WESTLAKE CONSULTANTS

Planning | Engineering | Surveying

July 23, 2026

Mr. Darren Wyss
Principal Planner
City of West Linn Planning
22500 Salamo Road
West Linn, OR 97068

Via email: dwyss@westlinnoregon.gov

RE: Request for Additional Information - Completeness of Application
Parking Facility -- DR-26-01/WAP-26-01

Dear Darren,

This letter and the enclosed materials are submitted in response to your incompleteness letter dated March 26, 2026, requesting additional information in order to deem application DR-26-01/WAP-26-01 Parking Facility Design Review/WRA Permit complete. These materials are submitted by the Applicant and Property Owner, Jordan Matin, to address items raised in your letter, and to supplement and update previously submitted application materials accordingly.

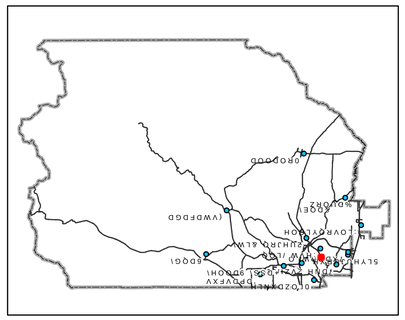
We appreciate your patience as Jordan retained additional subconsultants to complete and provide additional required analyses and reports, including Geotechnical and Lighting. With the results provided by the geotechnical analysis, the project team has updated the preliminary engineering plans, including a revised stormwater design. Also included was additional work completed by the Arborist and the Natural Resource Assessment Consultant to update their exhibits and reports, as needed. The submitted narrative has been revised to reflect these updates and to fully address applicable review criteria for this Design Review/WRA Permit application.

With submittal of this letter and enclosed (electronically submitted) revised materials, it is our expectation that this land use application will be deemed complete. We look forward to your confirmation of completeness.

Sincerely,

Westlake Consultants, Inc.

Kenneth L. Sandblast, AICP
Director of Planning



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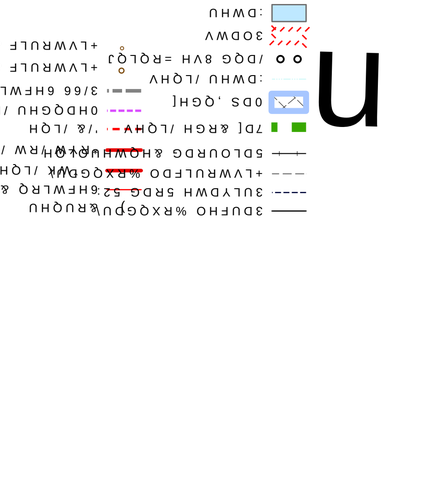

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CITY OF WEST LINN
PRE-APPLICATION CONFERENCE MEETING
SUMMARY NOTES
February 6, 2025

SUBJECT: Class II Design Review and Water Resource Area Permit.

FILE: PA-25-01

APPLICANTS PRESENT: Jordan Matin, Ken Sandblast (Westlake), Julia (Westlake)

STAFF PRESENT: Chris Myers, Associate Planner

PUBLIC PRESENT: None

These pre-application summary notes have been prepared for the applicant to identify applicable code sections and critical issues for the proposed application and summarize the application process and fees. Pre-Application summary notes are based on preliminary information and may not include all considerations. Contact the assigned planner for additional information regarding the process, approval criteria, submittal requirements, questions, and clarifications. Pre-Application Conference summary notes are valid for eighteen months from the meeting date. Once a complete application is submitted, the final decision can take 6-10 months.*

SITE INFORMATION:

Site Address:	18825 Willamette Drive
Tax Lot No.:	21E14DD6100
Site Area:	0.72 Acres
Neighborhood:	Robinwood Neighborhood Association
Comp. Plan:	Commercial
Zoning:	General Commercial
Zoning Overlays:	Riparian Corridor

PROJECT DESCRIPTION:

The applicant proposes the construction of a 24-space parking lot as well as the addition of two accessory structures.

APPLICABLE COMMUNITY DEVELOPMENT CODE SECTIONS:

Approval standards and criteria in effect when an application is *received* will be applied to the proposed development. The following Community Development Code (CDC) Chapters apply to this proposal:

- Chapter 19: General Commercial
  - 19.030 Permitted Uses
  - 19070 Dimensional Requirements, Uses Permitted Outright
  - 19.090 Other Applicable Development Standards
- Chapter 32: Water Resource Area Permit
  - 32.010 Purpose
  - 32.020 Applicability
  - 32.030 Prohibited Uses – See Table 32-1
  - 32.040 Exemptions
  - 32.050 Application (see 32.050.F.4)
  - 32.060 Approval Criteria (Standard Process) See Table 32-2 (required width of WRA)
  - 32.080 Approval Criteria (Alternate Review Process)
  - 32.090 Mitigation Plan
  - 32.100 Re-Vegetation Plan Requirements
- Chapter 46: Off-Street Parking, Loading, and Reservoir Areas
  - 46.010 Purpose
  - 16.020 Applicability and General Provisions

    - 46.030 Submittal Requirements
    - 46.040 Approval Standards
    - 46.060 Storage in Parking and Loading Areas Prohibited
    - 46.070 Maximum Distance Allowed Between Parking Area and Use (see 46.070.B.3 ADA)
    - 46.090 Off-Street Parking Space Requirements (Maximum Spaces) 3 spaces per 1000 square feet of leasable space. Current – 7000 leasable square feet = 21 allowed spaces. Site has 30 spaces.
    - 46.150 Design and Standards (see 46.150.A.1 Parking stall design standards) minimum of 8x16 "compact" and 9x18 standard size. 50% must be standard size.
        - See 46.150.B Accessible parking standards for persons with disabilities
        - See 46.150.D.2 and 3 Bicycle parking improvements and location. Check minimum required for office uses
        - 46.150.E Minimum standards for parking lot layout
        - 46.150.G New construction electric service
- Chapter 48: Access, Egress, and Circulation
- Chapter 54: Landscaping
- Chapter 55: Design Review
    - 55.070 Submittal Requirements
    - 55.090 Approval Standards – Class I Design Review
    - 55.100(B)(5) and (6)
    - 55.110 Site Analysis
    - 55.120 Site Plan
    - 55.140 Architectural Drawings
- Chapter 85: Land Divisions
    - 85.010 Purpose
    - 85.150 Application – Tentative Plan
    - 85.210 Property Line Adjustments – Approval Standards (Lot Consolidation)
- Chapter 99: Procedures for Decision Making: Quasi-Judicial

KEY ISSUES & CONSIDERATIONS

Staff has identified the following development issues, design considerations, or procedural issues that you should be aware of as you prepare your formal application for submittal. The identification of these issues or considerations here does not preclude the future identification of additional issues or considerations:

1. Accessory structures must be located on properties that have a principal use. In this case the proposed location of the two accessory structures is an undeveloped parcel. A lot consolidation will be needed.
2. In order to construct anything within the Riparian Corridor the applicant must obtain a report from a certified engineering firm (Geo Tech) to show that shrinking the 100-foot buffer from the water resource will not impact the habitat of the water resource.
3. CDC Chapter 46.090 off-street parking space requirements. Maximum parking numbers for General Office are 3 spaces per 1000 square feet of leasable space. Subject property has 7000 leasable square feet for a total maximum parking spaces of 21. Subject property currently has 30 parking spaces. No further parking will be allowed.

RESPONSE TO APPLICANT QUESTIONS:

None.

ENGINEERING:

The Engineering department comments are attached. For further details, contact Clark Ida at 503-722-3437 or Cide@westlinnoregon.gov.

BUILDING:
For building code and ADA questions, contact Adam Bernert at abernert@westlinnoregon.gov or 503-742-6054 or Alisha Bloomfield at abloomfield@westlinnoregon.gov or 503-742-6053.

TUALATIN VALLEY FIRE & RESCUE:
A Service Provider Permit must be provided with this application - https://www.tvfr.com/399/Service-Provider-Permit. Contact Jason Arn at jason.arn@tvfr.com or 503-259-1510 with any questions.

TREES:
For information on the tree requirements for this proposal, contact the Mike Perkins, City Arborist at Mperkins@westlinnoregon.gov or 503-722-4728.

PROCESS:
A Class II Design Review and a Water Resource Area Permit are a Planning Director's decision. No public hearing is required. Once the application is declared complete, staff will review the application, send a 20-day public comment notice, and post a notice sign on the property. When the public comment period closes, the Planning Director will prepare a decision. A final decision can take 6-10 months.

There is a 14-day appeal period after the decision. If the decision is not appealed, the applicant may proceed with the development.

NEIGHBORHOOD MEETING:
A neighborhood meeting is not required for a Class II Design Review.

HOW TO SUBMIT AN APPLICATION:
Submit a complete application in a single PDF document through the Submit a Land Use Application web portal. A complete application should include:

1. A development application;
2. Application materials identified in the Development Review Checklist.

COMPLIANCE NARRATIVE:
Written responses supported by substantial evidence must address all applicable approval standards and criteria. Written materials must explain how and why the proposed application will meet each applicable approval criteria. "Not Applicable" is not an acceptable response to the approval criteria.

Submittal requirements may be waived, but the applicant must first identify the specific submittal requirement and request, in writing, that the Planning Manager waive the requirement. The applicant must identify the specific grounds for the waiver. The Planning Manager will respond with a written determination about the waiver request before applying.

APPLICATION FEES & DEPOSITS:
The Planning Division Fee Schedule can be found on our website: https://westlinnoregon.gov/finance/current-fee-schedule

- Fee for a Class II Design Review = $4,500 + $500 Inspection Fee
- Fee for a Water Resource Area Permit = $2,850

Applications with deposits will be billed monthly for time and materials. Please provide the name and address of the party responsible for the final invoice in your application.

Timelines:
Once the application and payment are received, the City has 30 days to determine if the application is complete. If the application is incomplete, the applicant has 180 days to complete it or provide written notice to staff that no other information will be provided. Once complete, the City has 120 days from the completeness determination

to make a final decision on the application. Typical land use applications can take 6-10 months from beginning to end.

*** DISCLAIMER:** *These pre-application notes have been prepared per CDC Section 99.030.B.7. The information provided is an overview of the proposal considerations and requirements. Staff responses are based on limited material presented at the pre-application conference. New issues and requirements can emerge as the application is developed. Failure to provide information does not constitute a waiver of the applicable standards or requirements. The applicant has the burden of proof to demonstrate that all approval criteria have been satisfied. These notes do not constitute an endorsement of the proposed application or assure project approval.*

PRELIMINARY PLANS FOR

MATIN PARKING FACILITY

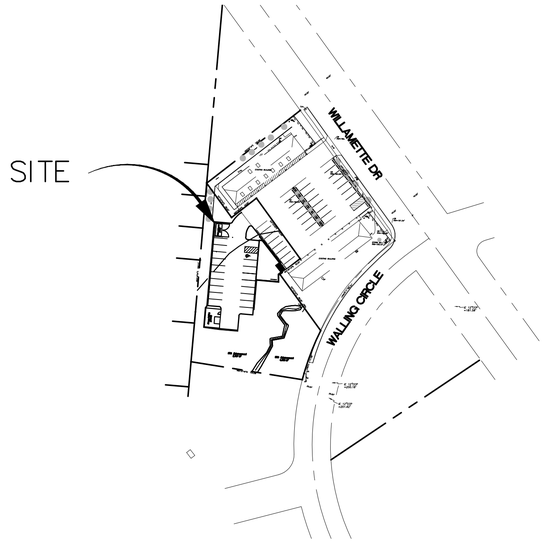
WEST LINN, OREGON

VICINITY MAP

NOT TO SCALE

SHEET INDEX

P100	COVER SHEET
P200	EXISTING CONDITIONS
P300	SITE PLAN
P301	NEIGHBORHOOD SITE PLAN
P400	GRADING PLAN
P401	RETAINING WALL ELEVATIONS
P500	COMPOSITE UTILITY PLAN
P600	CONSTRUCTION MANAGEMENT PLAN
P700	LANDSCAPING PLAN



LOCATION MAP

SCALE: 1"=100'

ATTENTION:

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503) 232-1987).

UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN ARE PER FIELD MARKINGS AND RECORD DRAWINGS PROVIDED BY THE RESPECTIVE UTILITY AGENCIES. LOCATION OF NON-OBSERVABLE AND/OR UNDERGROUND UTILITIES ARE SHOWN FOR INFORMATION ONLY AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE.

UTILITY VERIFICATION:

CONTRACTOR SHALL POTHOLE TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION AND SHALL PROVIDE WESTLAKE CONSULTANTS, INC. 72-HOURS NOTICE OF ANY POTENTIAL CONFLICTS.

ORS UTILITY STATEMENT

THIS DESIGN COMPLIES WITH ORS 92.044 (7) IN THAT NO UTILITY INFRASTRUCTURE IS DESIGNED TO BE WITHIN ONE (1) FOOT OF A SURVEY MONUMENT LOCATION SHOWN ON A SUBDIVISION OR PARTITION PLAT. NO DESIGN EXCEPTIONS NOR FINAL FIELD LOCATION CHANGES SHALL BE PERMITTED IF THAT CHANGE WOULD CAUSE ANY UTILITY INFRASTRUCTURE TO BE PLACED WITHIN THE PROHIBITED AREA.

SHEET SET SIZE

THESE PLANS ARE FULL SIZE WHEN PRINTED ON 34"X22" PAPER. SCALE ACCORDINGLY IF PRINTED ON 17"X11" PAPER WITH A FACTOR OF 2.

811 Know what's **below.** **Call** before you dig.

PROPERTY DESCRIPTION

TAX MAP & TL:
TAX MAP 2 1E 14DD, TAX LOT 6100

SITE SIZE:
0.72 ACRES

PROPOSAL:
PARKING LOT

STREET ADDRESS

ADJACENT TO
18825 WILLAMETTE DR
WEST LINN, OR 97068

APPLICANT/OWNER

JORDAN MATIN
18825 WILLAMETTE DR
WEST LINN, OR 97068
PHONE-971-285-2180
EMAIL: JMATIN@MATINREALESTATE.COM

ENGINEER

WESTLAKE CONSULTANTS, INC.
PACIFIC CORPORATE CENTER
15115 S.W. SEQUOIA PARKWAY,
SUITE 150 TIGARD, OREGON 97224
PHONE: (503) 684-0652
CONTACT: DANIEL BAILEY, PE
EMAIL: DBAILEY@WESTLAKECONSULTANTS.COM

ENVIRONMENTAL CONSULTANT

SCHOTT & ASSOCIATES, INC.
PHONE: (503) 678-6007
CONTACT: JODI FORGIONE, PWS GE
OWNER, WETLAND ECOLOGIST
PO BOX 589
AURORA, OREGON 97002

DRAWING NAME: J:\3038-001 24\6. ENGINEERING\3. CAD\PRODUCTION\1. LU\3038-001 P100 COVER SHEET.DWG 2026/07/17 - 02:55PM - JDM

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MATIN PARKING FACILITY
WEST LINN, OR
COVER SHEET

PRELIMINARY

THESE DRAWINGS ARE THE PROPERTY OF WESTLAKE CONSULTANTS INC. (WCI) AND ARE NOT TO BE REPRODUCED IN ANY MANNER EXCEPT WITH THE WRITTEN PERMISSION OF WCI

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1	7/9/2026	COMPLETENESS LETTER REDLINES	JDM	CMH

SHEET
P100

JOB NO.
3038-001

LEGEND

- EXISTING DECIDUOUS TREE W/ TRUNK DIAMETER (INCHES)(CL=CLUSTER)
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING UNDERGROUND STORM LINE
- EXISTING UNDERGROUND SANITARY SEWER LINE
- EXISTING SANITARY MANHOLE
- EXISTING CATCH BASIN
- EXISTING FENCE
- FOUND MONUMENTS

SCALE: 1 INCH = 20 FEET

20' 0 10' 20' 40'

REVISIONS				
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PRELIMINARY

MATIN PARKING FACILITY

WEST LINN, OR

EXISTING CONDITIONS AND DEMOLITION

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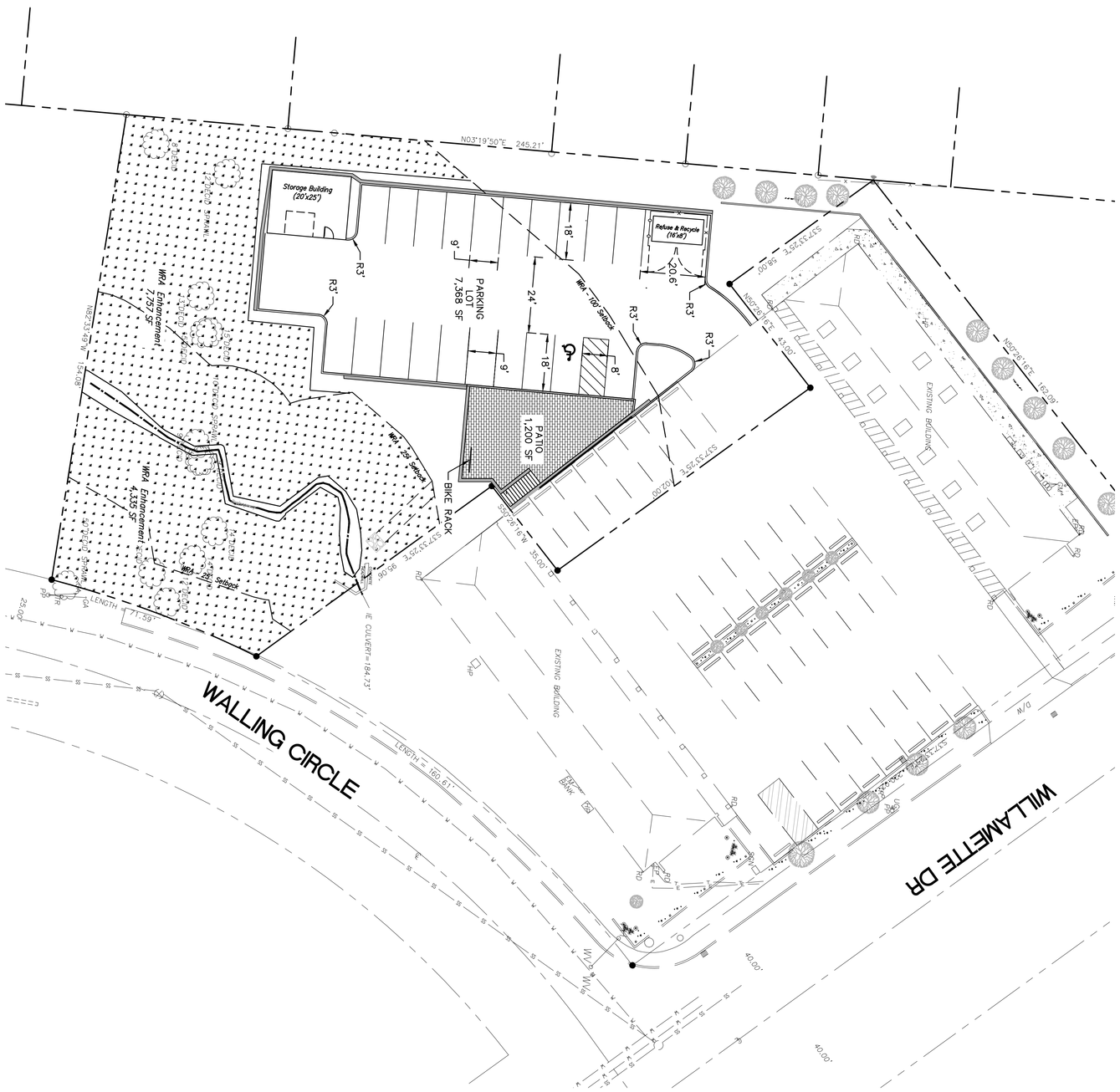
JOB NO. 3038-001

SHEET P200



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PRELIMINARY

MATIN PARKING FACILITY

WEST LINN, OR

SITE PLAN

WESTLAKE CONSULTANTS

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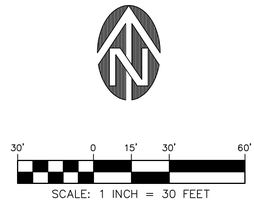
SHEET P300

JOB NO. 3038-001



LEGEND

- EXISTING LOT LINE
- 188 EXISTING CONTOUR – 2' INTERVAL
- 190 EXISTING CONTOUR – 10' INTERVAL
- 188 PROPOSED CONTOUR – 2' INTERVAL
- **190** PROPOSED CONTOUR – 10' INTERVAL
- DRAINAGE FLOW DIRECTION (PAVED)
- DRAINAGE FLOW DIRECTION (UNPAVED)
- WATER RESOURCE AREA (WRA) SETBACK
- ENHANCEMENT AREA

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MATIN PARKING FACILITY

WEST LINN, OR

NEIGHBORHOOD SITE PLAN

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P301

JOB NO.
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LEGEND

- EXISTING CONTOUR – 1' INTERVAL
- EXISTING CONTOUR – 5' INTERVAL
- PROPOSED CONTOUR – 1' INTERVAL
- PROPOSED CONTOUR – 5' INTERVAL
- RETAINING WALL
- DRAINAGE FLOW DIRECTION (PAVED)
- DRAINAGE FLOW DIRECTION (UNPAVED)

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MATIN PARKING FACILITY

WEST LINN, OR

GRADING PLAN

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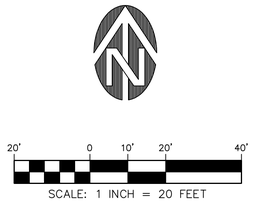
SITE PLAN VIEW

SCALE: 1"=20'



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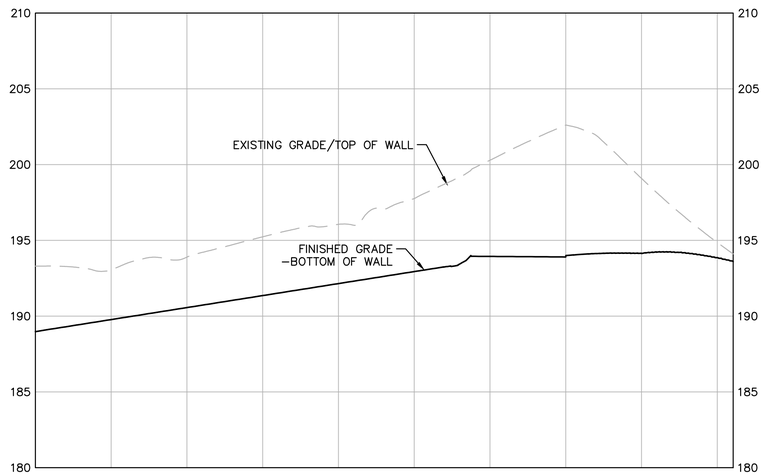
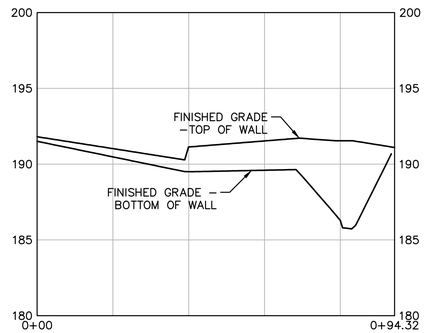


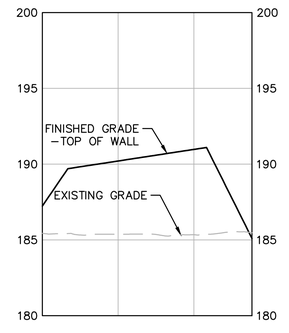
WEST WALL PROFILE

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'



SOUTHEAST WALL PROFILE

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'



NORTHEAST WALL PROFILE

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'

