3rd Review
P21-0099
Oct 2023

LEROY SURVEYORS AND ENGINEERS, INC.

Preliminary Drainage Report

For the Dos Lagos Lot 'B'
Parcel Number: 0419106025 & 0419106024
212 39th Ave SE
Puyallup, Washington

For

Dos Lagos Asset, LLC
810 E. Pico Blvd, Unit B24
Los Angeles, CA. 90021

By

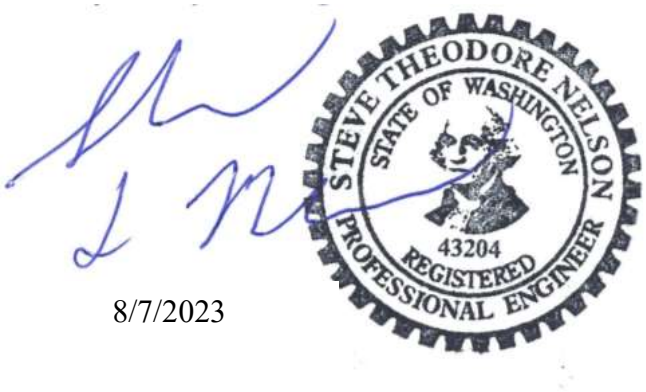
LeRoy Surveyors & Engineers, Inc.
P. O. Box 740
Puyallup, Washington 98371
(253) 848-6608

Contact: Steve T Nelson, P.E.

June 2021
Revised August 2023
Job No: 12896

CONDITIONS (At time of civil application):
1) As previously noted, parcels, 0419106025 and 0419106024 contain existing stormwater facilities serving Parcel 0419102095. Prior to civil application approval, the Dos Lagos project shall meet the following conditions:
-Any proposed site improvements shall be located outside of the existing stormwater facilities serving Parcel 0419102095 or the existing stormwater facilities shall be redesigned and reconstructed to provide equal or better performance.
-The applicant shall provide acknowledgement from the ownership of Parcel 0419102095 that any proposed site improvements do not interfere with the use and maintenance of the existing stormwater facilities serving Parcel 0419102095.
-The applicant shall execute and record a private stormwater access and maintenance easement in favor of Parcel 0419102095.
[CONDITION-Storm Report-Lot B; Pg 1 of 18]

I hereby state that this Preliminary Drainage Report for the Dos Lagos Lot 'B' has been prepared by me or under my supervision and meets the standard of care and expertise which is usual and customary in this community for professional engineers. I understand the City of Puyallup does not and will not assume liability for the sufficiency, suitability, or performance of drainage facilities prepared by me.



8/7/2023

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Section 1 – Proposed Project Overview

Project Name: Dos Lagos Lot 'B' Project

Permit Type: Civil Construction Permit

Permit No: P21-0099

Site Address: 212 39th Ave SE, Puyallup, WA 98373

Parcel Numbers: 0419106024 & 0419106025

Zoning: Urban Center Mixed-use Zone (UCX)
Mixed-use Design Review Overlay Zone (MX-DRO)

Per prior comment and at time of civil-Incorrect reference...should read P-18-0172 and 201912305002. [Storm Report-Lot B; Pg 4 of 18]

Legal Descriptions:

LOT 1 AND TRACT A OF CITY OF PUYALLUP SHORT PLAT NO. ~~P-18-0173~~, RECORDED UNDER RECORDING NO. ~~201912305003~~, IN PIERCE COUNTY, WASHINGTON.

The project proposes to construct an electric vehicle (EV) parking area consisting of approximately 6 spaces on 0.46 acres, located at the southeast corner of the intersection of 3rd Street SE and 39th Ave SE in Puyallup, Washington, 98374. Figure 1 illustrates the site parcel location within the local vicinity. Access to the site will be from public road 39th Ave SE. The project is connected to a predevelopment application (No. P-20-0088) and may require a completed SEPA checklist.

