rerouting an existing sewer line that runs parallel to, and directly south of, the existing ditched wetland. The sewer line will be moved north so the wetland restoration can occur unencumbered by the sewer line. The new sewer line will install a new maintenance hole at the eastern edge of the project and install a new line running north of the existing line to a new maintenance hole and then run due west and intertie with the existing line through a new maintenance hole. The abandoned sewer line will be removed during construction of the wetland restoration/enhancement project.

6b. Describe the purpose of the project and why you want or need to perform it. [\[help\]](#)

The overall goal of the project is to restore the natural headwater wetlands to Cougar Creek that existed historically. The project site will be planted with appropriate wetland and wetland buffer vegetation that will contribute to restoring the surface and groundwater hydrologic regime and return this headwater wetland area to a more natural, native state. The hydrologic regime and habitat restoration are important functions to the Cougar Creek headwaters, which are important to resident native species and an important contributor of cool, clean stream flows to downstream waters (Cougar Creek and Salmon Creek). Anticipated watershed benefits from this project include improved water quality, increased groundwater recharge, improved wetland hydroperiod, reduced peak runoff volume, reduced stream erosion, and improved summer base flows to Salmon Creek.

6c. Indicate the project category. (Check all that apply) [\[help\]](#)

- ☐ Commercial
 ☐ Residential
 ☐ Institutional
 ☐ Transportation
 ☐ Recreational
☐ Maintenance
 ☒ Environmental Enhancement

6d. Indicate the major elements of your project. (Check all that apply) [\[help\]](#)

- | | | | |
|--|---|--|---|
| ☐ Aquaculture
☐ Bank Stabilization
☐ Boat House
☐ Boat Launch
☐ Boat Lift
☐ Bridge
☐ Bulkhead
☐ Buoy
☐ Channel Modification | ☐ Culvert
☒ Dam / Weir
☐ Dike / Levee / Jetty
☐ Ditch
☐ Dock / Pier
☐ Dredging
☐ Fence
☐ Ferry Terminal
☐ Fishway | ☐ Float
☐ Floating Home
☐ Geotechnical Survey
☐ Land Clearing
☐ Marina / Moorage
☐ Mining
☐ Outfall Structure
☐ Piling/Dolphin
☐ Raft | ☐ Retaining Wall (upland)
☒ Road
☐ Scientific Measurement Device
☐ Stairs
☐ Stormwater facility
☐ Swimming Pool
☒ Utility Line |
|--|---|--|---|

☒ Other: Wetland restoration/enhancement project

6e. Describe how you plan to construct each project element checked in 6d. Include specific construction methods and equipment to be used. [\[help\]](#)

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year floodplain.

The wetland restoration and enhancement will be accomplished by constructing shallow wetland benches along the existing wetland. The grading plan creates shallow wetland cells that will replicate the natural retention and treatment functions of the historic wetlands that once existed.

Six earthen berms with flow control structures and gate valves to control water will be constructed across the wetland at different locations, which will separate the cells and control seasonal flows. Riprap pads will be located on either side of the berms at the end of pipes used to control water levels, as well as on either end of the culverts that will be placed under the two access roads.

Two existing access roads that currently cross the wetland will be reconstructed and expanded to cross the restored wetland. The roadway fill prism will be built up with roadway embankment fill to the required height and width needed to cross the constructed wetland. The access roads will be graveled with grass shoulders upon completion.

The existing sanitary sewer line that runs parallel with the existing ditched wetland will be routed outside of the wetland restoration area. The new sewer line will install a new maintenance hole at the eastern edge of the project and install a new line running north of the existing line to a new maintenance hole and then run due west and intertie with the existing line through a new maintenance hole. The abandoned sewer line will be removed during construction of the wetland restoration/enhancement project.

Wetland restoration, water control structures, access road construction, and sewer line relocation will be completed with the use of excavators, bulldozers, compactors, dump trucks, and general use vehicles. BMPs will be implemented to minimize the extent of additional potential effects to wetlands and wetland buffers. The County has developed an erosion and sediment control plan to control erosion during construction, and BMPs will remain in place until disturbed soils have been stabilized.

Upon completion of the wetland restoration, water control berms, access roads, and sewer line relocation, all disturbed area will be seeded with native upland and wetland seed mixtures and the restored wetland and wetland buffer area will be planted with appropriate native wetland and wetland buffer plants.

The existing wetlands are headwater wetlands of the Cougar Creek watershed, which is a tributary to Salmon Creek. No activities occur within the 100-year floodplain.

6f. What are the anticipated start and end dates for project construction? (Month/Year) [\[help\]](#)

- If the project will be constructed in phases or stages, use [JARPA Attachment D](#) to list the start and end dates of each phase or stage.

Start Date: Spring 2025

End Date: Winter 2025

☐ See JARPA Attachment D

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [\[help\]](#)

Approx. \$3,500,000

6h. Will any portion of the project receive federal funding? [\[help\]](#)

- If yes, list each agency providing funds.

☐ Yes ☒ No ☐ Don't know

Part 7–Wetlands: Impacts and Mitigation

☒ Check here if there are wetlands or wetland buffers on or adjacent to the project area.
(If there are none, skip to Part 8.) [\[help\]](#)

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [\[help\]](#)

☐ Not applicable

The project's goal is to restore the headwater wetland to its natural state as much as possible.

The purpose of this project is to restore historic wetlands and enhance existing wetlands, restoring the natural stormwater retention and treatment, and the natural groundwater recharge. Reducing peak runoff from storm events will help reduce stream erosion. The entire project area will be planted with appropriate native wetland and wetland buffer species.

The proposed project will involve temporary and permanent impacts to the existing wetland. To achieve the goals of the project, impacts to wetlands are unavoidable; however, the majority of these impacts are temporary, and the overall wetland area will be increased. Permanent impacts associated with the access road improvements, berms, placement of riprap pads, and relocation of the sewer line have been minimized to the extent practicable while still achieving the project goals. Wetland soils removed during restoration efforts will be stockpiled and placed back into the restored wetland areas. The use of low impact development BMPs will minimize long-term impacts to the existing wetland during construction. The restoration project will result in an overall gain in wetland area and uplift in functions to the wetland and wetland buffer.

7b. Will the project impact wetlands? [\[help\]](#)

☒ Yes ☐ No ☐ Don't know

7c. Will the project impact wetland buffers? [\[help\]](#)

☒ Yes ☐ No ☐ Don't know

7d. Has a wetland delineation report been prepared? [\[help\]](#)

- If Yes, submit the report, including data sheets, with the JARPA package.

☒ Yes ☐ No

7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System? [\[help\]](#)

- If Yes, submit the wetland rating forms and figures with the JARPA package.

☒ Yes ☐ No ☐ Don't know

7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands? [\[help\]](#)

- If Yes, submit the plan with the JARPA package and answer 7g.
- If No, or Not applicable, explain below why a mitigation plan should not be required.

☐ Yes ☒ No ☐ Don't know

The wetland restoration project will result is a small amount of permanent wetland impacts. NWP 27 does not require mitigation to compensate for impacts to aquatic resources. However, the overall project will result in the restoration of 2.32 acres of wetlands and enhancement of 1.11 acres of existing wetlands, for a total of 3.43 acres. The restoration and enhancement of wetlands will greatly exceed the permanent wetland impacts and additional mitigation will not be required. A restoration plan has been prepared that summarizes the restoration efforts, the proposed plantings, and monitoring and maintenance activities. The restoration plan has been included. It is anticipated that the proposed wetland restoration can be authorized under Nationwide 27 – Aquatic Habitat Restoration, Enhancement, and Establishment Activities.

Permanent impacts from the two road crossings total less than 0.05 acre (0.04 East Crossing and 0.01 West Crossing) and are each less than 0.1 acre, which is the typical threshold for when compensatory mitigation is required under Nationwide 14 – Linear Transportation.

Permanent impacts from relocating the sewer line outside of the wetland restoration area total less than 0.001 acres from a single maintenance hole, which is also less than the typical threshold for when compensatory mitigation is required under Nationwide 12 – Utility Line Activities.

7g. Summarize what the mitigation plan is meant to accomplish, and describe how a watershed approach was used to design the plan. [\[help\]](#)

N/A

7h. Use the table below to list the type and rating of each wetland impacted, the extent and duration of the impact, and the type and amount of mitigation proposed. Or if you are submitting a mitigation plan with a similar table, you can state (below) where we can find this information in the plan. [\[help\]](#)

Activity (fill, drain, excavate, flood, etc.)	Wetland Name ¹	Wetland type and rating category ²	Impact area (sq. ft. or Acres)	Duration of impact ³	Proposed mitigation type ⁴	Wetland mitigation area (sq. ft. or acres)
Excavate for earthen berms/ control structures	Wetland A	PEM (III)	7,400 SF	Permanent	R / E	NA
Fill for earthen berms/control structures	Wetland A	PEM (III)	7,400 SF	Permanent	R / E	NA
Excavate for wetland restoration / enhancement and sewer line relocation	Wetland A	PEM (III)	48,000 SF	6 months	R / E	NA
Excavate for West Road Crossing	Wetland A	PEM (III)	436 SF	6 months	R / E	NA
Fill for West Road Crossing	Wetland A	PEM (III)	436 SF	Permanent	R / E	NA
Excavate for East Road Crossing	Wetland A	PEM (III)	1,745 SF	6 months	R / E	NA
Fill for East Road Crossing	Wetland A	PEM (III)	1,745 SF	Permanent	R / E	NA
Fill for maintenance hole structure	Wetland A	PEM (III)	25 SF	Permanent	R / E	NA

¹ If no official name for the wetland exists, create a unique name (such as "Wetland 1"). The name should be consistent with other project documents, such as a wetland delineation report.

² Ecology wetland category based on current Western Washington or Eastern Washington Wetland Rating System. Provide the wetland rating forms with the JARPA package.

³ Indicate the days, months or years the wetland will be measurably impacted by the activity. Enter "permanent" if applicable.

⁴ Creation (C), Re-establishment/Rehabilitation (R), Enhancement (E), Preservation (P), Mitigation Bank/In-lieu fee (B)

Page number(s) for similar information in the mitigation plan, if available: _____

7i. For all filling activities identified in 7h, describe the source and nature of the fill material, the amount in cubic yards that will be used, and how and where it will be placed into the wetland. [\[help\]](#)

Temporary wetland impacts will consist of over-excavation of existing soils, to depth of 12-inches below the proposed surface, and replacement of approximately 518 cubic yards (CY) of native wetland soil back within the wetlands.

Fill for two access road prisms and six water control facilities is proposed. Clean roadway embankment fill, and riprap will be used. Approximately 440 CY of fill will be placed within the wetland for access road improvements and berms for water control structures.

Fill and excavation activities will occur within the same footprint.

7j. For all excavating activities identified in 7h, describe the excavation method, type and amount of material in cubic yards you will remove, and where the material will be disposed. [\[help\]](#)

Organic, hydric wetland soils will be excavated and incorporated in the wetland restoration. Any excess material will be disposed of at an approved off-site location. Approximately 2,753 CY of material will be removed.

Excavation and fill activities will occur within the same footprint.

Part 8–Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, “waterbodies” refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.) [\[help\]](#)

☐ Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment. [\[help\]](#)

☐ Not applicable

8b. Will your project impact a waterbody or the area around a waterbody? [\[help\]](#)

☐ Yes ☐ No

8c. Have you prepared a mitigation plan to compensate for the project’s adverse impacts to non-wetland waterbodies? [\[help\]](#)

- **If Yes**, submit the plan with the JARPA package and answer 8d.
- **If No, or Not applicable**, explain below why a mitigation plan should not be required.

☐ Yes ☐ No ☐ Don’t know

Not applicable - There are no waterbodies within the project area so a mitigation plan

8d. Summarize what the mitigation plan is meant to accomplish. Describe how a watershed approach was used to design the plan.

- If you already completed 7g you do not need to restate your answer here. [\[help\]](#)

8e. Summarize impact(s) to each waterbody in the table below. [\[help\]](#)

Activity (clear, dredge, fill, pile drive, etc.)	Waterbody name ¹	Impact location ²	Duration of impact ³	Amount of material (cubic yards) to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
--	-----------------------------	------------------------------	---------------------------------	--	---

¹ If no official name for the waterbody exists, create a unique name (such as "Stream 1") The name should be consistent with other documents provided. ² Indicate whether the impact will occur in or adjacent to the waterbody. If adjacent, provide the distance between the impact and the waterbody and indicate whether the impact will occur within the 100-year flood plain. ³ Indicate the days, months or years the waterbody will be measurably impacted by the work. Enter "permanent" if applicable.					
8f. For all activities identified in 8e, describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody. [help]					
8g. For all excavating or dredging activities identified in 8e, describe the method for excavating or dredging, type and amount of material you will remove, and where the material will be disposed. [help]					
8h. Have you prepared a Water Quality Monitoring Plan (WQMP) for all in-water work (below ordinary high water), over water work or discharges to waters of the state? ☐ Yes ☐ No If NO describe the monitoring that you will be conducting including parameters, equipment and locations, or explain why monitoring will not be necessary. [help]					

Part 9–Additional Information

Any additional information you can provide helps the reviewer(s) understand your project. Complete as much of this section as you can. It is ok if you cannot answer a question.