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WEST LINN, OR

RETAINING WALL ELEVATIONS

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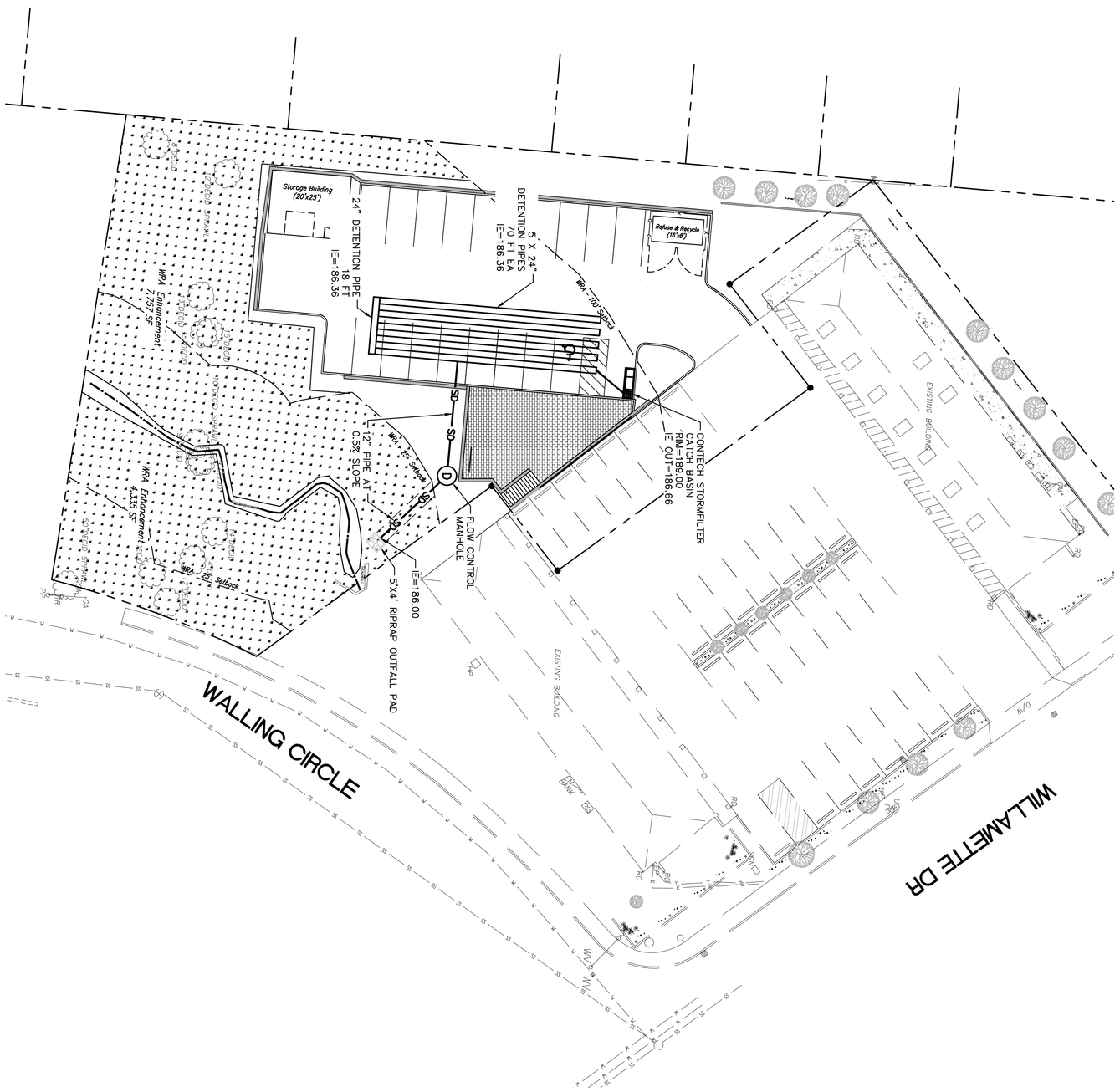
P401

JOB NO.
3038-001



LEGEND

- PROPOSED SANITARY LATERAL
- PROPOSED STORM MAIN
- PROPOSED MANHOLE
- PROPOSED STORMFILTER CATCH BASIN

SCALE: 1 INCH = 20 FEET

REVISIONS				
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WEST LINN, OR

COMPOSITE UTILITY PLAN

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SHEET P500

JOB NO. 3038-001

20' 0 10' 20' 40'

SCALE: 1 INCH = 20 FEET

LEGEND

- EXISTING CONTOUR – 1' INTERVAL
- EXISTING CONTOUR – 5' INTERVAL
- PROPOSED CONTOUR – 1' INTERVAL
- PROPOSED CONTOUR – 5' INTERVAL
- RETAINING WALL
- DRAINAGE FLOW DIRECTION (PAVED)
- DRAINAGE FLOW DIRECTION (UNPAVED)
- CHAIN LINK FENCE

EROSION CONTROL LEGEND

- SEDIMENT FENCE
- STOCKPILE/STORAGE FENCE
- GRAVEL CONSTRUCTION ENTRANCE
- CONSTRUCTION PARKING AND VEHICLE STORAGE

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MATIN PARKING FACILITY

WEST LINN, OR

CONSTRUCTION MANAGEMENT PLAN

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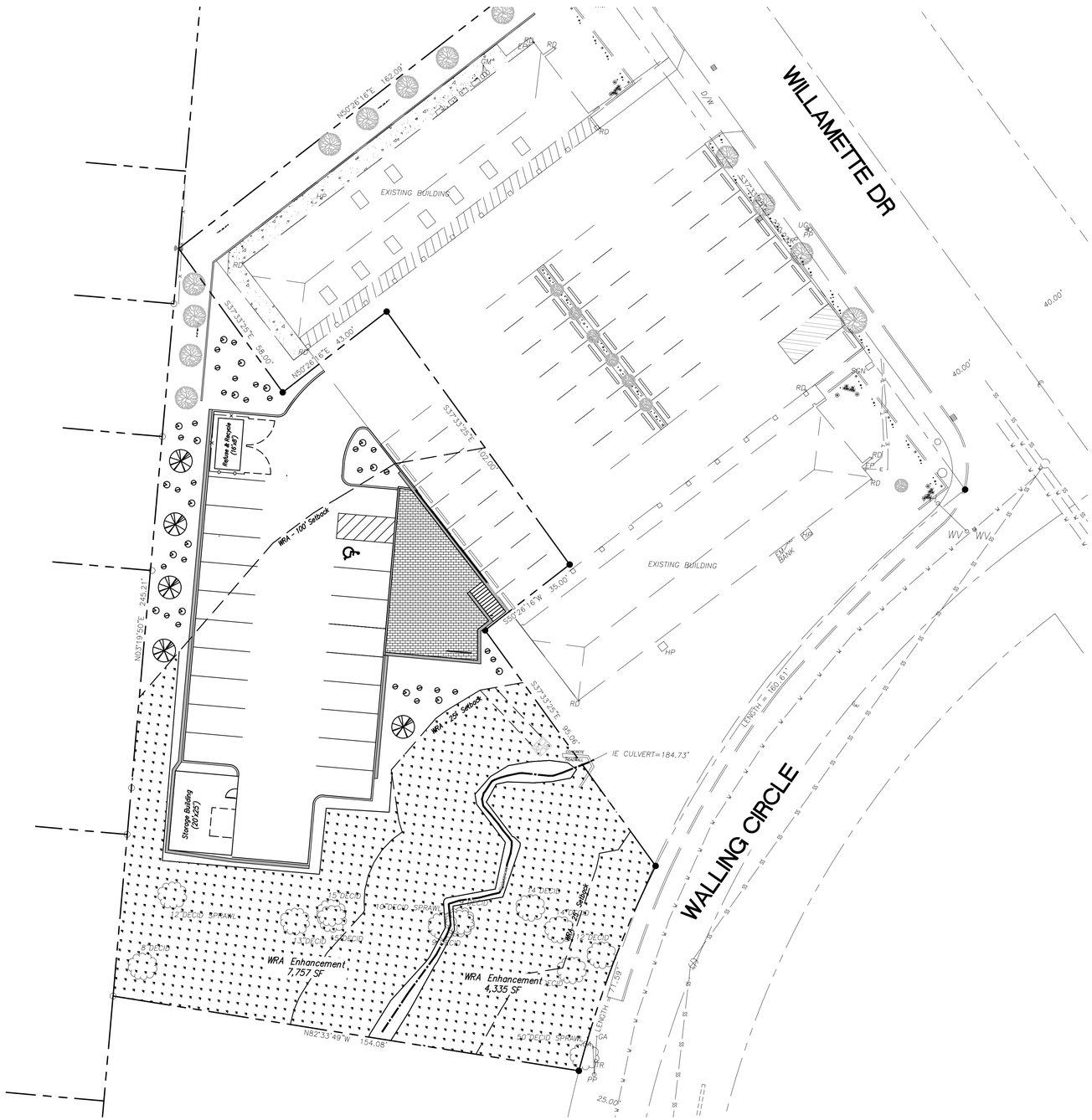
1	7/9/2026	COMPLETENESS LETTER REDLINES	JDM	CMH

SHEET
P600

JOB NO.
3038–001

DRAWING NAME: z:\3038-001.24\6. ENGINEERING\3. CAD\PRODUCTION\1. LU\3038-001 P600 CONSTRUCTION MANAGEMENT PLAN.DWG 2026/07/17 – 02:55PM – JDM



20' 0 10' 20' 40'

SCALE: 1 INCH = 20 FEET

LEGEND

- EXISTING PACIFIC DOGWOOD
- PACIFIC DOGWOOD – 5 NEW TREES
- 1–GAL CALIFORNIA FESCUE – FESTUCA CALIFORNIA
- 5–GAL TUFFED HAIRGRASS – DESCHAMPSIA CESPITOSA

GENERAL NOTES

1. TREES TO BE SPACED AS APPROPRIATE TO THE SPECIES, NOT TO EXCEED 30' APART ON AVERAGE.
2. SHRUBS TO BE SPACED NO MORE THAN 5' APART ON AVERAGE.
3. VEGETATIVE GROUNDCOVER WILL INCLUDE GRASSES AND OTHER LANDSCAPE MATERIAL.
4. LANDSCAPING TO BE MAINTAINED FOR VISION CLEARANCE.

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WEST LINN, OR

LANDSCAPING PLAN

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SHEET
P700

JOB NO.
3038–001

DRAWING NAME: J:\3038-001.24\6. ENGINEERING\3. CAD\PRODUCTION\1. LU\3038-001 P700 LANDSCAPE PLAN.DWG 2026/07/17 – 02:55PM – JDM

Schott & Associates
Ecologists & Wetland Specialists
P.O. Box 589 | Aurora, OR 97002 | (503) 678-6007

NATURAL RESOURCE ASSESSMENT
Within
Water Resource Area (WRA)

Willamette Drive Project Site

18825 Willamette Drive
T1N, R1E, Section 14DD, Tax Lot 6100
West Linn, Clackamas County, Oregon

Prepared for

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Date:

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Introduction

Schott & Associates (S&A) was contracted to conduct a wetland delineation and natural resource assessment report for the 0.73-acre project site located at the address of 18825 Willamette Drive, West Linn, Clackamas County, Oregon (T1N, R1E, Section 14DD, Tax Lot 6100; Figure 1). Wetland delineation has been completed and concurred with by DSL (WD#2024-0526; Appendix A). This subject property contains zoning overlays including Water Resource Area (WRA; Figure 4) and Habitat Conservation Area (HCA; Figure 5) and is subject to the regulations of West Linn Community Development Code (CDC) Chapter 32. The purpose of this report is to document existing water resources and existing and proposed conditions of the WRA setback to gain approvals for WRA permit. Any other required assessments including arborist reports, geologic surveys, or construction management plan are outside the scope of this assessment and will be provided, as needed, by others.

All work on this project has been completed by qualified natural resource specialists. Onsite assessment was conducted by Jodi Forgione, principal of S&A, a wetland and wildlife ecologist with over 10 years' experience in conducting natural resource assessments. The project management and reporting were completed by Juniper Tagliabue, a senior wetland ecologist with over 20 years' experience conducting natural resource assessments and permitting.

Site Description and Land Use

The mostly undeveloped study site consisted primarily of a forested hillslope extending down to an intermittent tributary to the Willamette River. To the north and extending offsite was a parking lot. The eastern portion of the site consisted of a hillslope up to South Walling Circle which defined the eastern study site boundary. The tributary flowed northeast through the bottom of a well-defined channel, exiting via a drain grate in the northeast part of the site. Wetland delineation conducted onsite by S&A documented jurisdictional OHWM boundaries of the onsite water resource and was concurred with by DSL (WD#2024-0526; Jan. 2, 2025).