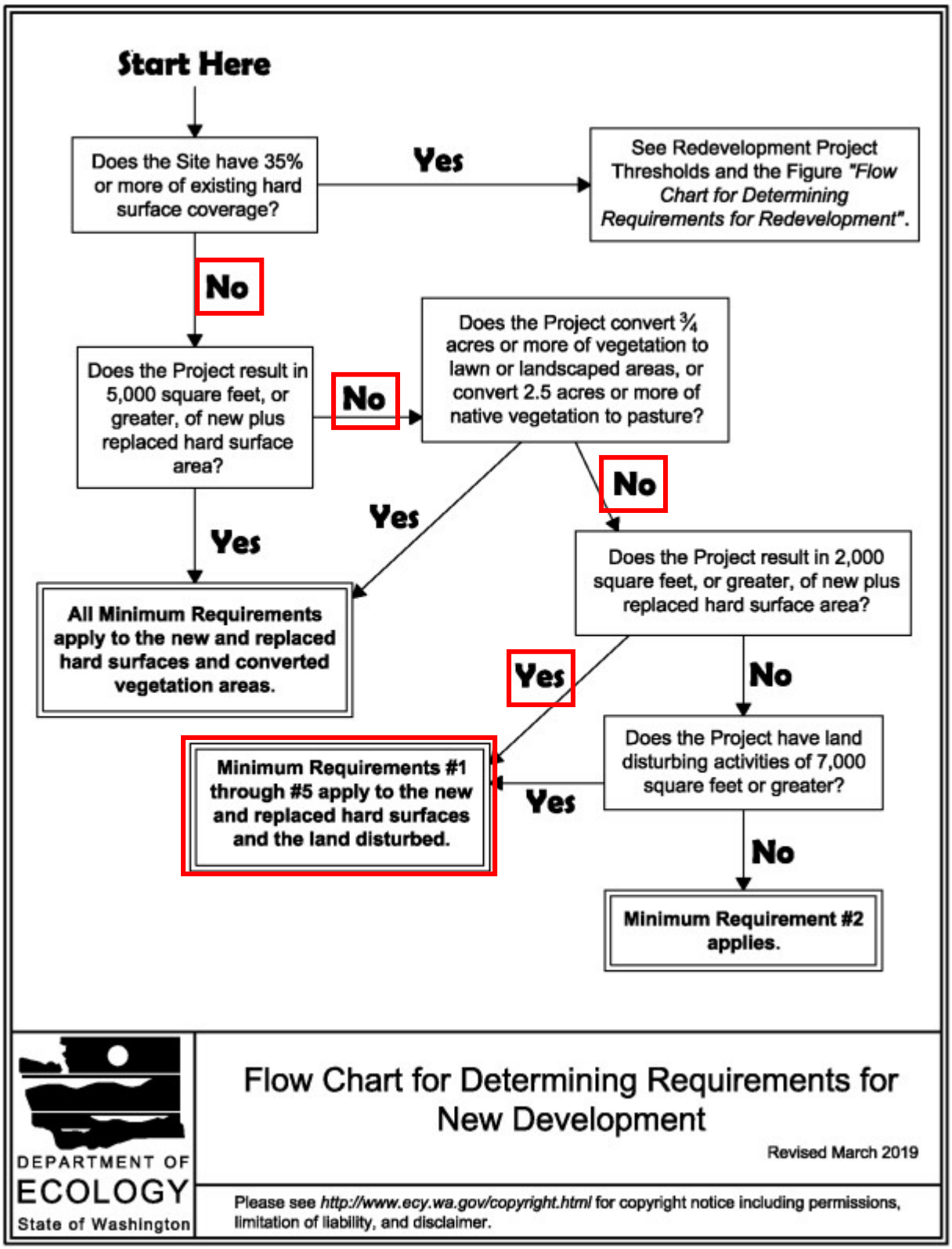
There is one drainage basin onsite (Threshold Discharge Area, TDA) in the existing and developed condition. See *Figure 2: Flow Chart for Determining Requirements for New Development.*

Figure 1: Site Vicinity Map

Minimum Requirements

The project shall comply with the requirements of the 2019 Stormwater Management Manual for Western Washington with amendments from City of Puyallup Municipal Code (PMC), Section 21.10. The Dos Lagos Lot 'B' project is a new development project and proposes to add impervious area in the form of vehicle parking, sidewalk, and drive lane. Less than 35% of the site consists of existing impervious coverage. Less than 5,000 sq. ft. of new impervious surfaces are proposed to be added and the proposed project converts less than 0.75 acres of vegetation to lawn or landscape areas. However, the project proposes more than 2,000 sq. ft. of new plus replaced hard surface area. Therefore, Minimum Requirements #1 to 5 apply. The Washington State Department of Ecology (DOE) flow chart, "Figure I-2.4.1 – Flow Chart for Determining Requirements for New Development," is found in Figure 2 on the following page.