9a. If you have already worked with any government agencies on this project, list them below. [help]			
Agency Name	Contact Name	Phone	Most Recent Date of Contact
USACE	Ari Sindel	(360) 746-4701	3/19/2024
Ecology	Lori White	(360) 669-1396	4/26/2022
Clark County	Ariel Whitacre	(564) 397-4717	4/26/2022
9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 of this JARPA on the Washington Department of Ecology's 303(d) List? [help] - If Yes, list the parameter(s) below. - If you don't know, use Washington Department of Ecology's Water Quality Assessment tools at: https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d. ☐ Yes ☒ No			
9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [help] Go to http://cfpub.epa.gov/surf/locate/index.cfm to help identify the HUC.			
17080001			

9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [help] Go to https://ecology.wa.gov/Water-Shorelines/Water-supply/Water-availability/Watershed-look-up to find the WRIA #.
28
9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [help] Go to https://ecology.wa.gov/Water-Shorelines/Water-quality/Freshwater/Surface-water-quality-standards/Criteria for the standards.
☒ Yes ☐ No ☐ Not applicable
9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline environment designation? [help] - If you don't know, contact the local planning department. - For more information, go to: https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Shoreline-laws-rules-and-cases.
☐ Urban ☐ Natural ☐ Aquatic ☐ Conservancy ☐ Other: _____
9g. What is the Washington Department of Natural Resources Water Type? [help] Go to http://www.dnr.wa.gov/forest-practices-water-typing for the Forest Practices Water Typing System.
☐ Shoreline ☐ Fish ☐ Non-Fish Perennial ☐ Non-Fish Seasonal
9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [help] If No, provide the name of the manual your project is designed to meet.
☒ Yes ☐ No
Name of manual: <u>Clark County Stormwater Manual 2021</u>
9i. Does the project site have known contaminated sediment? [help] If Yes, please describe below.
☐ Yes ☒ No
9j. If you know what the property was used for in the past, describe below. [help] The property has been used for agriculture activities since 1873. Beginning in the 1940s the farm was used as a state agricultural research facility run by Washington State University, providing community outreach and agricultural education programs.
9k. Is the project located in or adjacent to a designated state or federal contaminated site or clean-up site. (e.g. MTCA or CERCLA)? If Yes, provide any additional details below.
☒ Yes ☐ No
This site has confirmed or suspected contamination that could potentially harm people and the environment. It is in the state cleanup process under the Model Toxics Control Act.
9l. Has a cultural resource (archaeological) survey been performed on the project area? [help] If Yes, attach it to your JARPA package.
☒ Yes ☐ No

9m. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work. [\[help\]](#)

According to USFWS IPaC and NOAA Fisheries, ESA-listed species that may be present in the area of the proposed action include:

- Yellow-Billed Cuckoo (*Coccyzus americanus*)
- Bull Trout (*Salvelinus confluentus*) – Columbia River DPS*
- Steelhead (*Oncorhynchus mykiss*) – Lower Columbia River DPS
- Coho Salmon (*Oncorhynchus kisutch*) – Lower Columbia River ESU*
- Chum Salmon (*Oncorhynchus keta*) – Columbia River ESU
- Chinook Salmon (*Oncorhynchus tshawytscha*) – Lower Columbia River ESU
- Northwestern Pond Turtle (*Actinemys marmorata*) – Proposed Threatened

Due to the lack of suitable habitat conditions, the highly developed nature of the surrounding urban area, and the BMPs that will be implemented, the project will have no effect on ESA-listed species. There is no designated critical habitat within the project area.

*DPS (distinct population segment), ESU (evolutionary distinct unit)

9n. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work. [\[help\]](#)

WDFW maps rainbow trout (*Oncorhynchus mykiss*) and Cutthroat trout (*Oncorhynchus clarki*) in downstream reaches of Cougar Creek. Impacts to the downstream reaches of Cougar Creek will be avoided and minimized using best management practices, and the project is unlikely to affect WDFW listed species. An overall improvement to the hydraulic function to the headwaters of Cougar Creek will occur through the restoration and enhancement of disturbed and channelized wetlands.

Part 10–SEPA Compliance and Permits

Use the resources and checklist below to identify the permits you are applying for.

- Online Project Questionnaire at <http://apps.oria.wa.gov/opas/>.
- Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.
- For a list of addresses to send your JARPA to, click on [agency addresses for completed JARPA](#).

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [\[help\]](#)

- For more information about SEPA, go to <https://ecology.wa.gov/regulations-permits/SEPA-environmental-review>.

☐ A copy of the SEPA determination or letter of exemption is included with this application.

☒ A SEPA determination is pending with Clark County (lead agency). The expected decision date is November 2024.

☐ I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.) [\[help\]](#)

☐ This project is exempt (choose type of exemption below).

☐ Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt?

☐ Other: _____

☐ SEPA is pre-empted by federal law.

10b. Indicate the permits you are applying for. (Check all that apply.) [\[help\]](#)

LOCAL GOVERNMENT

Local Government Shoreline permits:

- ☐ Substantial Development ☐ Conditional Use ☐ Variance
☐ Shoreline Exemption Type (explain): _____

Other City/County permits:

- ☐ Floodplain Development Permit ☒ Critical Areas Ordinance

STATE GOVERNMENT

Washington Department of Fish and Wildlife:

- ☐ Hydraulic Project Approval (HPA) ☐ Fish Habitat Enhancement Exemption – [Attach Exemption Form](#)

Washington Department of Natural Resources:

- ☐ Aquatic Use Authorization
 Complete [JARPA Attachment E](#) and submit a check for \$25 payable to the Washington Department of Natural Resources.
Do not send cash.

Washington Department of Ecology:

- ☒ Section 401 Water Quality Certification
☐ Authorization to impact waters of the state, including wetlands (Check this box if the proposed impacts are to waters not subject to the federal Clean Water Act)

FEDERAL AND TRIBAL GOVERNMENT

United States Department of the Army (U.S. Army Corps of Engineers):

- ☒ Section 404 (discharges into waters of the U.S.) ☐ Section 10 (work in navigable waters)

United States Coast Guard:

For projects or bridges over waters of the United States, contact the U.S. Coast Guard at:

- ☐ Bridge Permit: D13-SMB-D13-BRIDGES@uscg.mil
☐ Private Aids to Navigation (or other non-bridge permits): D13-SMB-D13-PATON@uscg.mil

United States Environmental Protection Agency:

- ☐ Section 401 Water Quality Certification (discharges into waters of the U.S.) on tribal lands where tribes do not have treatment as a state (TAS)

Tribal Permits: (Check with the tribe to see if there are other tribal permits, e.g., Tribal Environmental Protection Act, Shoreline Permits, Hydraulic Project Permits, or other in addition to CWA Section 401 WQC)

- ☐ Section 401 Water Quality Certification (discharges into waters of the U.S.) where the tribe has treatment as a state (TAS).

Part 11—Authorizing Signatures

Signatures are required before submitting the JARPA package. The JARPA package includes the JARPA form, project plans, photos, etc. [\[help\]](#)

11a. Applicant Signature (required) [\[help\]](#)

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary permits.

I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. Kf (initial)

By initialing here, I state that I have the authority to grant access to the property. I also give my consent to the permitting agencies entering the property where the project is located to inspect the project site or any work related to the project. Kf (initial)

Kenneth A Lader	<u>Kenneth A. Lader</u>	07/10/24
Applicant Printed Name	Applicant Signature	Date

11b. Authorized Agent Signature [\[help\]](#)

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Pam Schense	<u>Pam Schense</u>	07/15/24
Authorized Agent Printed Name	Authorized Agent Signature	Date

11c. Property Owner Signature (if not applicant) [\[help\]](#)

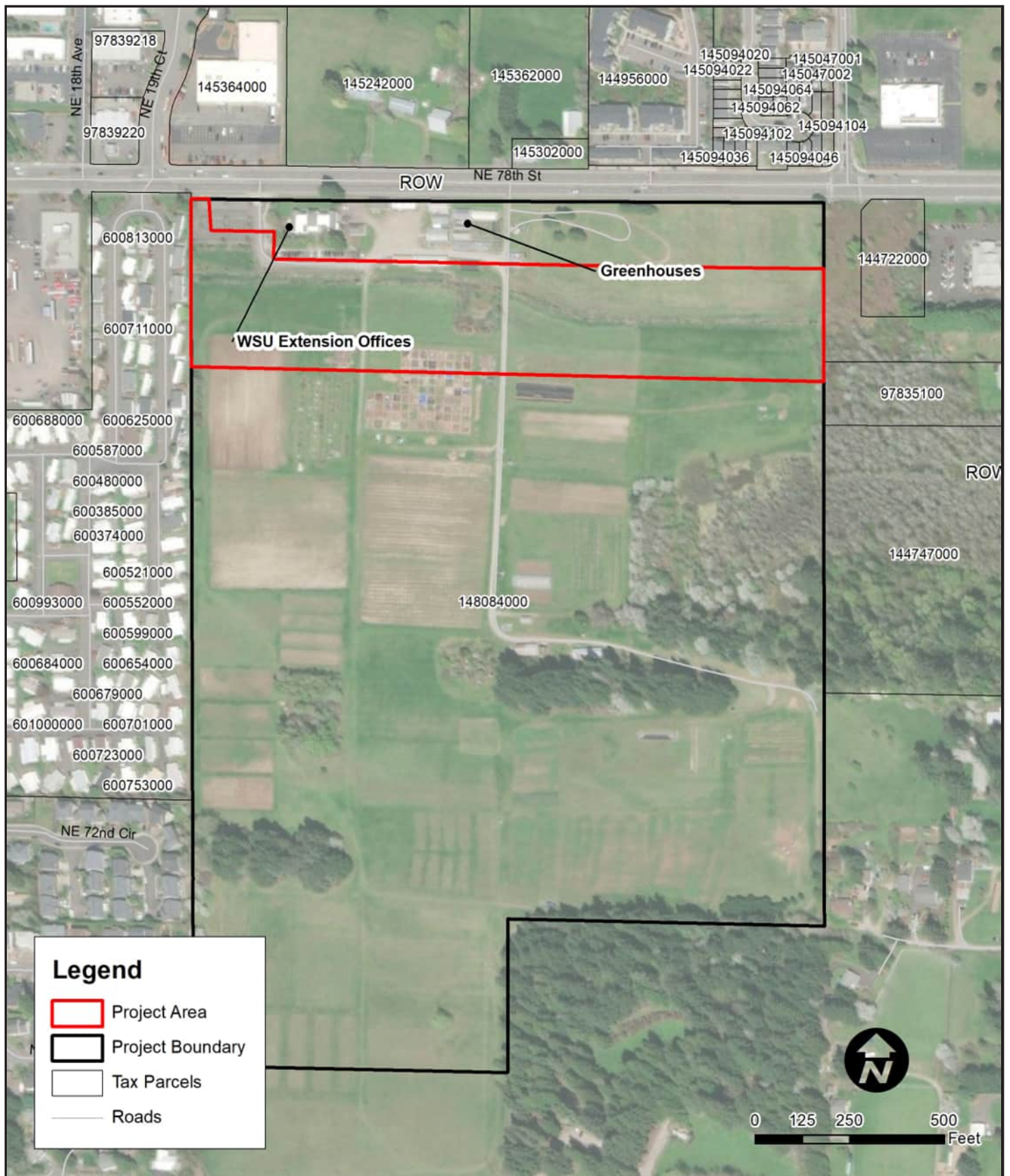
Not required if project is on existing rights-of-way or easements (provide copy of easement with JARPA).

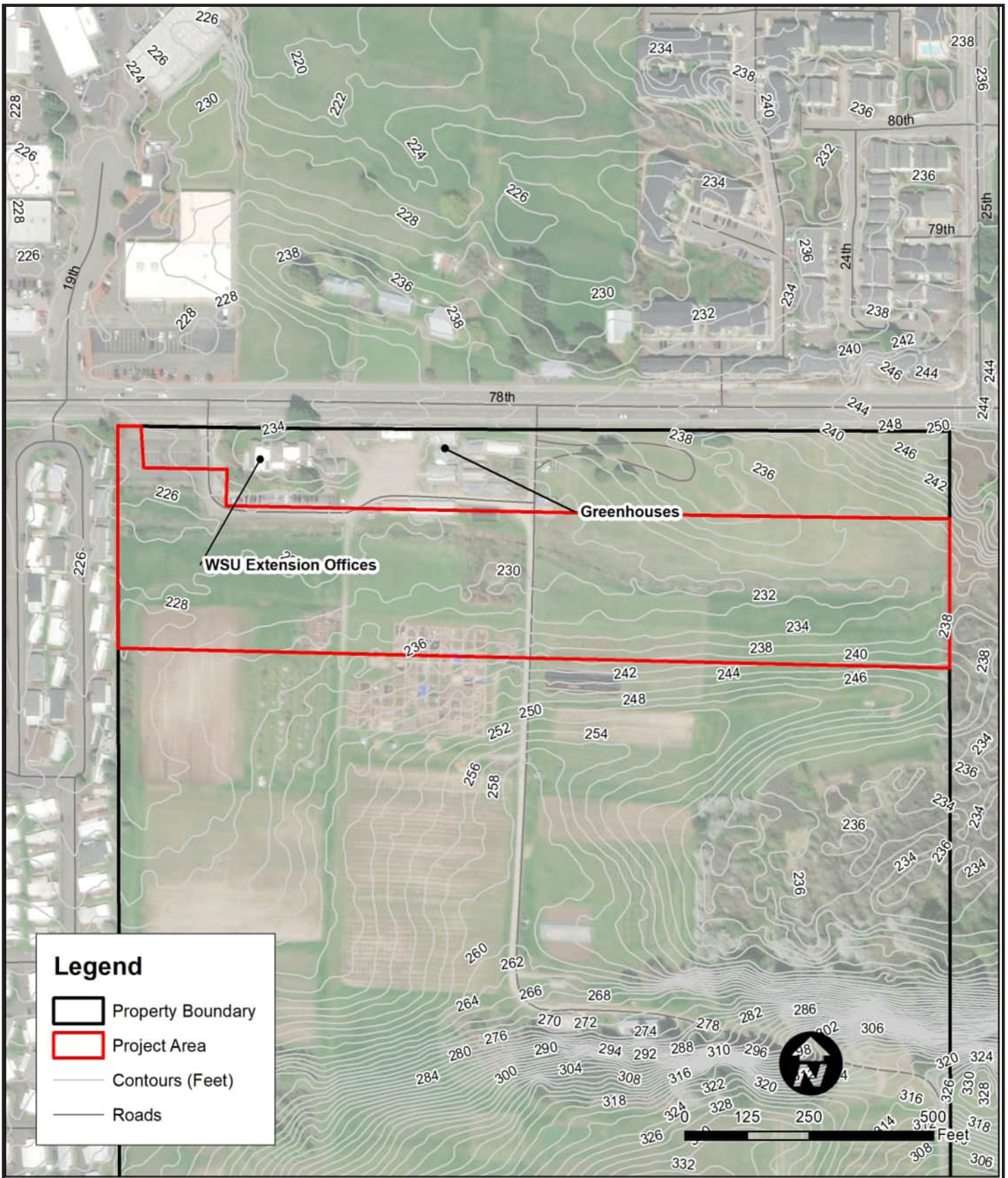
I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.