Vegetation onsite was dominated by a mix of black cottonwood (*Populus balsamifera*) and sweet cherry (*Prunus avium*) trees with a few western red cedar (*Thuja plicata*) and Oregon oak (*Quercus garryana*). Himalayan blackberry (*Rubus armeniacus*) as well as Japanese knotweed (*Fallopia japonica*) and English ivy (*Hedera helix*) were dominant in the understory and climbing into the tree canopy. Vegetation surrounding the stream was predominantly blackberry thicket.

West Linn WRA mapping shows a stream in the southeast portion of the site and Significant Riparian Corridor extending 100' on either side of the stream boundary as per CDC Chapter 32. West Linn HCA mapping identifies both Moderate and Low HCA onsite corresponding with Metro 2005 Riparian Class II mapping. As per Chapter 28.020(A)3 HCAs are regulated "if all or any part of a lot or parcel is in the Willamette Greenway and Tualatin River Protection Area boundaries." This chapter does not apply to the study site. The onsite resource is regulated under Chapter 32 for Water Resource Areas. The property is located within General Commercial (GC) zoning as mapped by the city of West Linn. Surrounding land use was commercial to the north and east and residential to the west and south.

Project Objectives

The applicant proposes development of a parking facility, accessory storage building, and patio in the northwest portion of the site. The existing parking area would extend west and south, providing 21 standard parking spaces bound by a retaining wall to minimize impacts. The proposed patio is located east of the proposed parking area and south of the existing parking area overlooking the WRA. A storm line from the parking area to a manhole south of the patio is proposed, extending through the WRA to an outfall near the existing culvert outlet. All proposed development is outside the delineated waterway

within the mapped WRA. A WRA permit is required. The proposed development plan is provided in Appendix B.

The applicant requests approval under the Alternative Review Process per Section 32.080. In order to complete the parking lot development, the applicant proposes a reduced variable width WRA extending 25-100 feet west of the stream in the degraded WRA. No reduction is proposed east of the stream and the entire remaining WRA will be enhanced. This will maximize development potential of the property while maintaining the highest quality onsite resources.

Methods

While preparing this application site visit was conducted and the following existing data and information was reviewed:

- Clackamas County tax map (Figure 2)
- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) and West Linn Local Wetland Inventory (LWI)
- West Linn Water Resource Area (WRA) Map (Figure 4)
- West Linn HCA Map (Figure 5)
- Tree Survey (Figure 6)
- Oregon Department of Forestry (ODF) and Metro stream mapping
- U.S. Department of Agriculture (USDA) NRCS gridded Soil Survey Geographic (gSSURGO) database for Clackamas County
- Aerial photographs from the time period between 1994 and 2023, obtained from Google Earth
- Contours derived from the Oregon Department of Geology and Mineral Industries (DOGAMI, 2009)
- WD#2024-0526 and Concurrence (Appendix A)
- Site Plan prepared by Westlake Consultants (Appendix B)

Schott & Associates completed the initial fieldwork on September 7, 2023 and revisited the site on September 4, 2024. Delineation data were collected according to methods described in the *1987 Manual* and the *Regional Supplement to the Corps of Engineers Delineation Manual: Western Mountains, Valleys, and Coast (Version 2.0)*. Three sample plots were established to document site conditions and locate the boundaries of any wetlands. For each sample plot, data on vegetation, hydrology, and soils was collected, recorded in the field, and later transferred to data forms. Plant indicator status was determined using the 2022 National Wetland Plant List (Corps 2022). The onsite stream was delineated via the ordinary high-water mark (OHWM) as indicated by top of bank, wrack or scour lines, and change in vegetation communities.

Onsite waters were classified according to the USFWS *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979) and the *Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites* (DSL 2001). The delineation report was submitted to DSL and was approved in January, 2025.

Vegetation communities for mapped WRA were assessed in the field and documented by sample plots 1, 2, and 3 located within the delineation report. Data forms are located in Appendix B of the Delineation Report (Appendix A). Results are described below.

Ground level photographs were taken to document site conditions (See Appendix C of Delineation Report).

Results

One soil series was mapped within the study site boundary according to the USDA NRCS soil survey for Clackamas County: Cascade silt loam, 8 to 15 percent slopes, a non-hydric, somewhat poorly drained soil series.

LWI mapping does not identify any water resources onsite. NWI mapping shows a riverine intermittent streambed seasonally flooded (R4SBC) water corresponding approximately with the location of the onsite drainage. A stream and Significant Riparian Corridor were mapped by the City of West Linn as WRA area onsite.

Chapter 32 Water Resource Area

Protected Water Features

Based on soils, vegetation, hydrology, and ordinary high-water mark (OHWM) data gathered in the field, S&A identified one intermittent drainage in the southeastern portion of the study site. Drainage channel, sample plots, and photo point locations are shown in the delineation report (Appendix A; Figure 6).

The intermittent tributary (138 linear feet onsite) to the Willamette River was mapped flowing northeast through the eastern portion of the site, exiting via a drain grate near the northeast property corner. The banks of the stream were nearly vertical (approximately 2-3 feet) and clearly defined with five inches, or less, of slow to moderately flowing water observed at the time of both site visits. The maximum width onsite was seven feet. OHWM indicators were based on top of bank (at vertical embankments). The substrate was a mix of cobble/gravel and sand.

The stream was classified as a riverine flow through (RFT) HGM class and a riverine intermittent streambed seasonally flooded (RS4BC) Cowardin class.

Water Resource Areas (WRA)

As required by Table 32-2, the required width of the Riparian Corridor Water Resource Area extends 100 feet from the OHWM on each side of the water resource. A 100-foot buffer was assessed extending west and an approximately 40-foot buffer was assessed to the east, extending to S Walling Circle (Figure 3). As per CDC Section 32.050(F)(8) plant communities within the undisturbed WRA were identified and characterized. Adjacent riparian vegetation west of the stream consisted of predominantly Himalayan blackberry (FAC) and clematis (*Clematis ligusticifolia*; FAC) with horsetail (*Equisetum arvense*; FAC), Canada thistle (*Cirsium arvense*; FACU) and geranium (*Geranium robertianum*; FACU) in the herbaceous layer. Some vine maple (*Acer circinatum*, FAC), red osier dogwood (*Cornus sericea*, FACW), and cherry trees (FACU) were also observed.

Further upslope, the hillside was dominated by a forested canopy of black cottonwood (FAC) and sweet cherry trees with a few western red cedar (FAC) in the overstory. Himalayan blackberry, English ivy (FACU) and a patch of Japanese knotweed dominated the understory. Tree survey was completed by an arborist (Figure 6) and estimated canopy is included on Figure 3.

While tree canopy was primarily native, the shrub layer was dominated by invasive Himalayan blackberry and the herbaceous and vine layer ranged from 35-100% non-native or invasive. Non-native species cover was approximately 70% across the two lower strata.

East of the stream was predominantly bare ground and unmowed non-native grasses with blackberry thickets. The entire WRA was found to be in degraded condition.

Chapter 32 Approval Criteria

32.070 ALTERNATE REVIEW PROCESS

This section establishes a review and approval process that applicants can use when there is reason to believe that the width of the WRA prescribed under the standard process (CDC 32.060(D)) is larger than necessary to protect the functions of the water resource at a particular site. It allows a qualified professional to determine what water resources and associated functions (see Table 32-4 below) exist at a site and the WRA width that is needed to maintain those functions. (Ord. 1623 § 1, 2014)

32.080 APPROVAL CRITERIA (ALTERNATE REVIEW PROCESS)

Applications reviewed under the alternate review process shall meet the following approval criteria:

A. The proposed WRA shall be, at minimum, qualitatively equal, in terms of maintaining the level of functions allowed by the WRA standards of CDC 32.060(D).

Response: As described in this report, the existing WRA west of the drainage consists of a riparian corridor dominated by invasive Himalayan blackberry and a mix of predominantly sweet cherry and black cottonwood; to the east it is dominated by a single stratum of non-native invasive herbaceous vegetation. The proposed variable width WRA will extend a minimum of 25 feet and a maximum of 100 feet west and approximately 40 feet east of the stream OHWM. The entire proposed WRA shall be enhanced to good condition with a diverse mix of native trees, shrubs and groundcover species (Appendix B and Table 2). The proposed WRA shall be, at minimum, qualitatively equal in terms of maintaining the level of functions allowed by the WRA standards of CDC 32.060(D).

B. If a WRA is already significantly degraded (e.g., native forest and ground cover have been removed or the site dominated by invasive plants, debris, or development), the approval authority may allow a reduced WRA in exchange for mitigation, if:

1. The proposed reduction in WRA width, coupled with the proposed mitigation, would result in better performance of functions than the standard WRA without such mitigation. The approval authority shall make this determination based on the applicant's proposed mitigation plan and a comparative analysis of ecological functions under existing and enhanced conditions (see Table 32-4).

Response: As described in this report, the existing WRA is significantly degraded. Native forest has been disturbed, and the site is dominated by non-native invasive forest and understory species. Closer to the stream, vegetation is dominated by invasive Himalayan blackberry. Significant transient use of the site has occurred, resulting in vegetation disturbance as well as dispersal of significant inorganic debris (i.e. garbage). The applicant proposes to reduce the existing WRA west of the stream only. The proposed WRA will extend 25-100 feet west from OHWM (7,757sf) and all the way to the property boundary defined by S Walling Circle (approximately 40 feet; 4,335sf) to the east for a total area of 12,092sf (Appendix B). Mitigation will consist of removal of garbage and invasive species followed by planting of native trees, shrubs, and groundcover in the entire proposed WRA. The proposed reduced WRA, along with mitigation, will result in significantly higher functions than the existing (standard) WRA without mitigation.

Table 1. Ecological Functions Comparison per Table 32-4		
Ecological Functions	**WRA existing conditions**	**WRA enhanced conditions**
Stream flow moderation and/or water storage	Wetland Storage functions low. Surface water flows through small well-defined intermittent stream. No adjacent wetlands. Does not overflow bank.	Storage functions will increase with vegetation density in WRA slowing flows for better storage capacity.
Sediment or pollution control	Vegetation is present but highly disturbed within 100' of waterway. Significant garbage and debris. Bare ground, non-native grasses, and Himalayan blackberry dominate adjacent to the stream.	Increased native vegetation and tree canopy within the entire remaining onsite WRA, especially adjacent to the stream, will increase functions by slowing water flow, creating more tree canopy and increasing the capacity to filter nutrients and retain sediments.
Bank stabilization	Well defined bank for small intermittent stream.	Increased native vegetation may help bank stabilization although significant erosion is not evident.
Large wood recruitment for a fish bearing section of stream	Not a fish bearing stream. Few trees for LWD recruitment.	Not a fish bearing stream. Additional trees will eventually increase tree canopy.
Organic material sources	Dominance of bare ground, Himalayan blackberry shrub, and non-native grasses adjacent to the stream.	Additional trees/shrubs will increase organic material sources throughout the WRA.
Shade (water temperature moderation) and microclimate	Not a fish bearing stream. Currently minimal shade.	Not a fish bearing stream. Tree planting will reduce onsite temperatures and support reduced downstream temperatures.
Stream flow that sustains in-stream and adjacent habitats	Minor channel with no adjacent wetland habitat. Intermittent flow.	Intermittent flow will be maintained. No hydrologic impacts anticipated.
Other terrestrial habitat	Habitat within 100 feet of the resource is a mix of native and non-native vegetation with significant disturbance from use as transient camp.	Removal of garbage, removal of invasive vegetation, and planting of diverse native species shall increase type and diversity of cover and food sources, significantly improving terrestrial habitat.

2. The mitigation project shall include all of the following components as applicable. It may also include other forms of enhancement (mitigation) deemed appropriate by the approval authority.

a. Removal of invasive vegetation.

b. Planting native, non-invasive plants (at minimum, consistent with CDC

32.100) that provide improved filtration of sediment, excess nutrients, and pollutants. The amount of enhancement (mitigation) shall meet or exceed the standards of CDC 32.090(C).

c. Providing permanent improvements to the site hydrology that would improve water resource functions.

d. Substantial improvements to the aquatic and/or terrestrial habitat of the WRA.