Figure 2: Flow Chart for Determining Requirements for New Development



- Minimum Requirement #1: Preparation of Stormwater Site Plans
    - In accordance with Volume 1, Chapter 2, Sections 2.4.1 & 2.5.1 of the Manual, a Stormwater Site Plan is required. This plan will include this Drainage Report, a Stormwater Pollution Prevention Plan (SWPPP), an Operation and Maintenance Manual, and the Site Development Drawings.
- Minimum Requirement #2: Construction Stormwater Pollution Prevention (SWPP)
    - In accordance with Volume 1, Chapter 2, Section 2.5.2, Construction Stormwater Pollution Prevention is required for all projects which replace or add more than 2,000 sq. ft. of impervious surfaces or disturb more than 7,000 sq. ft. of land. A Construction Stormwater Pollution Prevention Plan (SWPPP) is prepared and included as part of the project stormwater site plans with a narrative report included as part of this Drainage Report (See SWPPP in Appendix). The following thirteen (13) elements will be addressed in the SWPP plans and in the narrative report:

        Element 1: Preserve Vegetation/Mark Clearing Limits
        Element 2: Establish Construction Access
        Element 3: Control Flow Rates
        Element 4: Install Sediment Controls
        Element 5: Stabilize Soils
        Element 6: Protect Slopes
        Element 7: Protect Drain Inlets
        Element 8: Stabilize Channels and Outlets
        Element 9: Control Pollutants
        Element 10: Control De-Watering
        Element 11: Maintain BMPs
        Element 12: Manage the Project
        Element 13: Protect Low Impact Development BMPs
- Minimum Requirement #3: Source Control of Pollution
    - The project proposes parking and charging stations for electric vehicles. There will also be additional improvements to widen the roadway and install a sidewalk to access the parking stalls. All known, available, and reasonable source control BMPs will be applied to the project. Applicable construction BMPs will be applied and discussed within the Construction SWPPP.
- Minimum Requirement #4: Preservation of Natural Drainage Systems and Outfalls
    - Under existing conditions stormwater runoff is conveyed to the wetland east of the site (see Drainage in Section 2, below). The project will maintain the natural and existing drainage patterns to the maximum extent possible.

- Minimum Requirement #5: On-Site Stormwater Management
    - Over 2,000 sq ft of new and replaced hard surfaces will be created, triggering On-Site Stormwater Management requirements. In accordance with Section 1.2.5.5 of the Manual, projects are required to employ On-site Stormwater Management BMPs to infiltrate, disperse, and retain stormwater runoff on-site to the extent feasible without causing flooding or erosion impacts. This project triggers Minimum Requirements #1-5. The project chooses to utilize List #1. For each surface type, the BMPs were considered in the order listed for that type of surface. The first BMP considered feasible was used:
    - Lawn and Landscaped Area: Use Post-Construction Soil Quality and Depth in accordance with BMP T5.13: Post-Construction Soil Quality and Depth
    - Roofs:
        - **This section is not applicable, as no roof areas are proposed as part of this development.**
    - Other Hard Surfaces:
        - Full Dispersion in accordance with BMP T5.30: Full Dispersion: **is infeasible due to there being insufficient space on-site to implement.**
        - Permeable pavement1 in accordance with BMP T5.15: Permeable Pavements, or Rain Gardens in accordance with BMP T5.14A: Rain Gardens, or Bioretention in accordance with BMP T7.30: Bioretention Cells, Swales, and Planter Boxes. The rain garden or bioretention facility must have a minimum horizontal projected surface area below the overflow which is at least 5% of the area draining to it: **Permeable pavement is infeasible due to there not being sufficient infiltrative soils on-site (per site Geologist). Additionally, there is not sufficient space on-site to implement a new bioretention system or rain garden.**
        - Sheet Flow Dispersion in accordance with BMP T5.12: Sheet Flow Dispersion, or Concentrated Flow Dispersion in accordance with BMP T5.11: Concentrated Flow Dispersion: **Sheet Flow Dispersion is deemed feasible for this project. The new parking area will sheetflow to a gravel trench which will disperse any runoff.**