Kathleen Otto	<u>Kathleen Otto</u>	07/15/24
Property Owner Printed Name	Property Owner Signature	Date

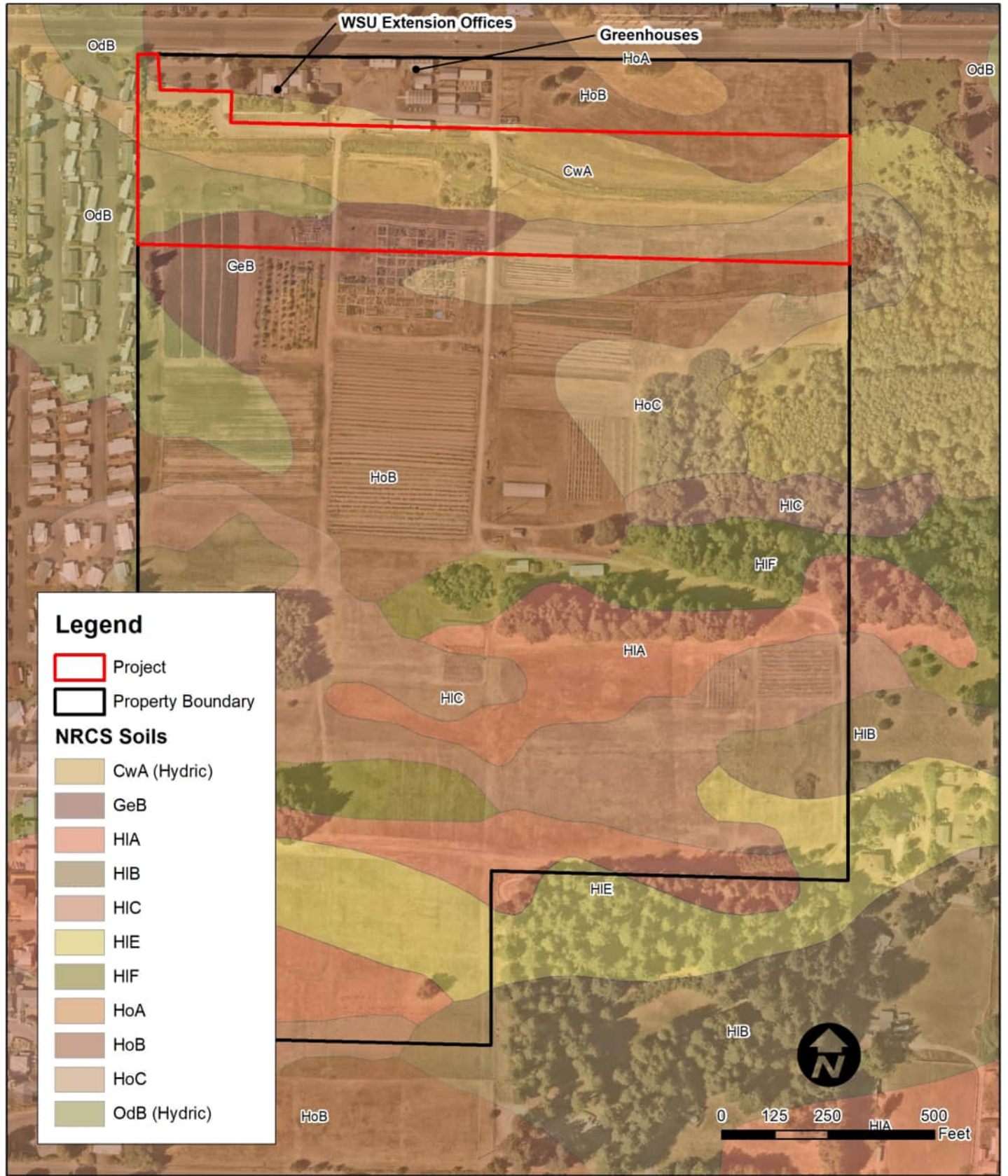
18 U.S.C §1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA publication number: ORIA-16-011 rev. 09/2018





Reference No: NWS-2023-613 PURPOSE: Wetland Restoration COUNTY OF: Clark STATE: Washington APPLICANT: Clark County Public Works 1300 Franklin St., Vancouver, WA 98660	Figure 3: Topography 	HERITAGE FARMS WETLAND RESTORATION TOWNSHIP: T02N, R01E, Section 11 LATITUDE: 45° 40' 39.6588"N LONGITUDE: -122° 38' 47.2344"W DATUM: NAD 1983 StatePlane WA Sheet 3 of 25 July 2024
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Reference No: NWS-2023-613
 PURPOSE: Wetland Restoration
 COUNTY OF: Clark
 STATE: Washington
 APPLICANT: Clark County Public Works
 1300 Franklin St., Vancouver, WA 98660

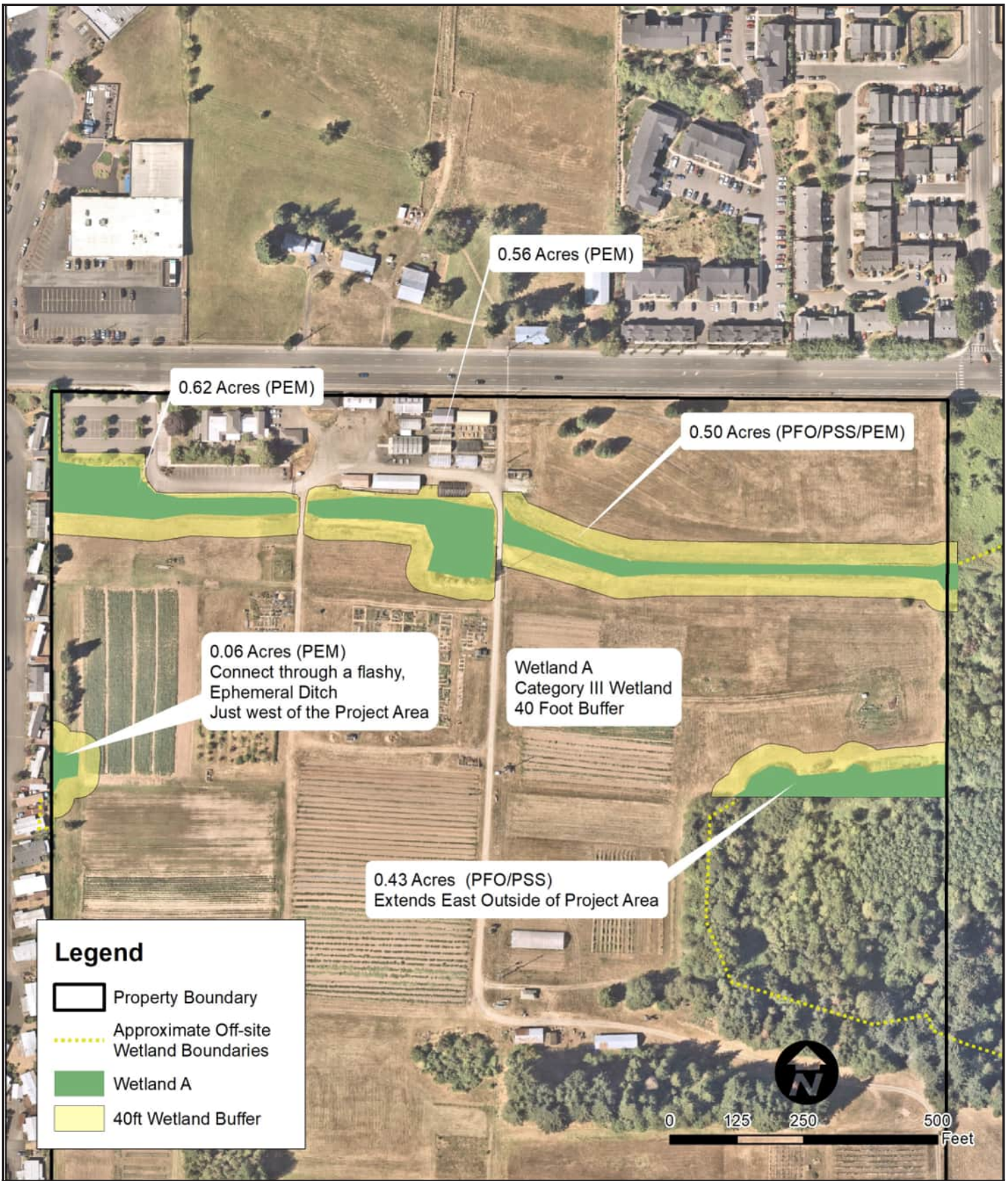
Figure 4: NRCS Mapped Soils



HERITAGE FARMS WETLAND RESTORATION

TOWNSHIP: T02N, R01E, Section 11
 LATITUDE: 45° 40' 39.6588"N
 LONGITUDE: -122° 38' 47.2344"W
 DATUM: NAD 1983 StatePlane WA
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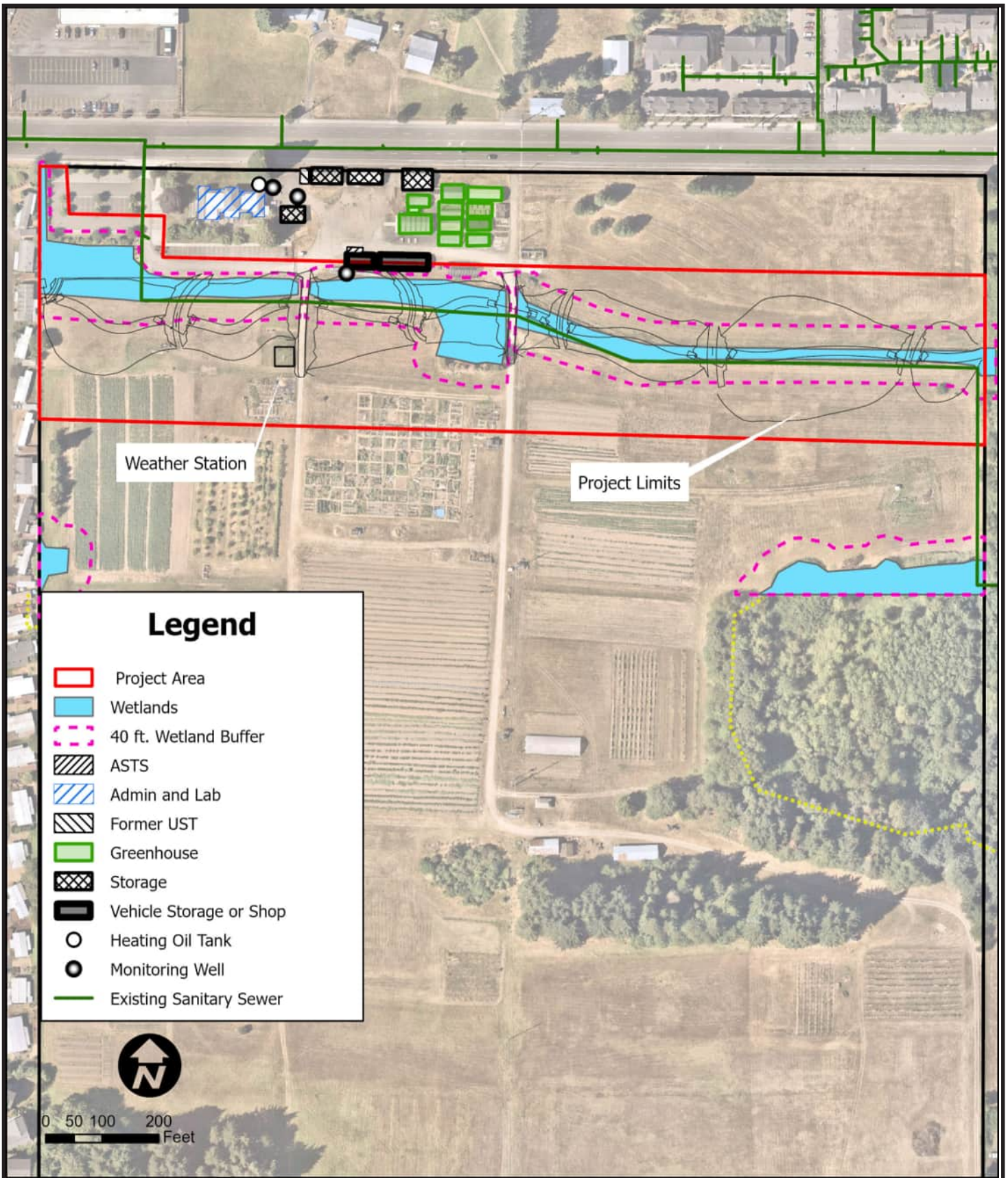
Reference No: NWS-2023-613
 PURPOSE: Wetland Restoration
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 APPLICANT: Clark County Public Works
 1300 Franklin St., Vancouver, WA 98660