Response: The mitigation plan shall consist of removal of invasive species and planting a diverse assemblage of native trees, shrubs, and groundcover species to improve water quality functions including filtration of sediment, excess nutrients, and pollutants onsite as well improving water quality parameters for downstream waters. Proposed enhancement will substantially improve adjacent terrestrial habitat of the WRA. Proposed enhancement area is 12,092sf which exceeds the standards of CDC 32.090(C).

C. Identify and discuss site design and methods of development as they relate to WRA functions.

Response: Site design was based on locating the proposed parking area at the top of the hillslope as far from the proposed WRA boundary as possible, minimizing potential impacts to the stream and WRA. The lot will be constructed with a retaining wall ranging from 0.5'-9.5' in height in order to reduce impacts. Additional grading between the wall and the reduced WRA will be limited to the minimum necessary as shown in Appendix B. This impacted WRA is in degraded condition and directly adjacent to an existing parking area to the north. The WRA to the south and east directly abuts the stream and will be protected and enhanced as described in this report. This higher functioning WRA will support functions of the intermittent stream as well as improving onsite habitat functions within the remainder of the riparian corridor.

D. Address the approval criteria of CDC 32.060, with the exception of CDC 32.060(D).

Response: The application proposes a parking lot and patio in the outer portion of the mapped WRA and will be outside of the proposed WRA boundary. A stormwater outfall to include 138sf of temporary impact and 20sf of permanent impact is proposed within the reduced WRA. Applicable approval criteria A, B, E, and I are addressed below.

32.060 Approval Criteria (Standard Process)

No application for development on property containing a WRA shall be approved unless the approval authority finds that the proposed development is consistent with the following approval criteria, or can satisfy the criteria by conditions of approval:

A. WRA protection/minimizing impacts.

1. Development shall be conducted in a manner that will avoid or, if avoidance is not possible, minimize adverse impact on WRAs.

2. Mitigation and re-vegetation of disturbed WRAs shall be completed per CDC 32.090 and 32.100 respectively.

Response: Degraded WRA conditions are present, and a reduced but enhanced buffer is proposed pursuant to the Alternative Review Process provisions of Section 32.080 rather than this Section. Mitigation and revegetation is provided per the standards of CDC 32.090 and 32.100. Proposed development shall minimize adverse impact on the WRA to the extent possible while still constructing the parking lot onsite by placing it entirely outside the proposed WRA. Impacts within the proposed WRA are limited to temporary impacts for placement of a stormwater pipe and 20sf of permanent impact for the stormwater outfall as described below.

B. Storm water and storm water facilities.

1. Proposed developments shall be designed to maintain the existing WRAs and utilize them as the primary method of storm water conveyance through the project site unless:

a. The surface water management plan calls for alternate configurations (culverts, piping, etc.); or

b. Under CDC 32.070, the applicant demonstrates that the relocation of the water resource will not adversely impact the function of the WRA including, but not limited to, circumstances where the WRA is poorly defined or not clearly channelized.

Re-vegetation, enhancement and/or mitigation of the re-aligned water resource shall be required as applicable.

2. Public and private storm water detention, storm water treatment facilities and storm water outfall or energy dissipaters (e.g., rip rap) may encroach into the WRA if:

a. Accepted engineering practice requires it;

b. Encroachment on significant trees shall be avoided when possible, and any tree loss shall be consistent with the City's Tree Technical Manual and mitigated per CDC 32.090;

c. There shall be no direct outfall into the water resource, and any resulting outfall shall not have an erosive effect on the WRA or diminish the stability of slopes; and

d. There are no reasonable alternatives available.

A geotechnical report may be required to make the determination regarding slope stability.

3. Roadside storm water conveyance swales and ditches may be extended within rights-of-way located in a WRA. When possible, they shall be located along the side of the road furthest from the water resource. If the conveyance facility must be located along the side of the road closest to the water resource, it shall be located as close to the road/sidewalk as possible and include habitat friendly design features (treatment train, rain gardens, etc.).

4. Storm water detention and/or treatment facilities in the WRA shall be designed without permanent perimeter fencing and shall be landscaped with native vegetation.

5. Access to public storm water detention and/or treatment facilities shall be provided for maintenance purposes. Maintenance driveways shall be constructed to minimum width and use water permeable paving materials. Significant trees, including roots, shall not be disturbed to the degree possible. The encroachment and any tree loss shall be mitigated per CDC 32.090. There shall also be no adverse impacts upon the hydrologic conditions of the site.

6. Storm detention and treatment and geologic hazards. Per the submittals required by CDC 32.050(F)(3) and 92.010(E), all proposed storm detention and treatment facilities must comply with the standards for the improvement of public and private drainage systems located in the West Linn Public Works Design Standards, there will be no adverse off-site impacts caused by the development (including impacts from increased intensity of runoff downstream or constrictions causing ponding upstream), and the applicant must provide sufficient factual data to support the conclusions of the submitted plan.

Response: The existing WRA shall be maintained with a single new stormwater pipe to be located within the WRA. The outfall shall be located above the OHWM of the water resource. Originally, a rain garden was proposed adjacent to the patio, however the Geotech analysis determined that onsite soils do not support infiltration. As a result, the stormwater facilities have been designed to detain and treat stormwater generated by proposed improvements via an underground system located beneath the proposed parking lot. Stormwater will be released from this system using a conveyance pipe and outfall. The proposed outfall location within the WRA was determined using site topography and elevation change characteristics. The proposed path of the conveyance pipe to the outfall location, as shown in the site plan, minimizes the disturbance within the WRA. No erosive effect on the WRA or impact to the stability of slopes is anticipated from this activity. No encroachment of significant trees is proposed. As

described above, there are no reasonable alternatives available, and the accepted engineering practice requires it.

E. Per the submittals required by CDC 32.050(F)(4), the applicant must demonstrate that the proposed methods of rendering known or potential hazard sites safe for development, including proposed geotechnical remediation, are feasible and adequate to prevent landslides or other damage to property and safety. The review authority may impose conditions, including limits on type or intensity of land use, which it determines are necessary to mitigate known risks of landslides or property damage.

Response: A geotechnical analysis has been prepared for this site. As explained in the submitted geotechnical report, there was no finding of known or potential hazards that would constrict the proposed development on the subject site. Per the geotech report, the proposed construction is geotechnically feasible with appropriate site preparation. See the submitted report for details.

I. The following habitat friendly development practices shall be incorporated into the design of any improvements or projects in the WRA to the degree possible:
1. Restore disturbed soils to original or higher level of porosity to regain infiltration and storm water storage capacity.
2. Apply a treatment train or series of storm water treatment measures to provide multiple opportunities for storm water treatment and reduce the possibility of system failure.
3. Incorporate storm water management in road rights-of-way.
4. Landscape with rain gardens to provide on-lot detention, filtering of rainwater, and groundwater recharge.
5. Use multi-functional open drainage systems in lieu of conventional curb-and-gutter systems.
6. Use green roofs for runoff reduction, energy savings, improved air quality, and enhanced aesthetics.
7. Retain rooftop runoff in a rain barrel for later on-lot use in lawn and garden watering.
8. Disconnect downspouts from roofs and direct the flow to vegetated infiltration/filtration areas such as rain gardens.
9. Use pervious paving materials for driveways, parking lots, sidewalks, patios, and walkways.
10. Reduce sidewalk width to a minimum four feet. Grade the sidewalk so it drains to the front yard of a residential lot or retention area instead of towards the street.
11. Use shared driveways.
12. Reduce width of residential streets and driveways, especially at WRA crossings.
13. Reduce street length, primarily in residential areas, by encouraging clustering.
14. Reduce cul-de-sac radii and use pervious and/or vegetated islands in center to minimize impervious surfaces.
15. Use previously developed areas (PDAs) when given an option of developing PDA versus non-PDA land.
16. Minimize the building, hardscape and disturbance footprint.
17. Consider multi-story construction over a bigger footprint. (Ord. 1623 § 1, 2014; Ord. 1635 § 19, 2014; Ord. 1647 § 5, 2016; Ord. 1662 § 7, 2017)

Response: The proposed application includes habitat friendly development practices 1 and 11. Any soils temporarily disturbed within the reduced WRA will be restored to original condition and planted as described in the mitigation plan. The proposed access to the parking facility will be provided by an easement over the adjacent lot, which has access to Willamette Drive. No separate access to the parking facility from S Walling Circle is proposed.

32.090 MITIGATION PLAN

A. A mitigation plan shall only be required if development is proposed within a WRA (including development of a PDA). (Exempted activities of CDC 32.040 do not require mitigation unless specifically stated. Temporarily disturbed areas, including TDAs associated with exempted activities, do not require mitigation, just grade and soil restoration and re-vegetation.) The mitigation plan shall satisfy all applicable provisions of CDC 32.100, Re-Vegetation Plan Requirements.

Response: Development is proposed under the Alternative Review Process per CDC Chapter 32.080 resulting in a reduced WRA boundary. 8,510sf of permanent impact is proposed within the area removed from the WRA. The remaining area will be enhanced.

138sf of temporary disturbance is proposed within the WRA for placement of the stormwater pipe. This area will be restored in place as part of the proposed mitigation and enhancement plan described below. 20sf of permanent impact for the riprap outfall will be mitigated at a 1:1 ratio as part of the overall mitigation plan. The entire remaining WRA will be enhanced for mitigation as described below.

B. Mitigation shall take place in the following locations, according to the following priorities (subsections (B)(1) through (4) of this section):

1. On-site mitigation by restoring, creating, or enhancing WRAs.

Response: Mitigation is proposed by enhancing onsite WRA.

C. Amount of mitigation.

1. The amount of mitigation shall be based on the square footage of the permanent disturbance area by the application. For every one square foot of non-PDA disturbed area, on-site mitigation shall require one square foot of WRA to be created, enhanced, or restored.

2. For every one square foot of PDA that is disturbed, on-site mitigation shall require one half a square foot of WRA vegetation to be created, enhanced, or restored.

Response: Proposed impact area within existing 100' WRA to be reduced is 8,510sf. Additional permanent disturbance is limited to 20sf for the permanent riprap within the proposed WRA. Required mitigation at 1:1 is 8,530sf of onsite enhancement. Proposed mitigation/enhancement area shall consist of the entire remaining WRA for a total of 12,092sf and exceeds these requirements.

D. The Planning Director may limit or define the scope of the mitigation plan and submittal requirements commensurate with the scale of the disturbance relative to the resource and pursuant to the authority of Chapter 99 CDC. The Planning Director may determine that a consultant is required to complete all or a part of the mitigation plan requirements.

E. A mitigation plan shall contain the following information:

1. A list of all responsible parties including, but not limited to, the owner, applicant, contractor, or other persons responsible for work on the development site.

Response: The applicant and owner are a single entity listed below.

Applicant/Owner: Jordan Matin
5441 S Macadam Ave., Suite 208
Portland, Oregon 97239
971.285.2180

jmatin@matinrealestate.com

Contractor: To be determined closer to time of construction.

2. A map showing where the specific adverse impacts will occur and where the mitigation activities will occur.

Response: See Site Development Plan (Appendix B).

3. A re-vegetation plan for the area(s) to be mitigated that meets the standards of CDC 32.100.

Response: See the response to CDC 32.100 below.

4. An implementation schedule, including timeline for construction, mitigation, mitigation maintenance, monitoring, and reporting. All in-stream work in fish bearing streams shall be done in accordance with the Oregon Department of Fish and Wildlife.

Response: Mitigation shall occur concurrently with construction after all approvals are met and in accordance with planting requirements outlined in 32.100. As per City of West Linn WRA protection requirements, 80% success is required for replanted areas. The mitigation site will be monitored and maintained for three years. If, after each year's monitoring period, 80% survival has not been met, dead plants will be replaced up to the 80% success required. Mitigation monitoring reports shall be provided to document these activities. No work will be conducted in fish bearing streams and the in-stream work window is not applicable.