Section 2 – Existing Conditions Summary

Topography

Topographically, the site is variably sloped. A detention facility and stormwater controls serving parcel #0419102095 occupy the western portion of the site. The central portion of the site is characterized by a small knoll, approximately 4 feet in height. The detention facility outlet and riser are located within this knoll, allowing stormwater to be conveyed through the on-site Biofiltration swale, situated on the eastern portion of the site, before draining into the adjacent wetland east of the site.

Ground Cover

As stated above in 'Topography,' a large portion of the site is made up of shallow depressions, most likely manmade, and used for off-site drainage. The western portion of the site is partially treed, with grasses and blackberries as understory. The remainder of the site is covered by grass and blackberries.

Drainage

Parking lot drainage originating from the businesses found just to the west of the site (parcel #0419102095) flows onto the western portion of parcel 0419106025 (Tract A) and into an existing detention facility. After exiting the detention facility, stormwater is conveyed through a Biofiltration swale, situated on the eastern portion of the site. A culvert conveys the stormwater under 3rd St SE and into the wetland east of the site.

The remainder of the site is paved as 3rd St SE. Runoff sheetflows off and disperses into the previously identified detention facility and Biofiltration Swale.

The site is in the aquifer recharge area. It is also within a 10-year wellhead protection area.

Per prior comment and at time of civil application-Add: "to the East, and an east-west private drive along the south property line of the parcels." [Storm Report-Lot B; Pg 9 of 18]