Figure 5: Existing Conditions

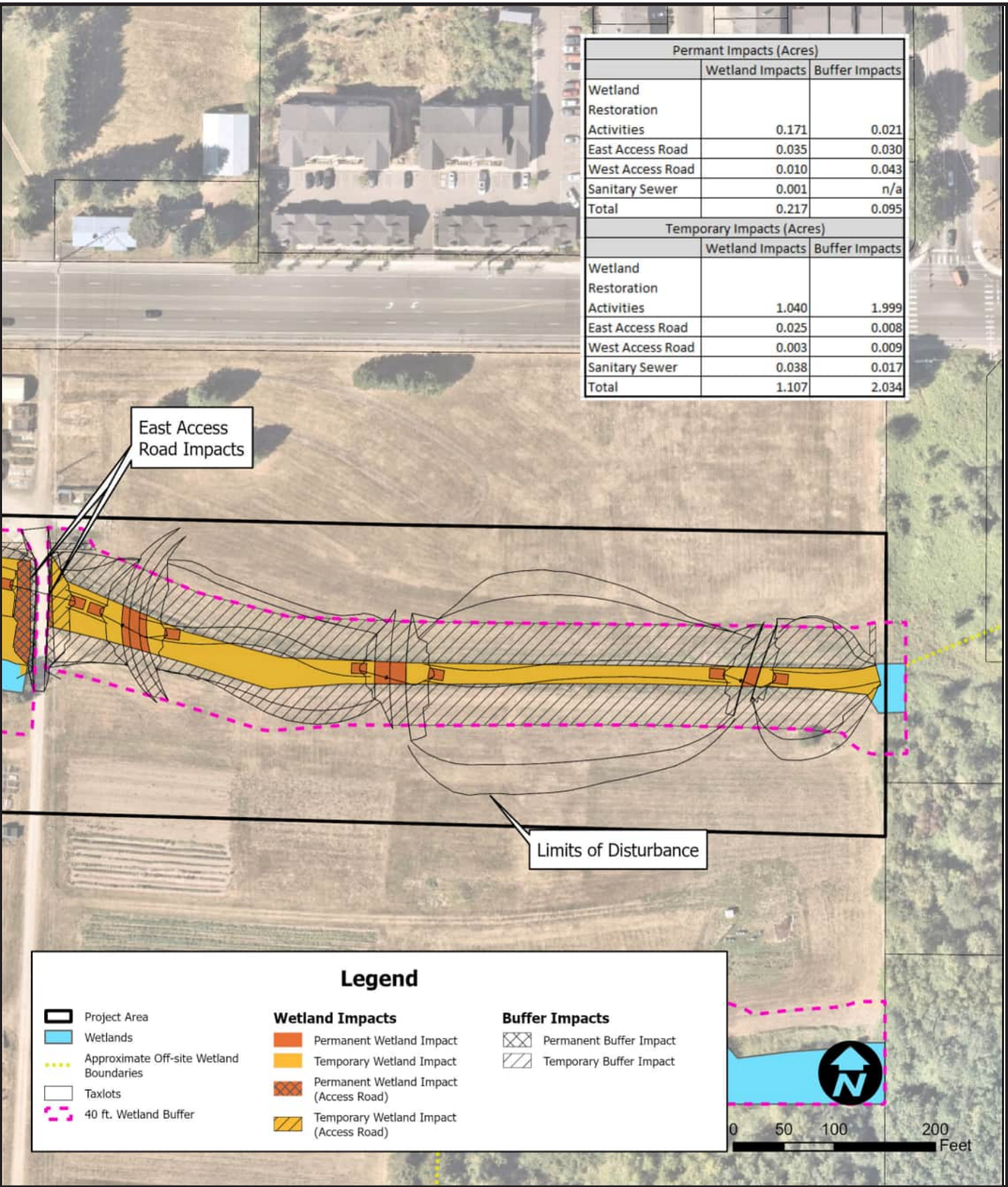


HERITAGE FARMS WETLAND RESTORATION
 TOWNSHIP: T02N, R01E, Section 11
 LATITUDE: 45° 40' 39.6588"N
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Permant Impacts (Acres)		
	Wetland Impacts	Buffer Impacts
Wetland Restoration Activities	0.171	0.021
East Access Road	0.035	0.030
West Access Road	0.010	0.043
Sanitary Sewer	0.001	n/a
Total	0.217	0.095
Temporary Impacts (Acres)		
	Wetland Impacts	Buffer Impacts
Wetland Restoration Activities	1.040	1.999
East Access Road	0.025	0.008
West Access Road	0.003	0.009
Sanitary Sewer	0.038	0.017
Total	1.107	2.034



Permant Impacts (Acres)		
	Wetland Impacts	Buffer Impacts
Wetland Restoration Activities	0.171	0.021
East Access Road	0.035	0.030
West Access Road	0.010	0.043
Sanitary Sewer	0.001	n/a
Total	0.217	0.095
Temporary Impacts (Acres)		
	Wetland Impacts	Buffer Impacts
Wetland Restoration Activities	1.040	1.999
East Access Road	0.025	0.008
West Access Road	0.003	0.009
Sanitary Sewer	0.038	0.017
Total	1.107	2.034

Sanitary Sewer Manhole Impact

West Access Road Impacts

East Access Road Impacts

Limits of Disturbance

Weather Station

Project Area

Wetlands

Approximate Off-site Wetland Boundaries

Taxlots

40 ft. Wetland Buffer

Wetland Impacts

Permanent Wetland Impact

Temporary Wetland Impact

Permanent Wetland Impact (Access Road)

Temporary Wetland Impact (Access Road)

Buffer Impacts

Permanent Buffer Impact

Temporary Buffer Impact



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Figure 8: Wetland A Impacts (West)



HERITAGE FARMS WETLAND RESTORATION
TOWNSHIP: T02N, R01E, Section 11
LATITUDE: 45° 40' 39.6588"N
LONGITUDE: -122° 38' 47.2344"W
DATUM: NAD 1983 StatePlane WA
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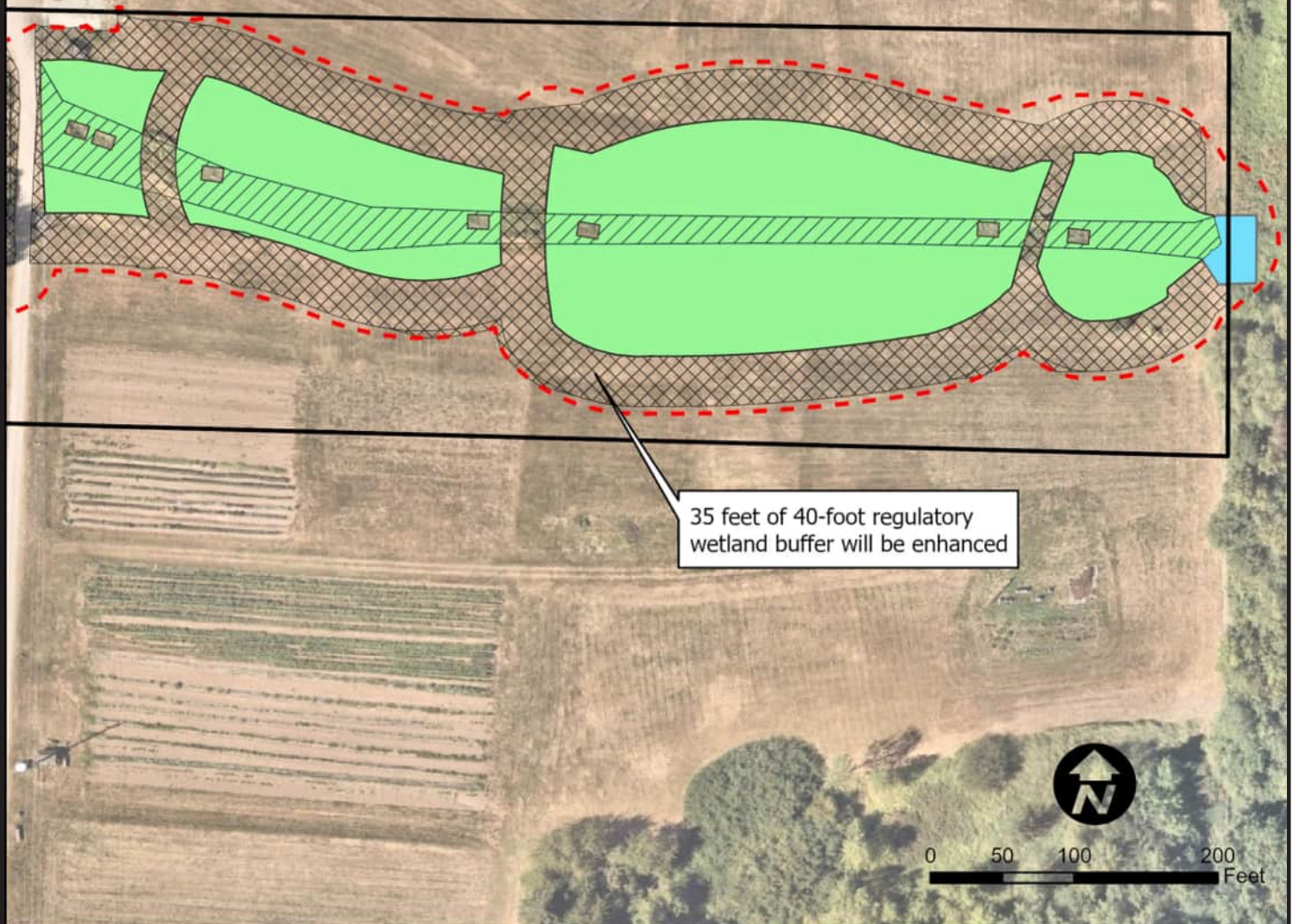
Legend

-  Project Area
-  Existing Wetland
-  40 ft. Wetland Buffer
-  Vegetated Buffer (35 ft.)
-  Wetland Restoration
-  Wetland Enhancement

Note: See Figures 7 and 8 for depiction of existing wetland included in wetland restoration activities.

	Acres
Wetland Restoration	2.32
Wetland Enhancement	1.11
Vegetated Buffer (35 ft)	2.54

NOTE: All disturbed areas beyond the vegetated buffer associated with the project will also be seeded.



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Figure 9: Restoration Plan
 Wetland A (East)



HERITAGE FARMS WETLAND RESTORATION

TOWNSHIP: T02N, R01E, Section 11
 LATITUDE: 45° 40' 39.6588"N
 LONGITUDE: -122° 38' 47.2344"W
 DATUM: NAD 1983 StatePlane WA
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Legend

-  Project Area
-  Existing Wetland
-  40 ft. Wetland Buffer
-  Vegetated Buffer (35 ft.)
-  Wetland Restoration
-  Wetland Enhancement

Note: See Figures 7 and 8 for depiction of existing wetland included in wetland restoration activities.

	Acres
Wetland Restoration	2.32
Wetland Enhancement	1.11
Vegetated Buffer (35 ft)	2.54

NOTE: All disturbed areas beyond the vegetated buffer associated with the project will also be seeded.

Weather Station

35 feet of 40-foot regulatory wetland buffer will be enhanced



0 50 100 200 Feet

Reference No: NWS-2023-613
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 1300 Franklin St., Vancouver, WA 98660

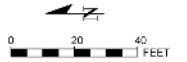
Figure 10: Restoration Plan
 Wetland A (West)



HERITAGE FARMS WETLAND RESTORATION
 TOWNSHIP: T02N, R01E, Section 11
 LATITUDE: 45° 40' 39.6588"N
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 DATUM: NAD 1983 StatePlane WA
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MATCH LINE STA 15+50 - SEE SHEET SD2



LEGEND

-  BUFFER SEED MIX AND LONG TERM MULCH
-  WETLAND SEED MIX AND LONG TERM MULCH

NOTE

1. ALL AREAS SHALL BE WEED FREE PRIOR TO PLACEMENT OF TOPSOIL, SEEDING, AND BARK-COMPOST-WOOD MULCH AND SHALL BE MAINTAINED TO BE WEED FREE THROUGHOUT THE DURATION OF THE CONTRACT.
2. SEE SPECIFICATIONS AND SHEET LSD1 FOR SEED AND BARK-COMPOST-WOOD MULCH APPLICATIONS.
3. PLANTING SHALL BE DONE AS DIRECTED ON SHEET LSD1 AND PER SPECIFICATIONS.