5. Assurances shall be established to rectify any mitigation actions that are not successful within the first three years. This may include bonding or other surety.(Ord. 1623 § 1, 2014)

Response: The applicant can provide any necessary assurance as needed based on coordination with City staff. We propose that any bonding or surety be deferred based on the results of the initial monitoring, maintenance, and reporting requirements.

32.100 RE-VEGETATION PLAN REQUIREMENTS

A. In order to achieve the goal of re-establishing forested canopy, native shrub and ground cover and to meet the mitigation requirements of CDC 32.090 and vegetative enhancement of CDC 32.080, tree and vegetation plantings are required according to the following standards:

1. All trees, shrubs and ground cover to be planted must be native plants selected from the Portland Plant List.

2. Plant size. Replacement trees must be at least one-half inch in caliper, measured at six inches above the ground level for field grown trees or above the soil line for container grown trees ... Shrubs must be in at least a one-gallon container or the equivalent in ball and burlap and must be at least 12 inches in height.

3. Plant coverage.

a. Native trees and shrubs are required to be planted at a rate of five trees and 25 shrubs per every 500 square feet of disturbance area ...Non-native sterile wheat grass may also be planted or seeded, in equal or lesser proportion to the native grasses or herbs.

b. Trees shall be planted between eight and 12 feet on center and shrubs shall be planted between four and five feet on center, or clustered in single species groups of no more than four plants, with

each cluster planted between eight and 10 feet on center. When planting near existing trees, the dripline of the existing tree shall be the starting point for plant spacing measurements.

4. Plant diversity. Shrubs must consist of at least two different species. If 10 trees or more are planted, then no more than 50 percent of the trees may be of the same genus

5. Invasive vegetation. Invasive non-native or noxious vegetation must be removed within the mitigation area prior to planting.

6. Tree and shrub survival. A minimum survival rate of 80 percent of the trees and shrubs planted is expected by the third anniversary of the date that the mitigation planting is completed.

7. Monitoring and reporting. Monitoring of the mitigation site is the ongoing responsibility of the property owner. Plants that die must be replaced in kind.

8. To enhance survival of tree replacement and plantings, the following practices are required:

a. Mulching. Mulch new plantings a minimum of three inches in depth and 18 inches in diameter to retain moisture and discourage weed growth.

b. Irrigation. Water new plantings one inch per week between June 15th to October 15th, for the three years following planting.

c. Weed control. Remove, or control, non-native or noxious vegetation throughout maintenance period.

d. Planting season. Plant bare root trees between December 1st and February 28th, and potted plants between October 15th and April 30th.

e. Wildlife protection. Use plant sleeves or fencing to protect trees and shrubs against wildlife browsing and resulting damage to plants.

WRA Enhancement Plan

This WRA Enhancement plan has been designed to meet the requirements of 32.100(A)1-8 as outlined above and described below. The applicant proposes enhancement of the entire remaining 12,092sf buffer onsite. The plan is expected to improve functions of the WRA by removing garbage, removing invasive species, and replanting with a diverse assemblage of native trees and shrubs throughout the area. The functions expected to be enhanced include water quality functions (temperature, nutrient and sediment retention), organic material recruitment, and upland wildlife habitat quality.

Planting Plan

The planting plan was developed according to 32.100 Revegetation Requirements (Table 2). All plants were selected from the Portland Plant List and are adapted to upland/riparian conditions with quantities and sizing according to the requirements based on the total permanent impact area of 8,530sf. Required planting is to consist of 85 trees and 427 shrubs. All bare ground within the restoration area will be seeded with a native grass mix as shown below. Planting plan is subject to approval by the City.

Table 2. Planting Palette for WRA Enhancement Area (12,092sf.)

Species	Type	Minimum Size	Spacing	Quantity
Douglas fir *Pseudotsuga menziesii*	Tree	0.5” diam or 1 gal.	12’OC	15
Western red cedar *Thuja plicata*	Tree	0.5” diam or 1 gal.	12’OC	5
Red alder *Alnus rubra*	Tree	0.5” diam or 1 gal.	12’OC	25
Flowering dogwood *Cornus nuttalli*	Tree	0.5” diam or 1 gal.	12’OC	15
Big leaf maple *Acer macrophyllum*	Tree	0.5” diam or 1 gal.	12’OC	25

Common snowberry *Symphoricarpos albus*	Shrub	1 gal.	Clusters 10’ OC	134
Vine maple *Acer circinatum*	Shrub	1 gal.	4-5’OC	80
Sword fern *Polystichum munitum*	Shrub	1 gal.	Clusters 10’ OC	134
Red osier dogwood* *Cornus sericea*	Shrub	1 gal.	4-5’ OC	40
Small fruited rose* *Rosa pisocarpa*	Shrub	1 gal.	4-5’OC	40
California brome (*Bromus carinatus*)/Blue wildrye (*Elymus glaucus*)	Grass	50/50% 1 lb/ac pls		As needed

* To be planted adjacent to stream only

Schedule and Maintenance Requirements

Bare root trees shall be planted between December 1st and February 28th, and potted plants shall be planted between October 15th and April 30th.

Monitoring of the mitigation site is the ongoing responsibility of the property owner. Plants that die must be replaced in kind. In accordance with City requirements a minimum survival rate of 80 percent of the trees and shrubs planted is expected by the third anniversary of the date that the mitigation planting is completed.

To enhance survival of tree replacement and plantings, in accordance with Section 32.100 the following practices are required:

- Mulch new plantings a minimum of three inches in depth and 18 inches in diameter to retain moisture and discourage weed growth.
- Irrigation for new plantings shall be provided in the amount of one inch per week between June 15th to October 15th, for the three years following planting.
- Non-native or noxious vegetation shall be removed or controlled throughout maintenance period.
- Use plant sleeves or fencing to protect trees and shrubs against wildlife browsing and resulting damage to plants.

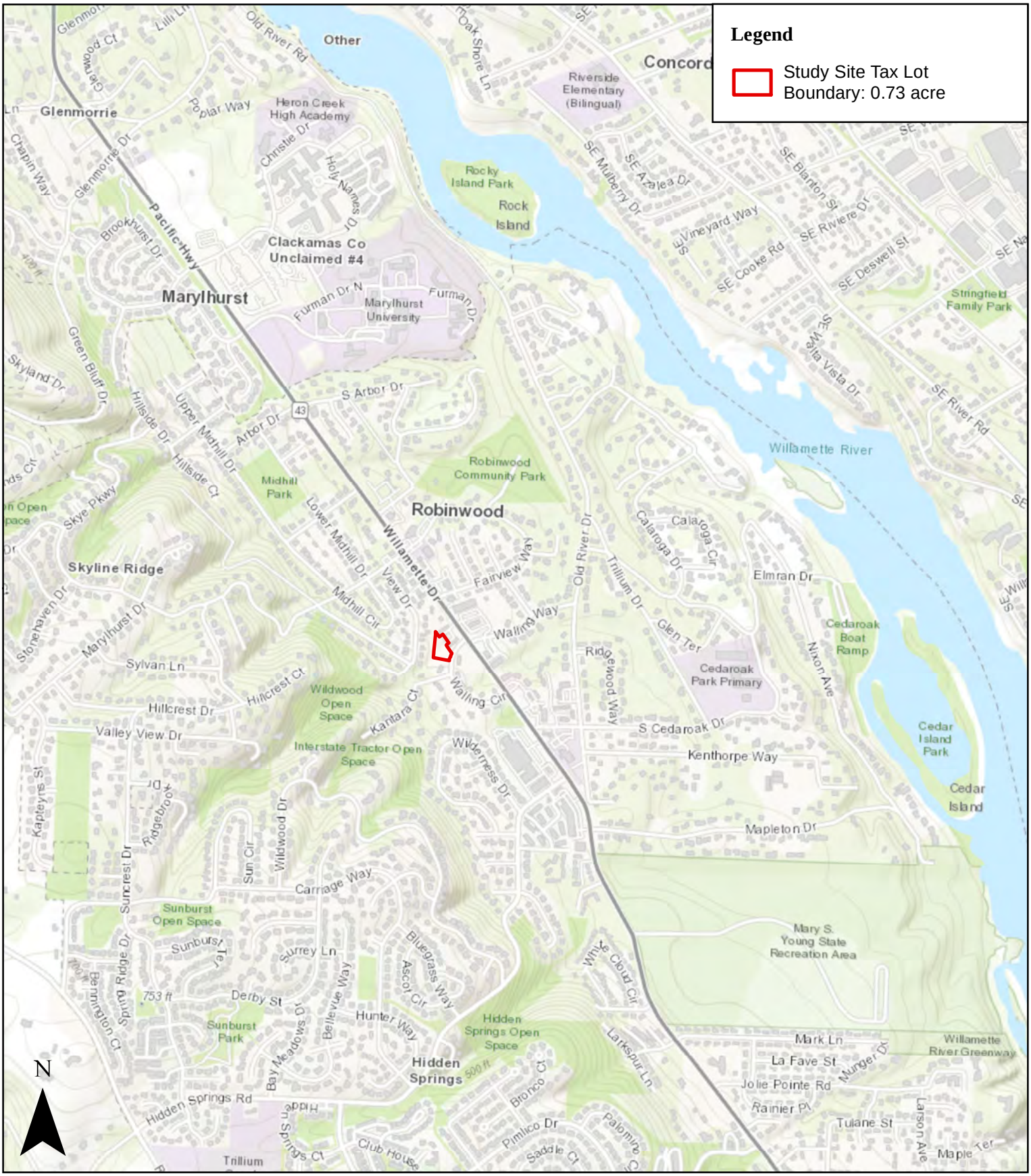
Summary and Conclusions

Site visit was conducted by S&A to complete a wetland delineation and assess onsite conditions. Delineation was concurred with by DSL in January, 2025. The existing onsite WRA is Degraded. Based on site assessment and outlined according to Chapter 32 of the West Linn Community Development Code the applicant has addressed Alternative Review Methods for WRA boundaries and proposes a reduced variable width buffer: 25-100’ west of the creek and an average of 40’ (extending to the property line) east of the creek. The entire 12,092sf remaining WRA will be enhanced.

The applicant proposes construction of a parking lot, storage building and patio outside the proposed WRA with a total disturbance area of 8,510sf. The parking lot will provide 21 new standard parking spaces. Impacts for a stormwater line to be placed within the WRA include 138sf of temporary disturbance and 20sf of permanent disturbance within the reduced WRA. Mitigation is proposed to consist of enhancement of the entire unimpacted 12,092sf of remaining WRA and exceeds the required replacement ratio of 1:1. The enhancement planting plan is based on 8,530sf of permanent impact. The

enhanced buffer is anticipated to provide significantly improved functions compared to functions provided by the current degraded WRA.