Section 3 – Off-Site Analysis Report

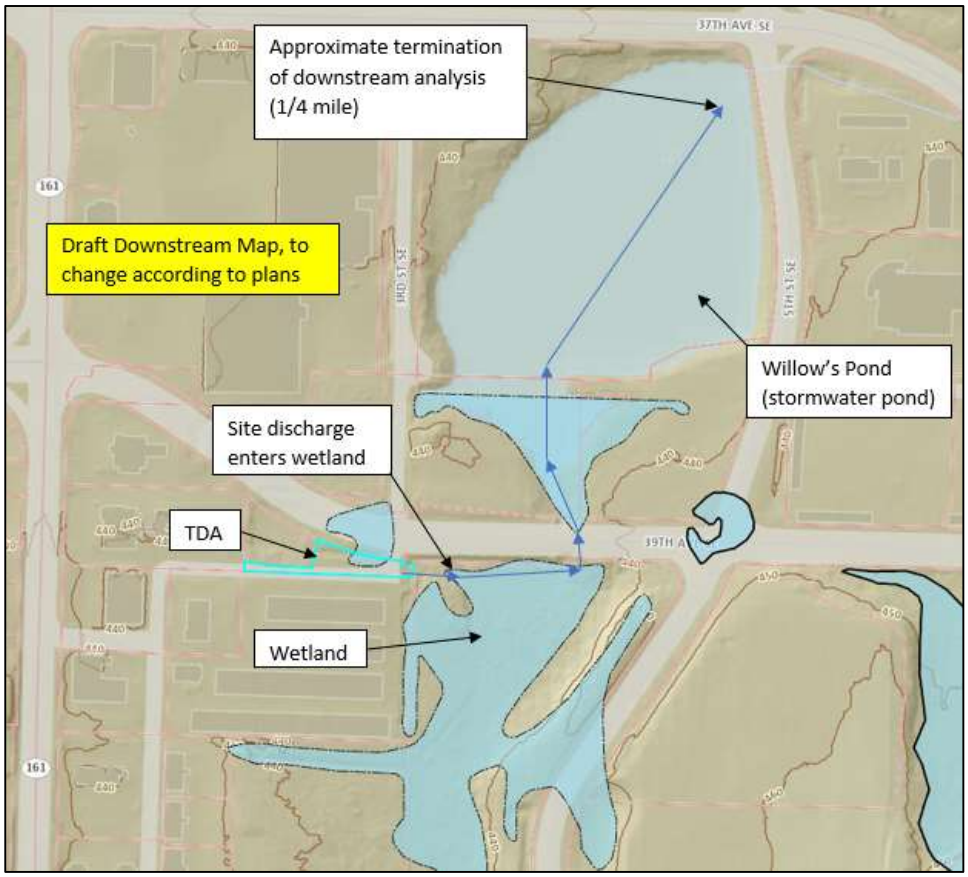
Upstream Analysis

Stormwater from the adjoining parcel (TPN 0419102095) is collected by various catch basins and conveyed onto the site via pipes.

Downstream Analysis

A downstream analysis has been completed for this project. An offsite analysis study area definition map (Figure 3) is shown below. The study area for this project extends approximately ¼ mile to the northwest portion of the water body known as Willow's Pond. This pond eventually drains into Bradley Lake, then downstream for an unspecified distance.

Figure 3: Downstream Analysis Map



Section 4 – Flow Control and Water Quality Facility Analysis and Design

Part A – Existing Site Hydrology

This project site is located in northwestern Pierce County at 212 39th Ave SE in the city of Puyallup. The site parcel comprises approximately 0.46 acres. The site currently contains a detention facility and Biofiltration swale, which outlets into a wetland east of the site. The remainder of the site is paved as 3rd St SE, and sheetflows north into the previously identified detention facility and Biofiltration Swale.

Part B – Developed Site Hydrology

The project proposes the following new or replaced hard surfaces.

Post Developed New + Replaced Hard Surfaces

Actual Surface Description	Area (SF)
Parking Lot Area	1,118 SF (0.026 AC)
Sidewalk	498 SF (0.011 AC)
Wall	45 SF (0.001 AC)
Pavement to Widen 3rd St SE	620 SF (0.014 AC)
Replaced Sidewalk across Access	270 SF (0.006 AC)
Total New + Replaced Hard Surfaces	**2,551 SF (0.059 AC)**

The proposed parking and sidewalk areas will be graded to sheetflow into a proposed gravel trench which will disperse any runoff. Pavement from the widening of 3rd St SE will continue to sheetflow and disperse into the previously identified detention facility and biofiltration swale. The existing biofiltration swale will be re-aligned so that it is not affected by the installation of the parking lot.

Section 5 – Special Reports and Studies

- There are no special reports or studies that are included with this submittal.

Section 6 – Other Permits

- A SEPA Environmental Checklist will be required.