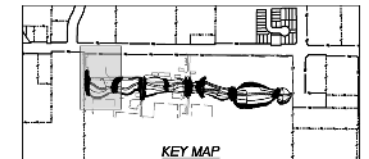
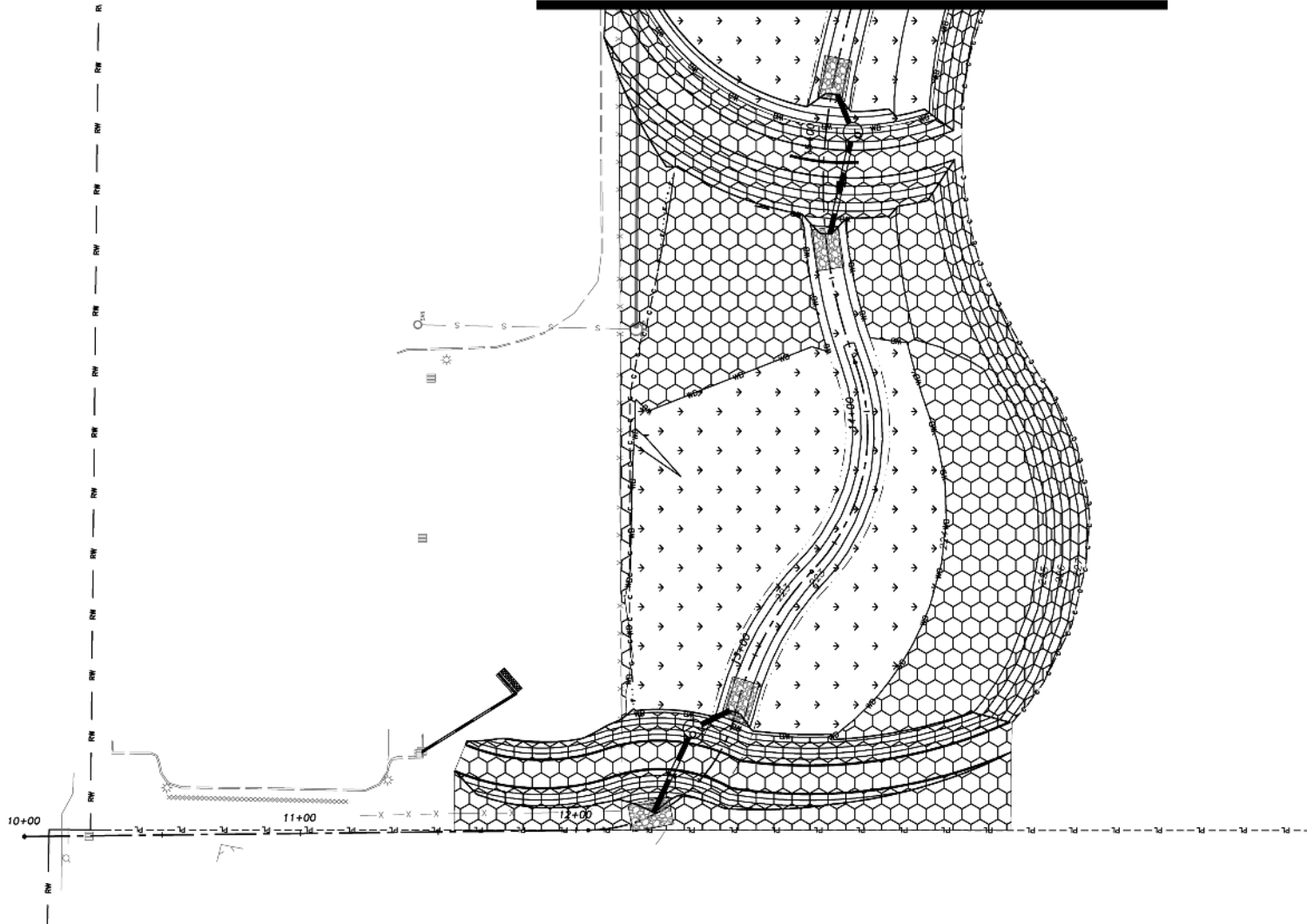


Figure 11a: Seeding Plan



Reference No: NWS-2023-613
 PURPOSE: Wetland Restoration
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 STATE: Washington
 APPLICANT: Clark County Public Works
 1300 Franklin St., Vancouver, WA 98660

HERITAGE FARMS WETLAND RESTORATION

TOWNSHIP: T02N, R01E, Section 11

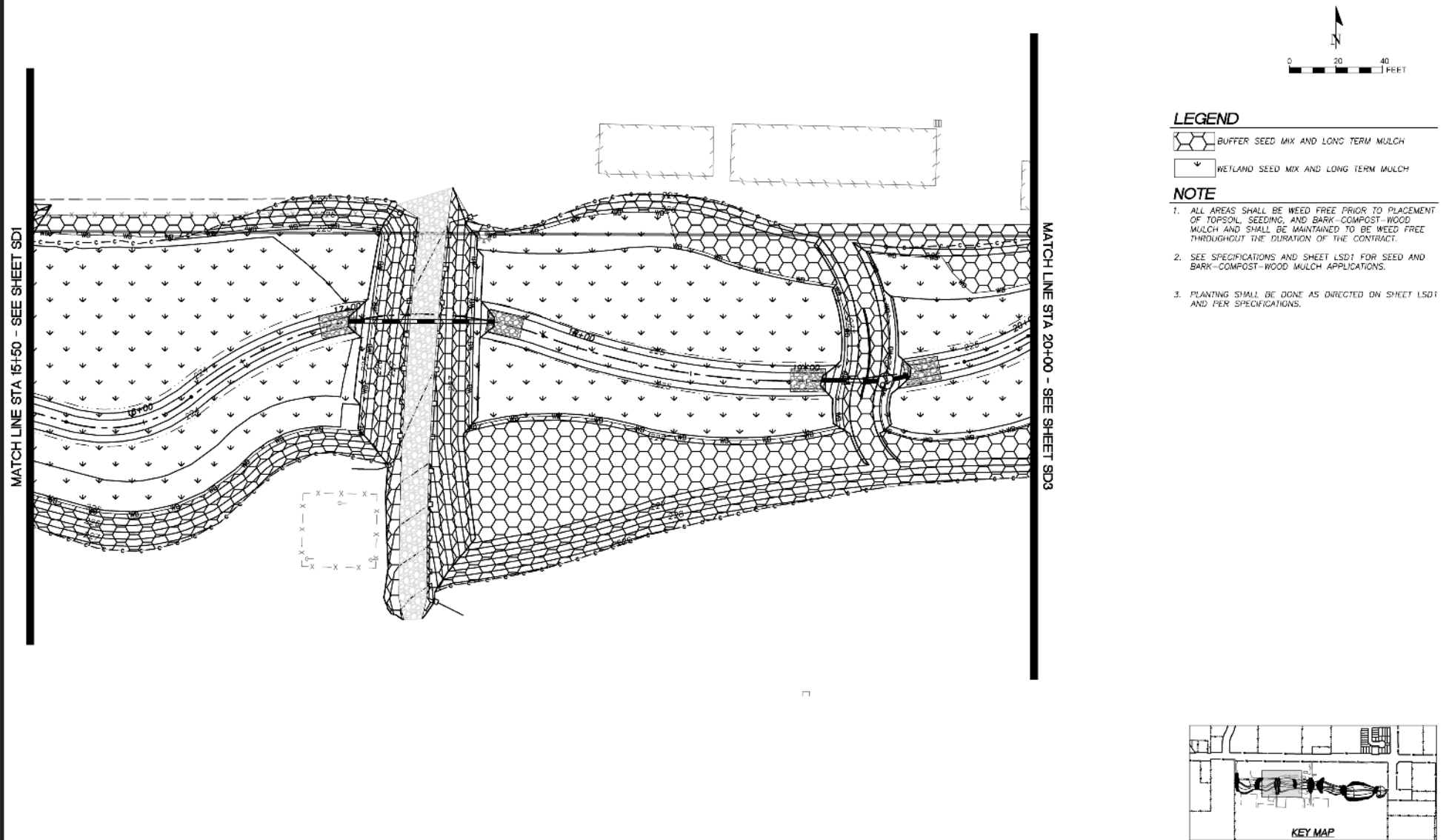
LATITUDE: 45° 40' 39.6588"N

LONGITUDE: -122° 38' 47.2344"W

DATUM: NAD 1983 StatePlane WA

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 1300 Franklin St., Vancouver, WA 98660

Figure 11b: Seeding Plan



HERITAGE FARMS WETLAND RESTORATION

TOWNSHIP: T02N, R01E, Section 11

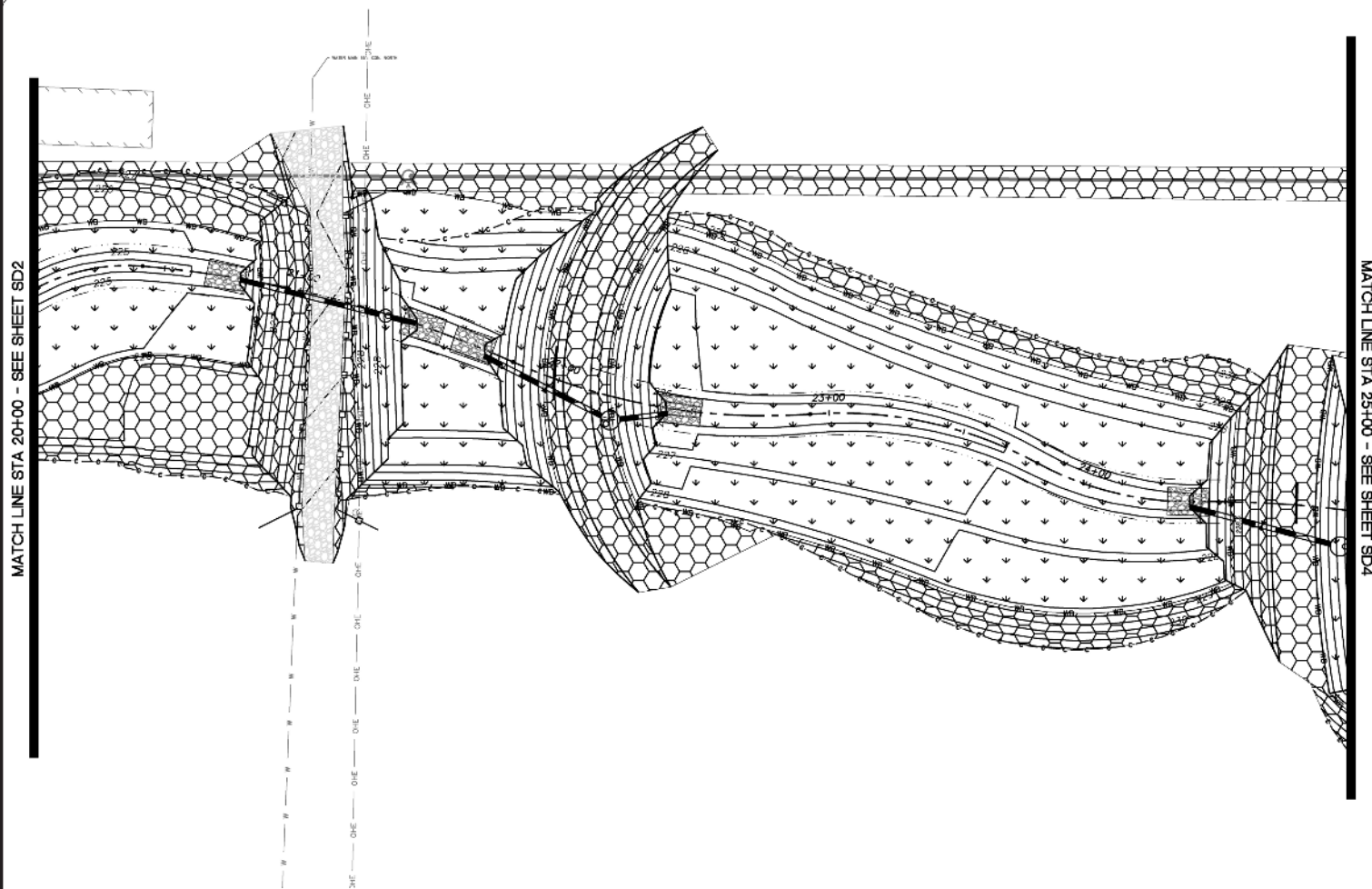
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LONGITUDE: -122° 38' 47.2344"W

DATUM: NAD 1983 StatePlane WA

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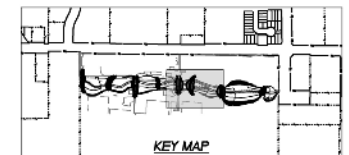


LEGEND

-  BUFFER SEED MIX AND LONG TERM MULCH
-  WETLAND SEED MIX AND LONG TERM MULCH

NOTE

1. ALL AREAS SHALL BE WEED FREE PRIOR TO PLACEMENT OF TOPSOIL, SEEDING, AND BARK-COMPOST-WOOD MULCH AND SHALL BE MAINTAINED TO BE WEED FREE THROUGHOUT THE DURATION OF THE CONTRACT.
2. SEE SPECIFICATIONS AND SHEET LSD1 FOR SEED AND BARK-COMPOST-WOOD MULCH APPLICATIONS.
3. PLANTING SHALL BE DONE AS DIRECTED ON SHEET LSD1 AND PER SPECIFICATIONS.