FIGURE 1: PROJECT VICINITY MAP



Date: 9/18/2024

Data Source: ESRI, 2024; Clackamas County GIS Dept, 2024

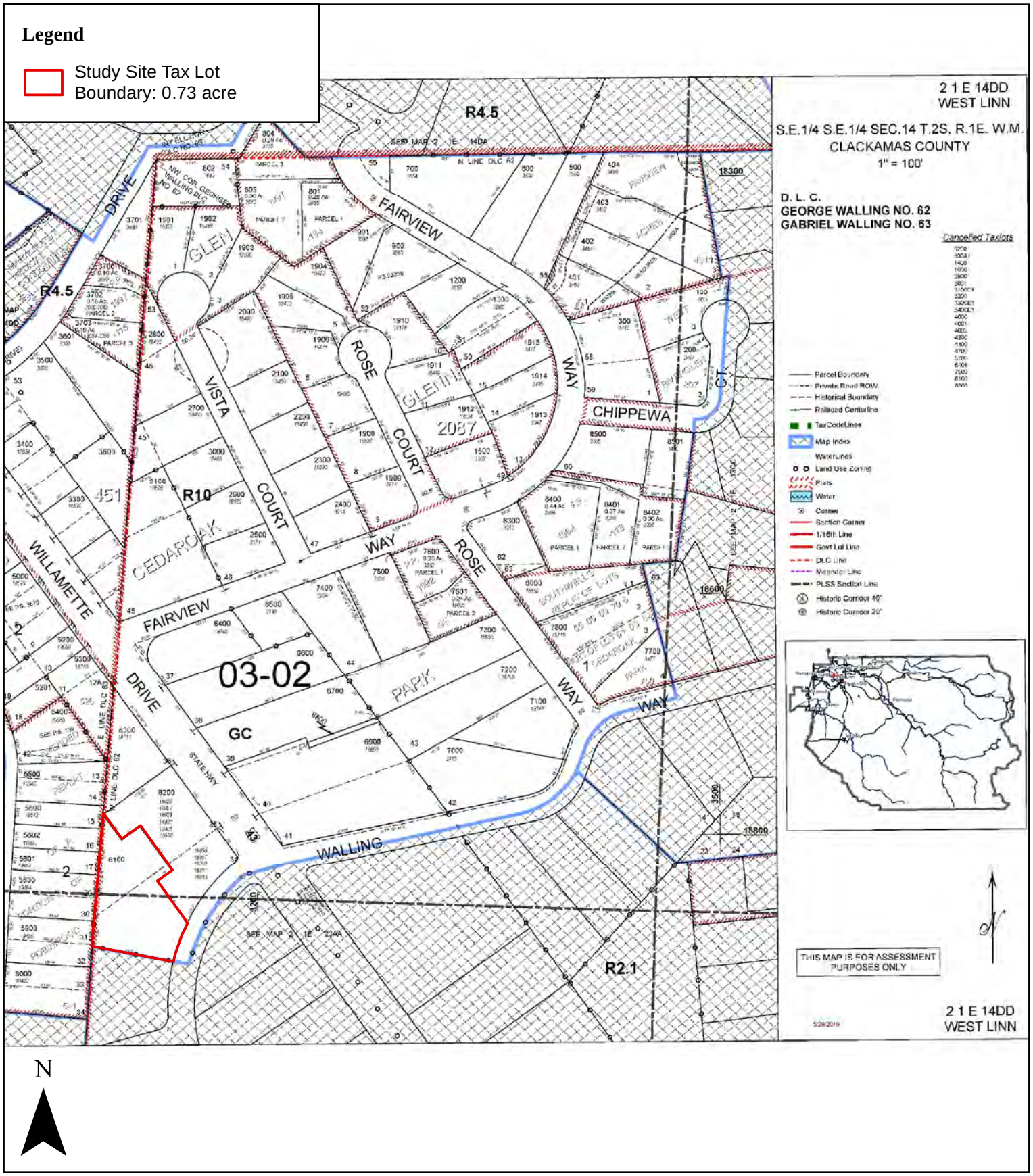
Figure 1.Location Map

Willamette Drive Project Site: S&A # 3096

SCHOTT & ASSOCIATES, INC.

0 500 1,000 2,000 Feet

FIGURE 2: TAX MAP



Date: 9/18/2024

Data Source: ESRI, 2024; Clackamas County GIS Dept, 2024

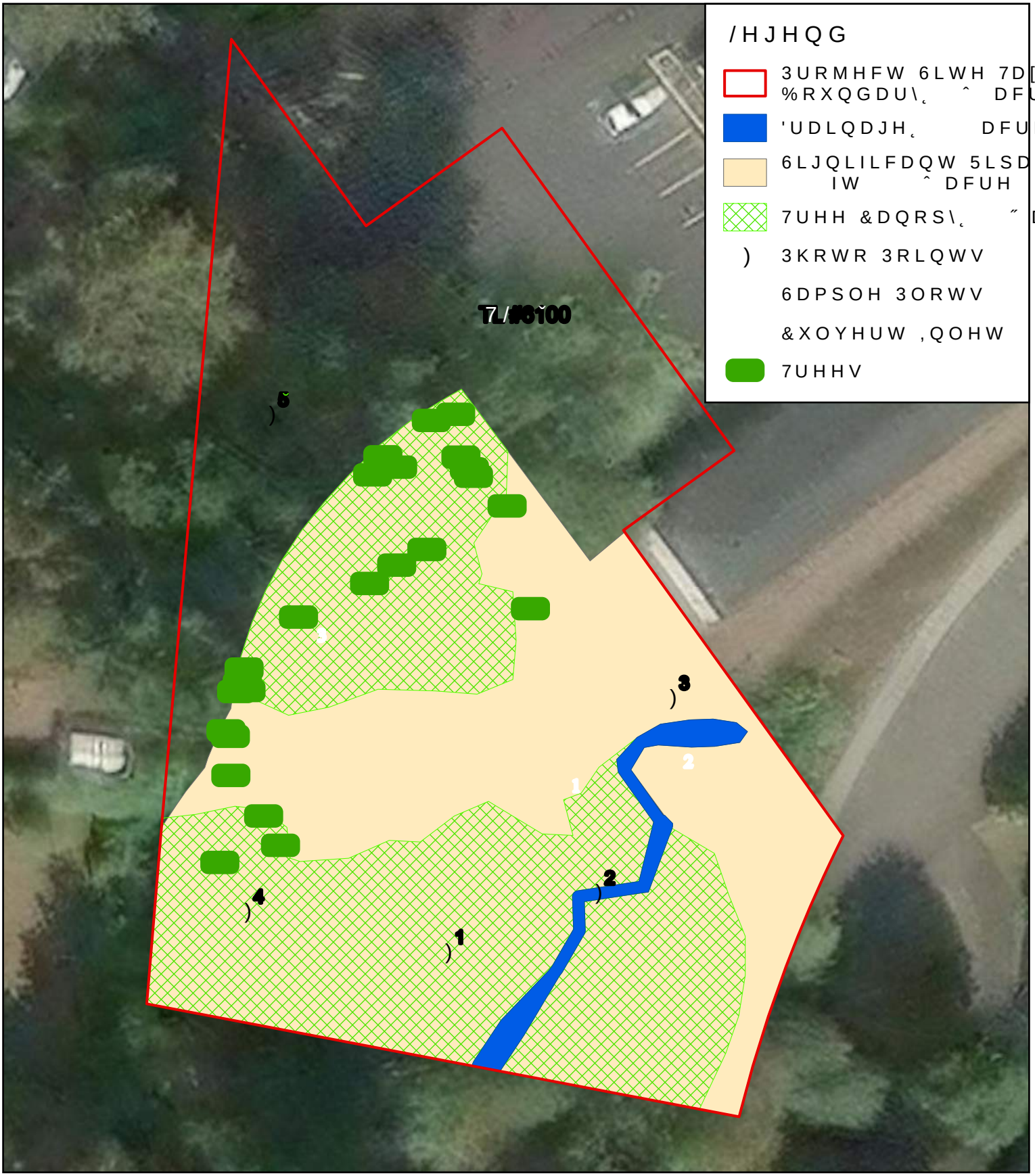
Figure 2. Tax Map - 21E14DD

Willamette Drive Project Site: S&A # 3096

SCHOTT & ASSOCIATES, INC.

0 100 200 400 Feet

FIGURE 3. EXISTING CONDITIONS - WRA MAP



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Schott & Associates
Ecologists & Wetland Specialists
P.O. Box 589 | Aurora, OR 97002 | (503) 678-6007

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FIGURE 4. CITY OF WEST LINN WRA MAP