Appendix A

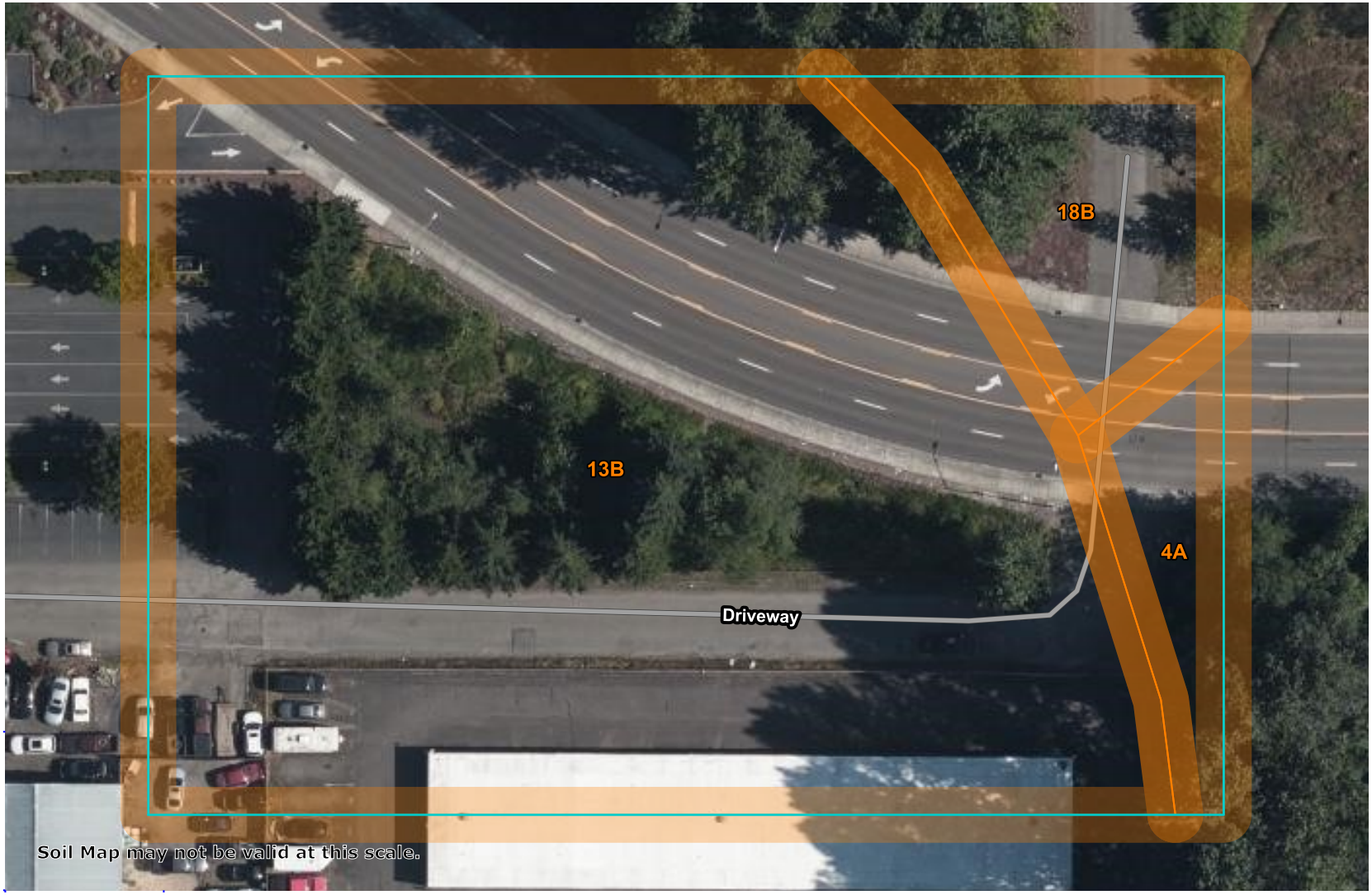
Stormwater Pollution Prevention Plan (SWPPP)

***SWPPP to be included in formal report**

Appendix B

NRCS Soil Map

122° 17' 30" W
122° 17' 23" W
47° 9' 15" N
47° 9' 12" N



Map Scale: 1:651 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 30 60 120 180

Map projection: Web Mercator Corner coordinates: WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Pierce County Area, Washington
Survey Area Data: Version 16, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 29, 2018—Jul 22, 2019