Reference No: NWS-2023-613

PURPOSE: Wetland Restoration

COUNTY OF: Clark

STATE: Washington

APPLICANT: Clark County Public Works

1300 Franklin St., Vancouver, WA 98660

Figure 11c: Seeding Plan



HERITAGE FARMS WETLAND RESTORATION

TOWNSHIP: T02N, R01E, Section 11

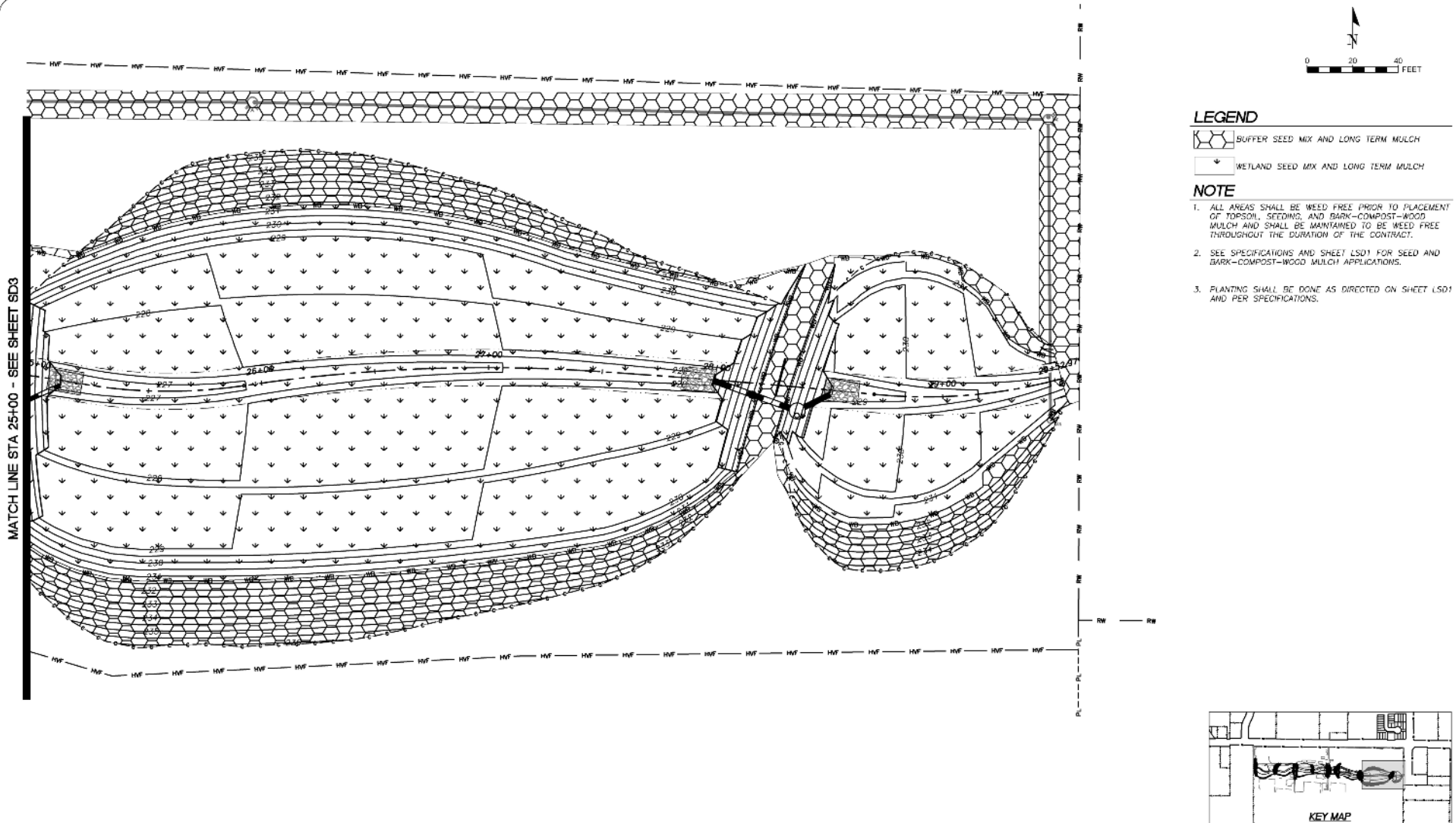
LATITUDE: 45° 40' 39.6588"N

LONGITUDE: -122° 38' 47.2344"W

DATUM: NAD 1983 StatePlane WA

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July 2024



Reference No: NWS-2023-613
 PURPOSE: Wetland Restoration
 COUNTY OF: Clark
 STATE: Washington
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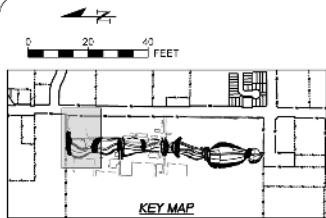
Figure 11d: Seeding Plan



HERITAGE FARMS WETLAND RESTORATION

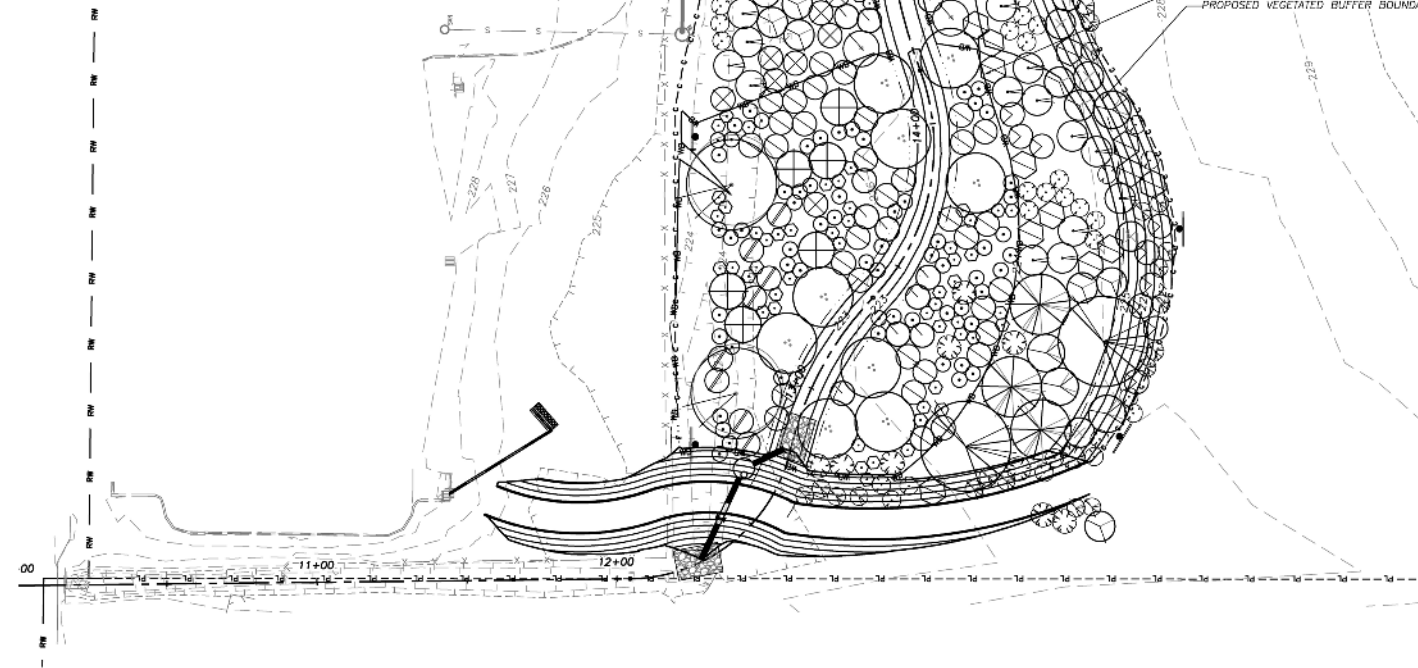
TOWNSHIP: T02N, R01E, Section 11
 LATITUDE: 45° 40' 39.6588"N
 LONGITUDE: -122° 38' 47.2344"W
 DATUM: NAD 1983 StatePlane WA
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NOTE

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2. SEE SPECIFICATIONS AND SHEET LSPD1 FOR SEED AND BARK-COMPOST-WOOD MULCH APPLICATIONS.
3. PLANTING SHALL BE DONE AS DIRECTED ON SHEET LSPD1, LSPD2 AND PER SPECIFICATIONS.



LEGEND

- Alnus rubra* Red Alder 20' O.C.
- Amelanchier alnifolia* Serviceberry 10' O.C.
- Frangula purshiana* Cascara 15' O.C.
- Populus balsamifera* Black Cottonwood 30' O.C.
- Pseudotsuga menziesii* Douglas Fir 30' O.C.
- Salix lasioandra* Pacific Willow 10' O.C.
- Salix scouleriana* Scouler Willow 6' O.C.
- Salix sitchensis* Sitka Willow 10' O.C.
- Thuja plicata* Western Red Cedar 20' O.C.
- Cornus sericea* Red Osier Dogwood 8' O.C.
- Corylus cornuta* Beaked Hazelnut 10' O.C.
- Holodiscus discolor* Oceanspray 8' O.C.
- Lonicera involucrata* Black Twinberry 8' O.C.
- Mahonia aquifolium* Tall Oregon Grape 6' O.C.
- Oemleria cerasiformis* Osoberry 10' O.C.
- Physocarpus capitatus* Pacific Ninebark 12' O.C.
- Ribes sanguineum* Red Flowering Currant 8' O.C.
- Rosa nutkana* Nootka Rose 5' O.C.
- Rubus parviflorus* Thimbleberry 6' O.C.
- Rubus spectabilis* Salmonberry 6' O.C.
- Spiraea douglasii* Douglas Spirea 3' O.C.
- Symphoricarpos albus* Common Snowberry 6' O.C.
- Demarcation Signs

Reference No: NWS-2023-613
 PURPOSE: Wetland Restoration
 COUNTY OF: Clark
 STATE: Washington
 APPLICANT: Clark County Public Works
 1300 Franklin St., Vancouver, WA 98660

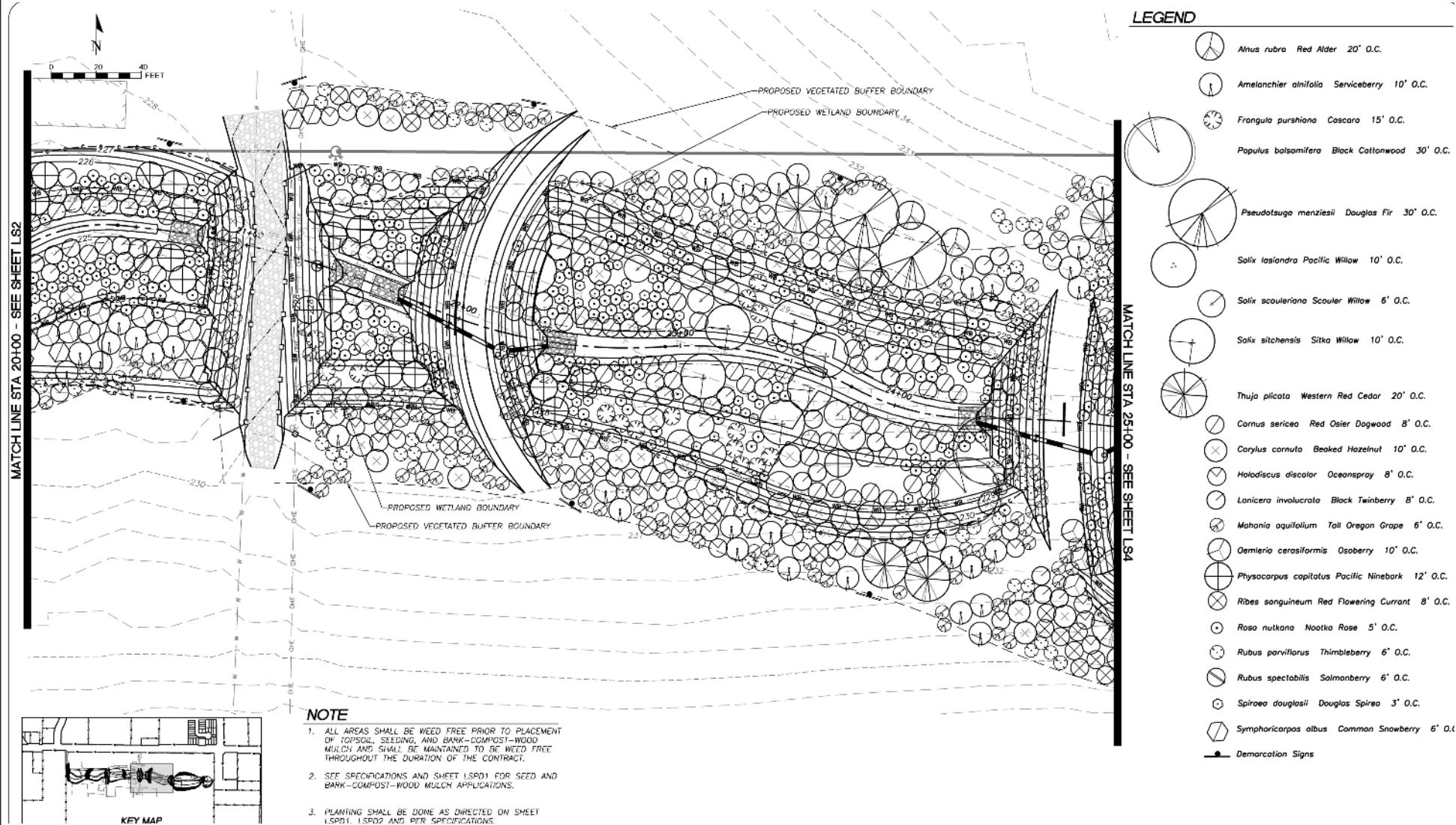
Figure 12a: Landscaping Plan



HERITAGE FARMS WETLAND RESTORATION

TOWNSHIP: T02N, R01E, Section 11
 LATITUDE: 45° 40' 39.6588"N
 LONGITUDE: -122° 38' 47.2344"W
 DATUM: NAD 1983 StatePlane WA
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Reference No: NWS-2023-613
 PURPOSE: Wetland Restoration
 COUNTY OF: Clark
 STATE: Washington
 APPLICANT: Clark County Public Works
 1300 Franklin St., Vancouver, WA 98660

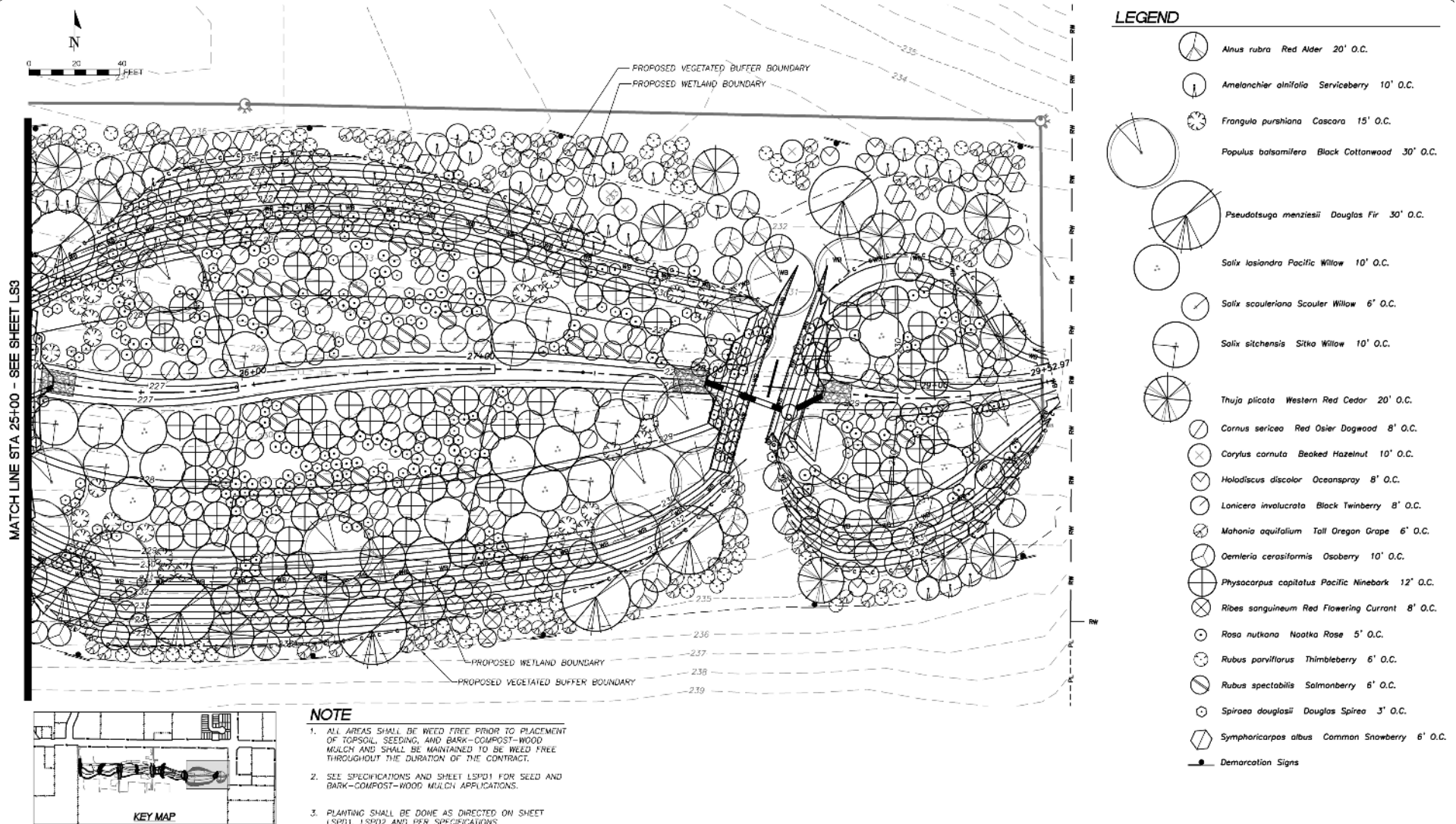
Figure 12c: Landscaping Plan



HERITAGE FARMS WETLAND RESTORATION

TOWNSHIP: T02N, R01E, Section 11
 LATITUDE: 45° 40' 39.6588"N
 LONGITUDE: -122° 38' 47.2344"W
 DATUM: NAD 1983 StatePlane WA
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July 2024

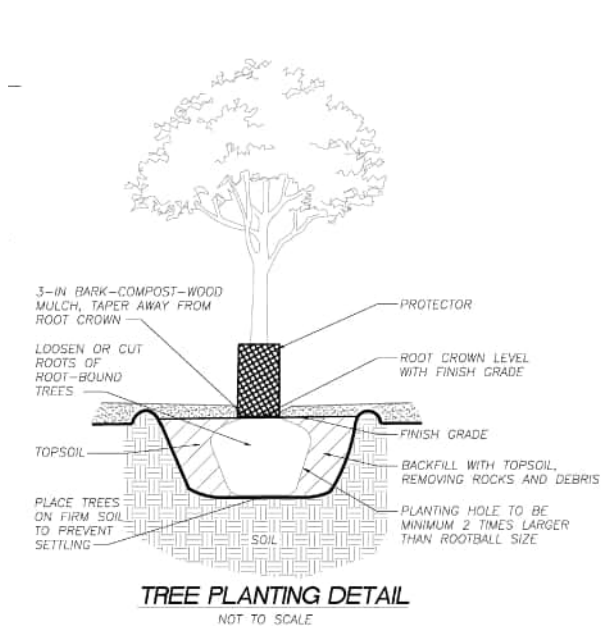


Reference No: NWS-2023-613
 PURPOSE: Wetland Restoration
 COUNTY OF: Clark
 STATE: Washington
 APPLICANT: Clark County Public Works
 1300 Franklin St., Vancouver, WA 98660

Figure 12d: Landscaping Plan

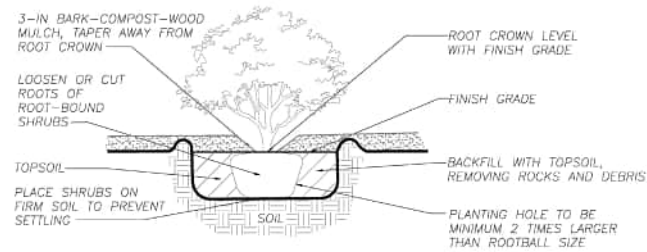


HERITAGE FARMS WETLAND RESTORATION
 TOWNSHIP: T02N, R01E, Section 11
 LATITUDE: 45° 40' 39.6588"N
 LONGITUDE: -122° 38' 47.2344"W
 DATUM: NAD 1983 StatePlane WA
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PLANTING PROCEDURE

1. DIG A HOLE TWICE THE DIMENSION OF THE ROOT BALL TO BE INSTALLED.
2. BREAK UP CHUNKS OF SOIL, REMOVE LARGE ROCKS AND INORGANIC DEBRIS.
3. IF SOIL IS DRY, ADD WATER TO HOLE TO THOROUGHLY WET SOIL BEFORE PLANTING.
4. REMOVE PLANT FROM CONTAINER WITHOUT TEARING OR BREAKING ROOTS FROM WEIGHT OF SOIL.
5. IF PLANT IS ROOT BOUND, MAKE A FEW SHALLOW, VERTICAL CUTS IN THE ROOT BALL TO STIMULATE NEW ROOT GROWTH.
6. PLACE PLANT WITHIN CENTER OF HOLE ON FIRM GROUND TO PREVENT FUTURE SETTLING.
7. BACK FILL SOIL INTO HOLE, REMOVING AIR POCKETS AND FIRING SOIL AROUND ROOT BALL WITH HANDS.
8. THE ROOT CROWN OF THE PLANT SHALL BE AT THE SAME LEVEL OF THE FINISH GRADE.
9. WATER PLANT THOROUGHLY IMMEDIATELY FOLLOWING PLANTING IF SOIL IS DRY.



PLANT SCHEDULE

TYPE	SYMBOL	BOTANICAL NAME / COMMON NAME	TOTAL	MINIMUM SIZE
TREES		ALNUS RUBRA / RED ALDER	38	5-FT HEIGHT, 2-GALLON
		AMELANCHIER ALNIFOLIA / SERRIMBERY	99	24-IN HEIGHT, 2-GALLON
		FRANCULA PURSHIANA / CASCARA	56	5-FT HEIGHT, 2-GALLON
		POPULUS BALSAMIFERA / BLACK COTTONWOOD	18	5-FT HEIGHT, 2-GALLON
		PSEUDOTSUGA MENZIESII / DOUGLAS-FIR	11	3-FT HEIGHT, 5-GALLON
		SALIX LASIOCARPA / PACIFIC WILLOW	21	LIVE STAKE, 1 TO 2-IN DIAMETER, 3-FT LENGTH
		SALIX SCOUERIANA / SCOUER WILLOW	36	LIVE STAKE, 1 TO 2-IN DIAMETER, 3-FT LENGTH
		SALIX SITCHENSIS / SITKA WILLOW	31	LIVE STAKE, 1 TO 2-IN DIAMETER, 3-FT LENGTH
		THUJA PLICATA / WESTERN RED CEDAR	26	3-FT HEIGHT, 5-GALLON
SHRUBS		CORNUS SERICEA / RED OSIER DOGWOOD	393	24-IN HEIGHT, 2-GALLON
		CORYLUS CORNUTA / BEAKED HAZELNUT	109	24-IN HEIGHT, 2-GALLON
		HOLDISCUS DISCOLOR / OCEANSPRAY	140	24-IN HEIGHT, 2-GALLON
		LONICERA INVOLUCRATA / BLACK TWIMBERRY	185	24-IN HEIGHT, 2-GALLON
		MAHONIA AQUIFOLIUM / TALL OREGON GRAPE	554	12-IN HEIGHT, 1-GALLON
		CEMLERIA CERCIFORMIS / OSCBERRY	//	24-IN HEIGHT, 2-GALLON
		PHYSCOCARPUS CAPITATUS / PACIFIC NINEBARK	142	24-IN HEIGHT, 2-GALLON
		RIBES SANGUINEUM / RED FLOWERING CURRANT	80	24-IN HEIGHT, 2-GALLON
		ROSA NUTKANA / NOOTKA ROSE	647	12-IN HEIGHT, 1-GALLON
		RUBUS PARVIFLORUS / THIMBLEBERRY	249	12-IN HEIGHT, 1-GALLON
		RUBUS SPECTABILIS / SALMONBERRY	44	12-IN HEIGHT, 1-GALLON
		SPIRAEA DOUGLASSII / DOUGLAS SPIRAEA	691	12-IN HEIGHT, 1-GALLON
		SYMPHORICARPOS ALBUS / COMMON SNOWBERRY	75	12-IN HEIGHT, 1-GALLON
TOTAL			3,423	

Reference No: NWS-2023-613

PURPOSE: Wetland Restoration

COUNTY OF: Clark

STATE: Washington

APPLICANT: Clark County Public Works

1300 Franklin St., Vancouver, WA 98660

Figure 12e: Landscaping Plan



HERITAGE FARMS WETLAND RESTORATION

TOWNSHIP: T02N, R01E, Section 11

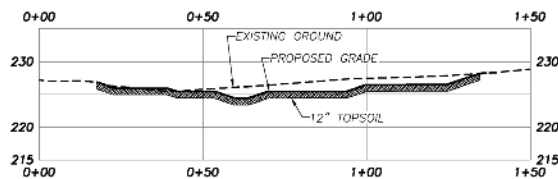
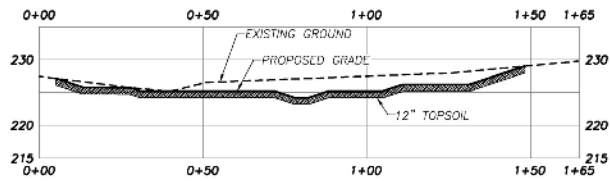
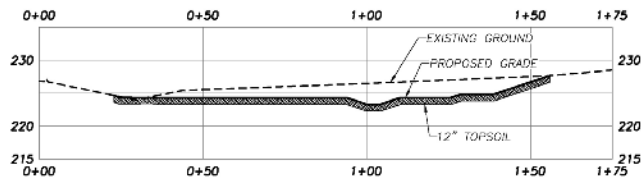
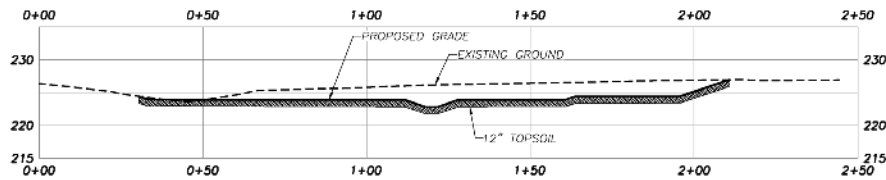
LATITUDE: 45° 40' 39.6588"N