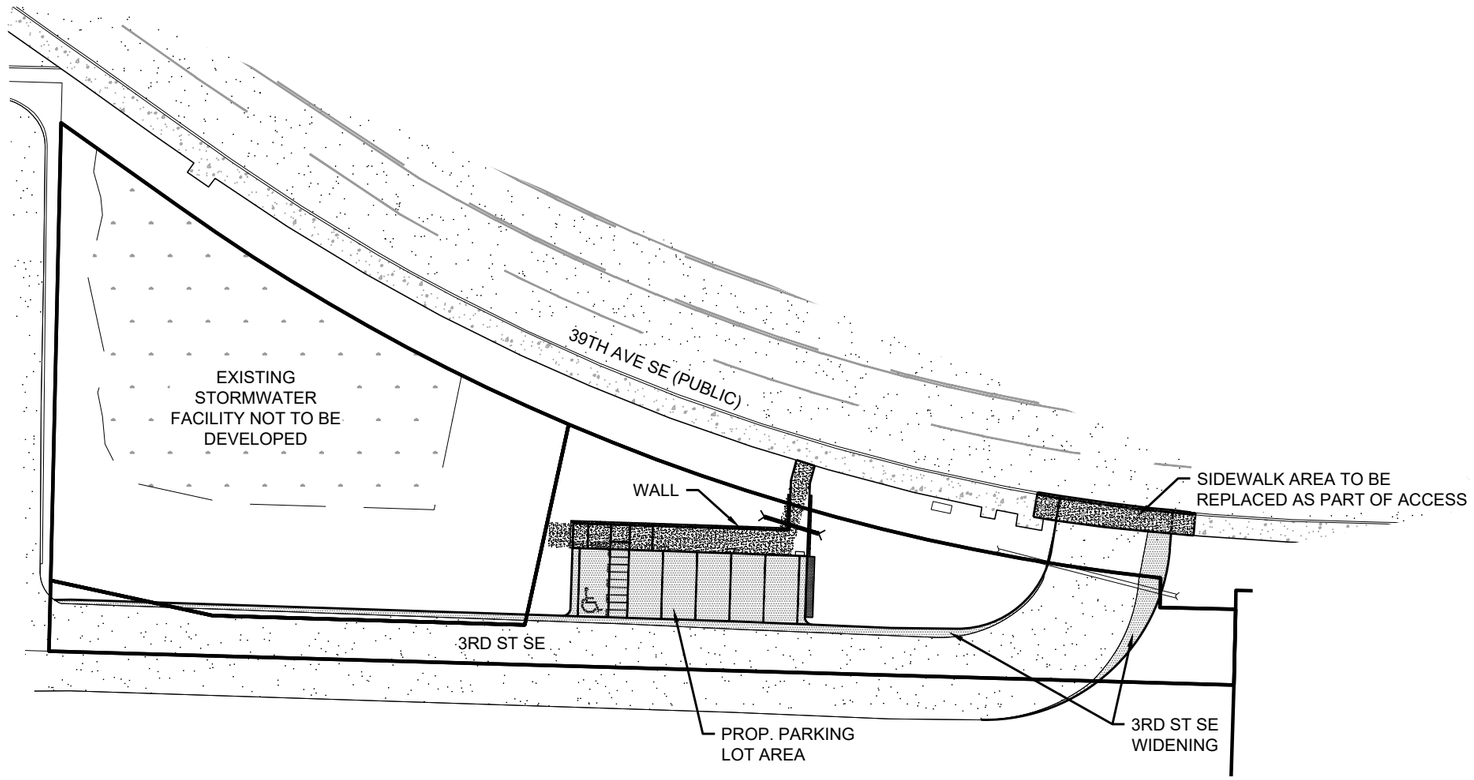
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4A	Bellingham silty clay loam	0.1	5.3%
13B	Everett very gravelly sandy loam, 0 to 8 percent slopes	1.8	84.0%
18B	Indianola loamy sand, 0 to 5 percent slopes	0.2	10.7%
Totals for Area of Interest		**2.1**	**100.0%**

Appendix C

Basin Map



PREDEVELOPED BASIN AREAS:

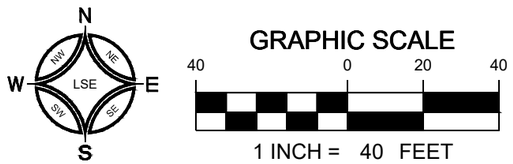
TOTAL PROJECT AREA: 2,551 SF (0.059 AC)

HISTORIC	
TILL FOREST	2,551 SF (0.586 AC)

DEVELOPED BASIN AREAS:

TOTAL PROJECT AREA: 2,551 SF (0.059 AC)

ON-SITE PROPOSED	
PARKING LOT AREA	1,118 SF (0.026 AC)
SIDEWALK	498 SF (0.011 AC)
WALL	45 SF (0.001 AC)
PAVEMENT TO WIDEN 3RD ST SE	620 SF (0.014 AC)
SIDEWALK AREA REPLACED ACROSS ACCESS	270 SF (0.006 AC)



DEVELOPED BASIN MAP - LOT B

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PARCEL NO. 0419106024 AND 0419106025	DATE: 8/1/23	JOB NO. 12896

SHEET

8-1-23