LONGITUDE: -122° 38' 47.2344"W

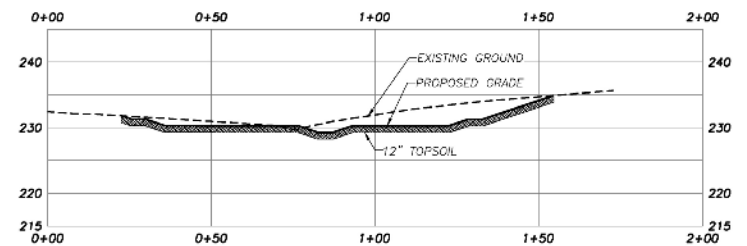
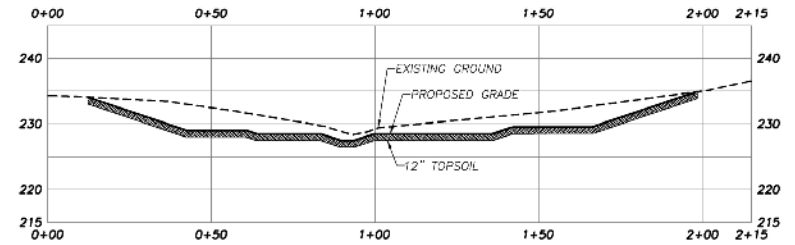
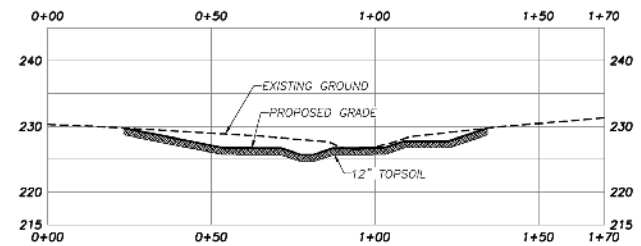
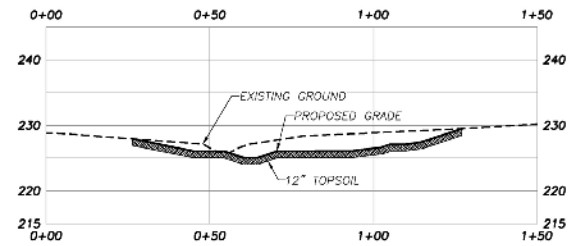
DATUM: NAD 1983 StatePlane WA

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SCALE:
HORIZ: 1"=20'
VERT: 1"=10'



SC
HOR
VER

Reference No: NWS-2023-613
PURPOSE: Wetland Restoration
COUNTY OF: Clark
STATE: Washington
APPLICANT: Clark County Public Works
1300 Franklin St., Vancouver, WA 98660

Figure 14: Grading Plan Section View



HERITAGE FARMS WETLAND RESTORATION

TOWNSHIP: T02N, R01E, Section 11

LATITUDE: 45° 40' 39.6588"N

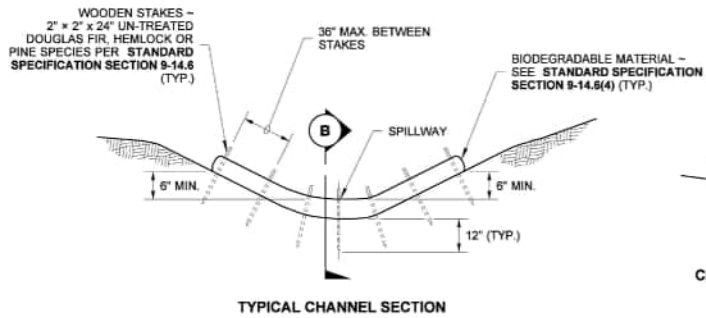
LONGITUDE: -122° 38' 47.2344"W

DATUM: NAD 1983 StatePlane WA

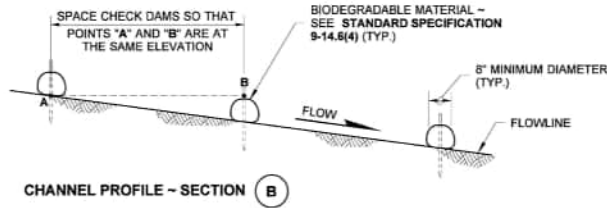
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July 2024

DRAWN BY: FERN LIDDELL



BIODEGRADABLE CHECK DAM

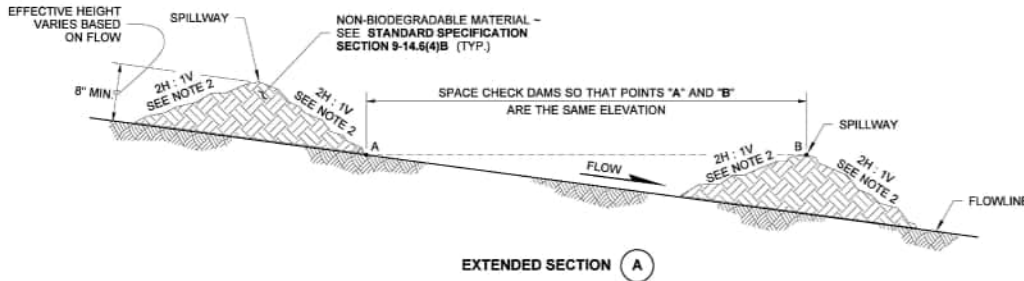
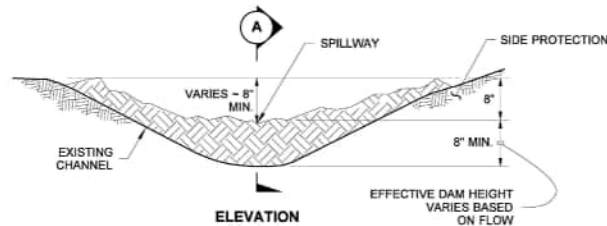


BIODEGRADABLE CHECK DAM
NOTE

1. Biodegradable Check Dams may need additional or modified staking to prevent undercutting or scouring.

NON-BIODEGRADABLE CHECK DAM
NOTES

1. Non-Biodegradable Manufactured Check Dam devices approved for use under **Standard Specification Section 9-14.6(4)B** shall be installed per manufacturer's recommendations and shall perform in accordance with **Standard Specification Section 8-01.3(6)**.
2. Rock Check Dams with slopes parallel to the roadway that are steeper than 10 H : 1 V shall be placed outside of the clear zone or behind traffic barrier.
3. To ensure adequate detention time, Rock Check Dams used as sediment control may need to be enhanced with plastic that meets the requirements of **Standard Specification Section 9-14.6(3)** or fabric that meets the geotextile requirements of **Standard Specification Section 9-33.2(1), Table 6**.



NON-BIODEGRADABLE CHECK DAM

GENERAL NOTES

1. Check Dams shall meet the requirements of **Standard Specification Sections 8-01.3(6)** and **9-14.6(4)**.
2. In channels, install the sloped ends of the Check Dam a minimum of 8" higher than the spillway to ensure water flows over the dam and not around it.
3. Perform maintenance in accordance with **Standard Specification Section 8-01.3(15)**.
4. Remove Check Dams in accordance with **Standard Specification Section 8-01.3(16)**.



Jul 6, 2022

CHECK DAMS ON CHANNELS

STANDARD PLAN I-50.20-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Mark Gaines

Jul 6, 2022



STATE DESIGN ENGINEER
Washington State Department of Transportation

Reference No: NWS-2023-613
PURPOSE: Wetland Restoration
COUNTY OF: Clark
STATE: Washington
APPLICANT: Clark County Public Works
1300 Franklin St., Vancouver, WA 98660

Figure 15: Check Dams Section View



HERITAGE FARMS WETLAND RESTORATION

TOWNSHIP: T02N, R01E, Section 11

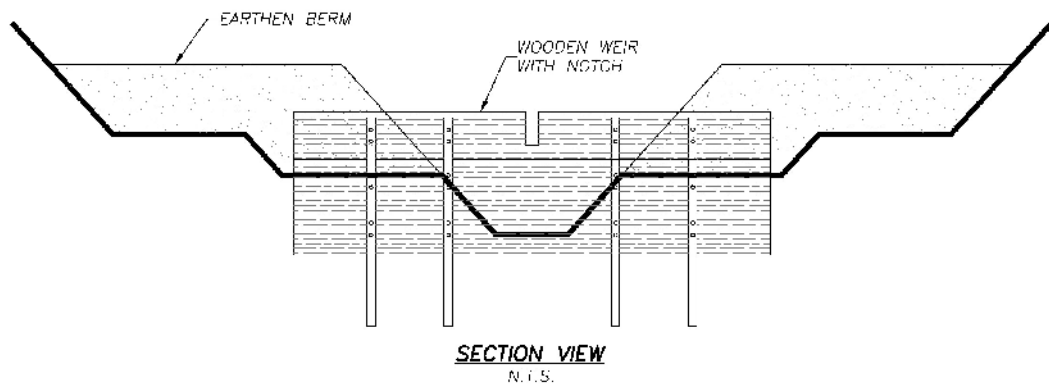
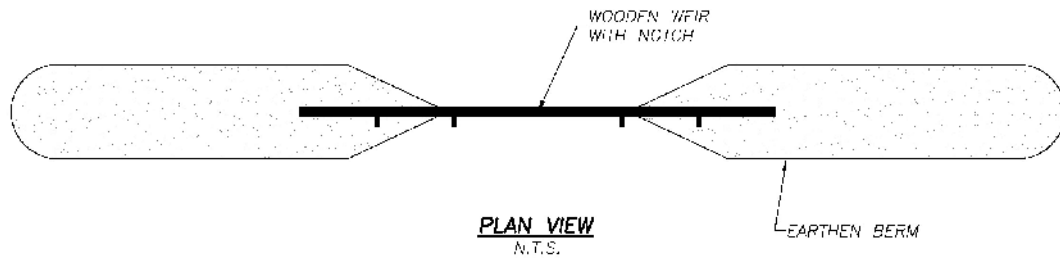
LATITUDE: 45° 40' 39.6588"N

LONGITUDE: -122° 38' 47.2344"W

DATUM: NAD 1983 StatePlane WA

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WEIR DETAIL
N.T.S.

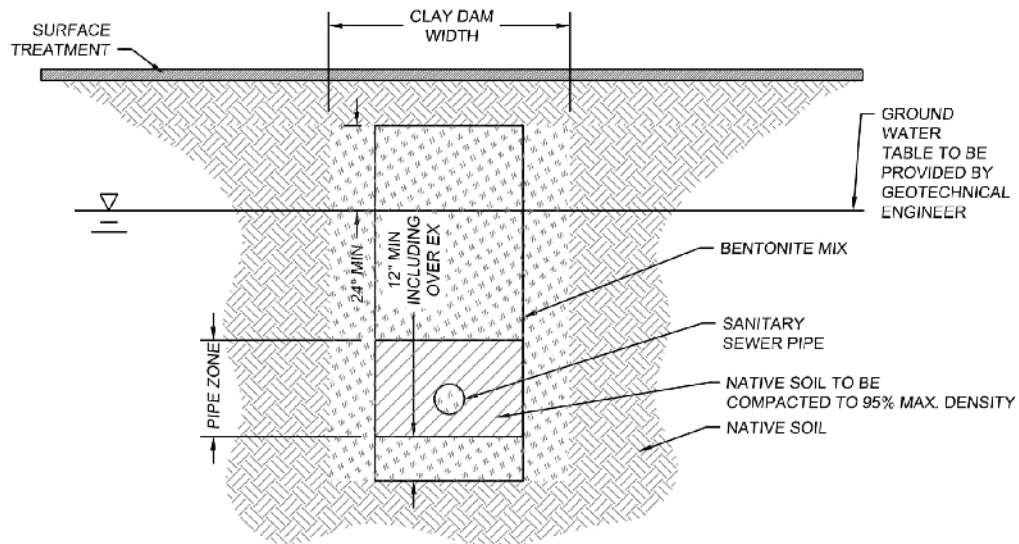
Reference No: NWS-2023-613
 PURPOSE: Wetland Restoration
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 1300 Franklin St., Vancouver, WA 98660

Figure 16: Flow Control Structure
 Weir Detail

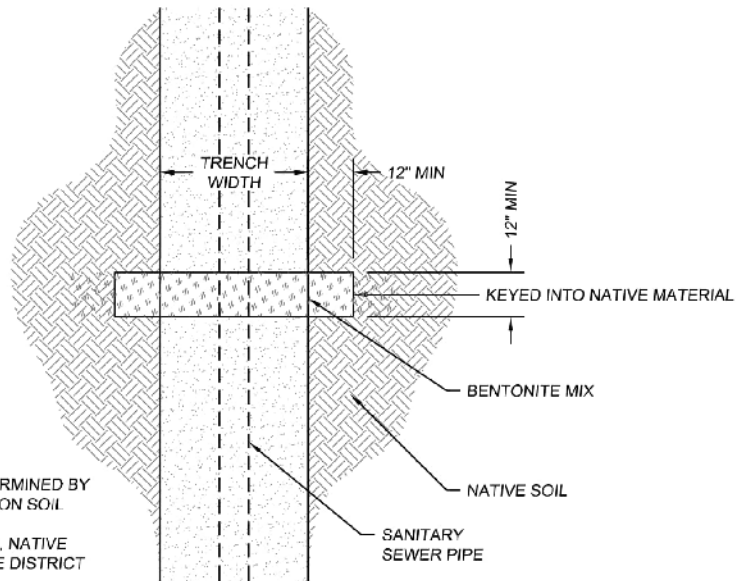


HERITAGE FARMS WETLAND RESTORATION
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SECTION VIEW



1. BENTONITE MIX RATIO TO BE DETERMINED BY A GEOTECHNICAL ENGINEER BASED ON SOIL CONDITIONS. SEE 7-08.3(3).
2. IF TRENCH IS NOT IN PUBLIC ROAD, NATIVE MATERIAL MAY BE APPROVED BY THE DISTRICT FOR USE IN LIEU OF BENTONITE.

PLAN VIEW

Reference No: NWS-2023-613
 PURPOSE: Wetland Restoration
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Figure 17: Clay Dam Detail



HERITAGE FARMS WETLAND RESTORATION
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 DATUM: NAD 1983 StatePlane WA
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Photo 1: Wetland "A" looking east



Photo 2: Wetland "A" (West) looking west



Photo 3: Wetland "A" (West) looking west



Photo 4: Ephemeral ditch connecting portions of Wetland A (West)



Photo 5: Western project boundary, looking north



Photo 6: Maintained uplands, looking east

Reference No: NWS-2023-613
 PURPOSE: Wetland Restoration
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Figure 18: Photo Sheet



HERITAGE FARMS WETLAND RESTORATION

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