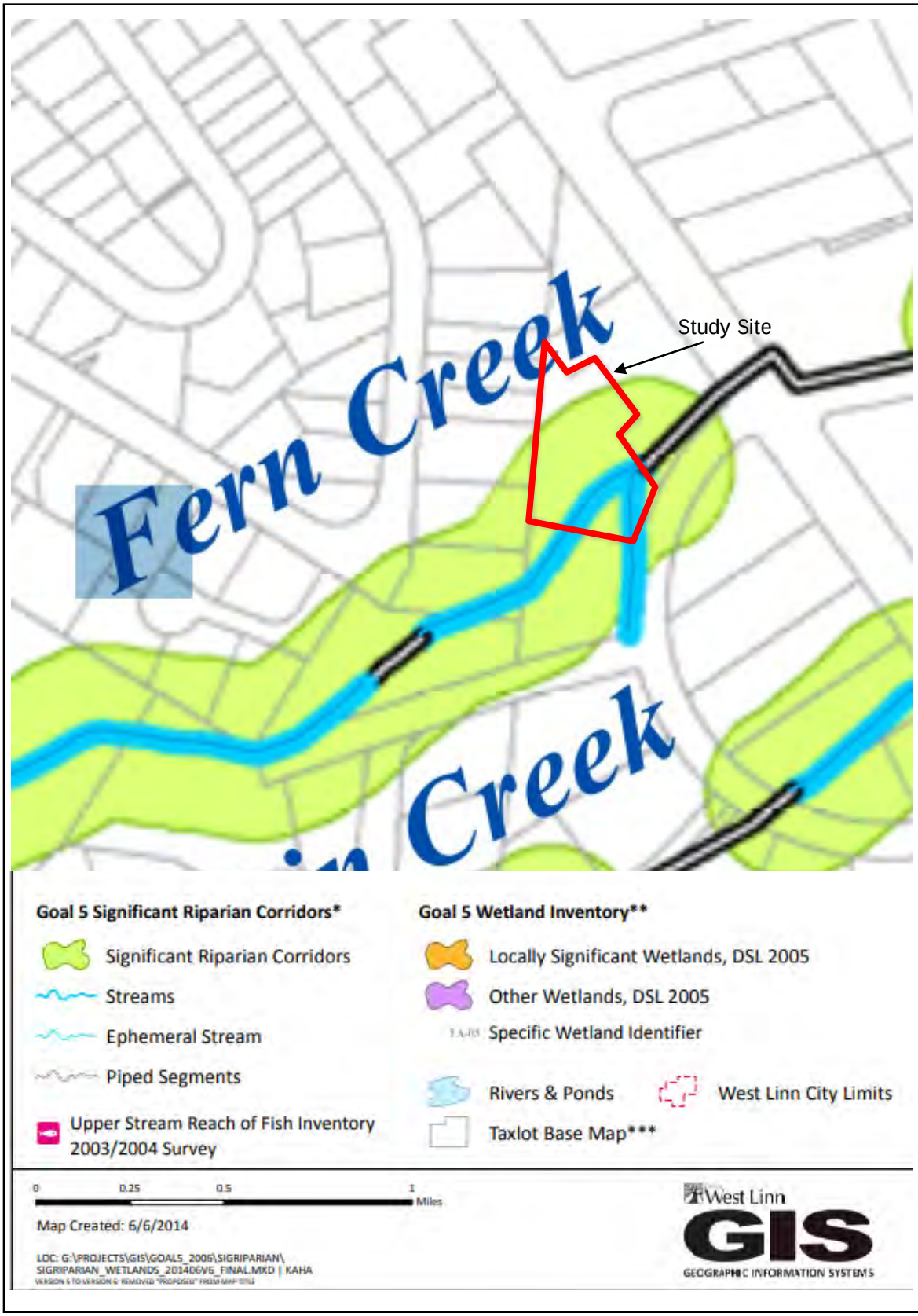


Figure 4. West Linn WRA Map
Willamette Drive Project Site
S&A3096

Schott & Associates
P.O. Box 589
Aurora, OR. 97002
503.678.6007

FIGURE 5. CITY OF WEST LINN HCA MAP

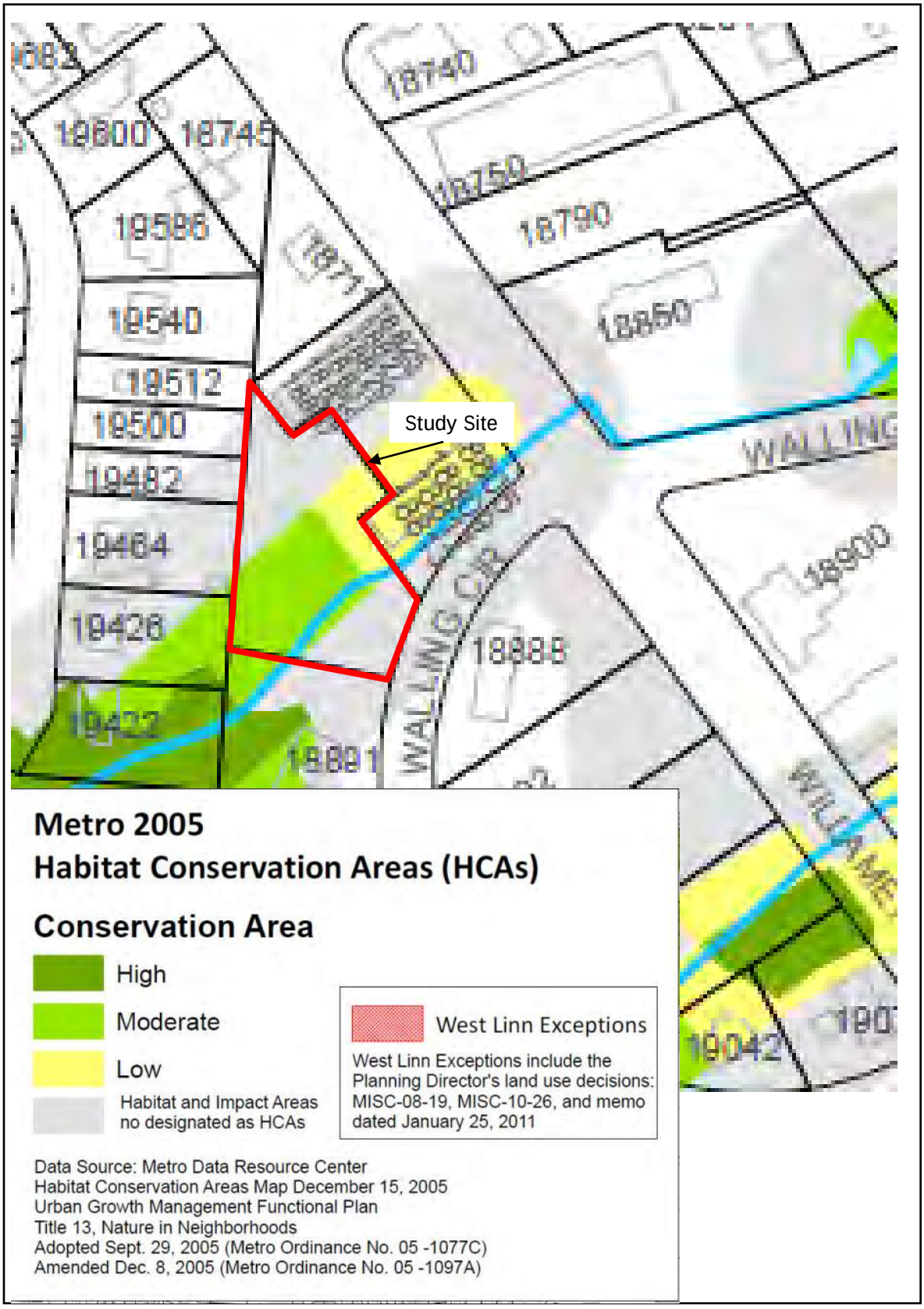


Figure 5. West Linn HCA Map
Willamette Drive Project Site
S&A3096

Schott & Associates
P.O. Box 589
Aurora, OR. 97002
503.678.6007

FIGURE 6: TREE SURVEY

Willamette Drive Project Site
Tree Survey
S&A3096

APPENDIX A: WETLAND DELINEATION

Oregon
Tina Kotek, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregon.gov/dsl

State Land Board

Tina Kotek
Governor

LaVonne Griffin-Valade
Secretary of State

Tobias Read
State Treasurer

January 2, 2025

Matin Real Estate
Attn: Jordan Matin
5441 S Macadam Avenue, Suite 208
Portland, OR 97239

Re: WD # 2024-0526 **Approved**
Wetland Delineation Report for Willamette Drive Project
Clackamas County; T2N R1E S14DD TL6100

Dear Jordan Matin:

The Department of State Lands has reviewed the wetland delineation report prepared by Schott & Associates for the site referenced above. Based upon the information presented in the report, we concur with the waterway boundaries as mapped in Figure 6 of the report. Please replace all copies of the preliminary wetland map with this final Department-approved map.

Within the study area, one waterway (Drainage) was identified. The waterway is subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in wetlands or below the ordinary high-water line (OHWL) of the waterway (or the 2-year recurrence interval flood elevation if OHWL cannot be determined).

This concurrence is for purposes of the state Removal-Fill Law only. We recommend that you attach a copy of this concurrence letter to any subsequent state permit application to speed application review. Federal, other state agencies or local permit requirements may apply as well. The U.S. Army Corps of Engineers will determine jurisdiction under the Clean Water Act, which may require submittal of a complete Wetland Delineation Report.

Please be advised that state law establishes a preference for avoidance of impacts to waters of this state. Because measures to avoid and minimize impacts to waters of this state may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. If you have any questions, please contact Chris Stevenson, PWS, the Wetland Ecologist for Clackamas County at (503) 798-7622.

Sincerely,

Peter Ryan, PWS Emeritus
Aquatic Resource Specialist

Enclosures

ec: Jodi Forgione, Schott & Associates
Juniper Tagliabue, Schott & Associates
West Linn Planning Department
Morgan Hall, Corps of Engineers
Michael De Blasi, DSL

Docusign Envelope ID: 01C2B43C-7441-4575-93BF-4652A2647382

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

A complete report and signed report cover form, along with applicable review fee, are required before a report review timeline can be initiated by the Department of State Lands. All applicants will receive an emailed confirmation that includes the report's unique file number and other information.

Ways to submit report:

- **Under 50MB** - A single unlocked PDF can be emailed to: wetland.delineation@dsl.oregon.gov.
- **50MB or larger** - A single unlocked PDF can be uploaded to the Jurisdiction Box.com folder. Email wetland.delineation@dsl.oregon.gov of the new upload.
- Unbound paper report and signed cover form can be mailed to: Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.

Ways to pay review fee:

- By credit card on DSL's epayment portal after receiving the unique file number from DSL's emailed confirmation.
- By check payable to the Oregon Department of State Lands attached to the unbound paper report OR attached to the complete signed cover form if report submitted electronically.

Contact and Authorization Information

☒ Applicant ☒ Owner Name, Firm and Address:
Jordan Matin
Matin Real Estate
5441 S Macadam Ave, Suite 208
Portland, OR 97239

Business phone # (503) 447-3599
Mobile phone # (optional) (971) 285-2180
E-mail: jmatin@matinrealestate.com

☐ Authorized Legal Agent, Name and Address (if different):

Business phone #
Mobile phone # (optional)
E-mail:

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: Jordan Matin **Signature:** Jordan Matin (DocuSigned by)
Date: 9/24/2024 Special instructions regarding site access: ____

Project and Site Information

Project Name: Willamette Drive Project

Latitude: 45.389224 Longitude: -122.644902
decimal degree - centroid of site or start & end points of linear project

Proposed Use:
Parking expansion

Tax Map # 1 1 14DD
Tax Lot(s) 6100

Tax Map #
Tax Lot(s)

Project Street Address (or other descriptive location):
18825 Willamette Drive

Township 1N Range 1E Section 14 QQ DD
Use separate sheet for additional tax and location information

City: West Linn County: Clackamas

Waterway: unnamed trib River Mile: Unk

Wetland Delineation Information

Wetland Consultant Name, Firm and Address:
Juniper Tagliabue & Jodi Forgione
Schott and Associates
PO Box 589
Aurora, OR 97002

Phone # (503) 678-6028
Mobile phone # (if applicable)
E-mail: juniper@schottandassociates.com
jodi@schottandassociates.com

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.
Consultant Signature: Juniper Tagliabue Date: Sep. 24, 2024

Primary Contact for report review and site access is ☒ Consultant ☐ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No Study Area size: 0.73-ac Total Wetland Acreage: 0.0000

Check Applicable Boxes Below

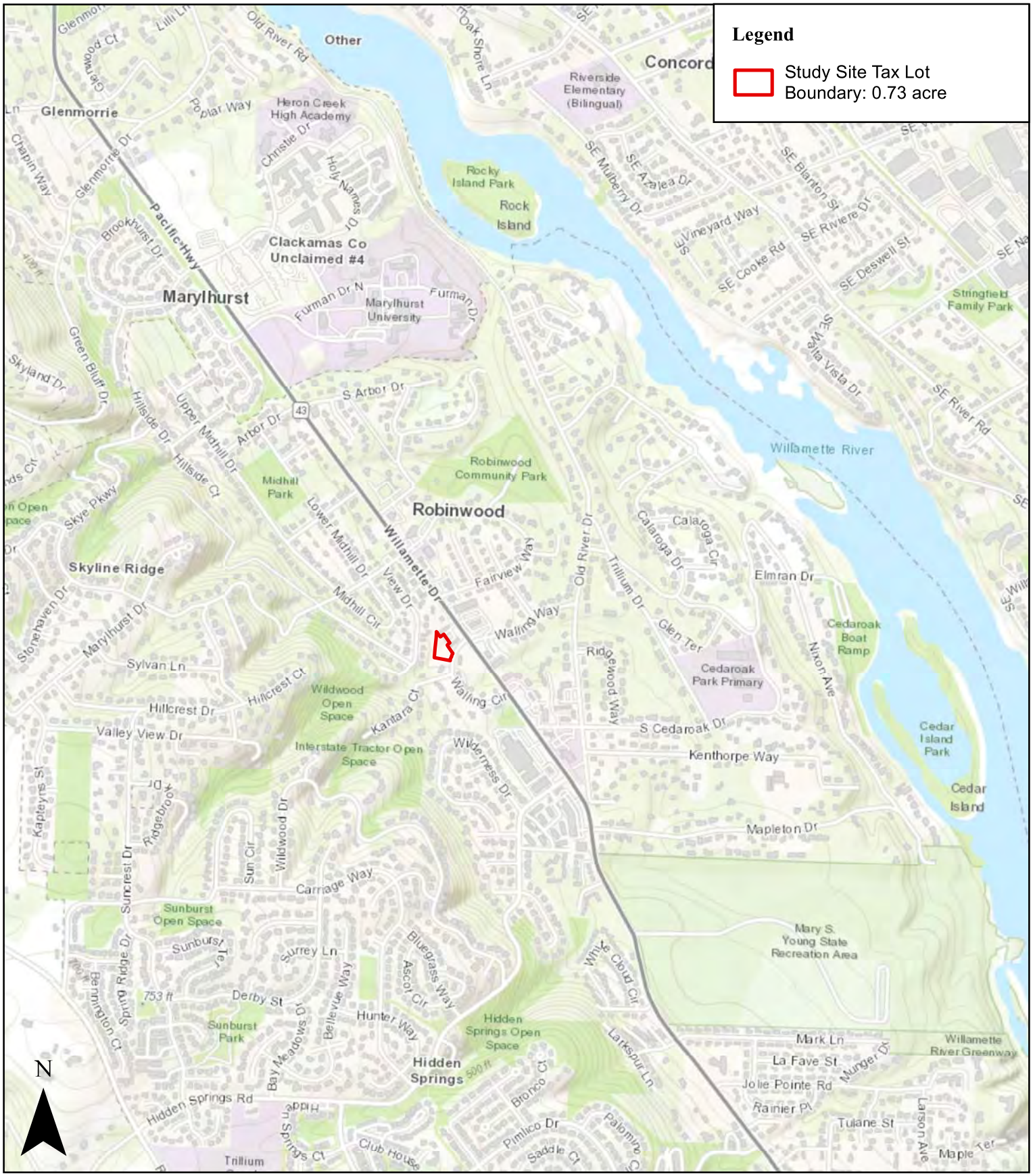
☐ R-F permit application submitted
☐ Mitigation bank site
☐ EFSC/ODOE Proj. Mgr: ____
☐ Wetland restoration/enhancement project (not mitigation)
☐ Previous delineation/application on parcel
If known, previous DSL # ____

☐ Fee payment submitted $ electronically
☐ Resubmittal of rejected report ($100)
☐ Request for Reissuance. See eligibility criteria. (no fee)
DSL # ____ Expiration date____
☐ LWI shows wetlands or waters on parcel
Wetland ID code ____

For Office Use Only

DSL Reviewer: CS Fee Paid Date: ____/____/____ DSL WD # 2024-0526

Date Delineation Received: 09 / 24 /2024 DSL App.# ____



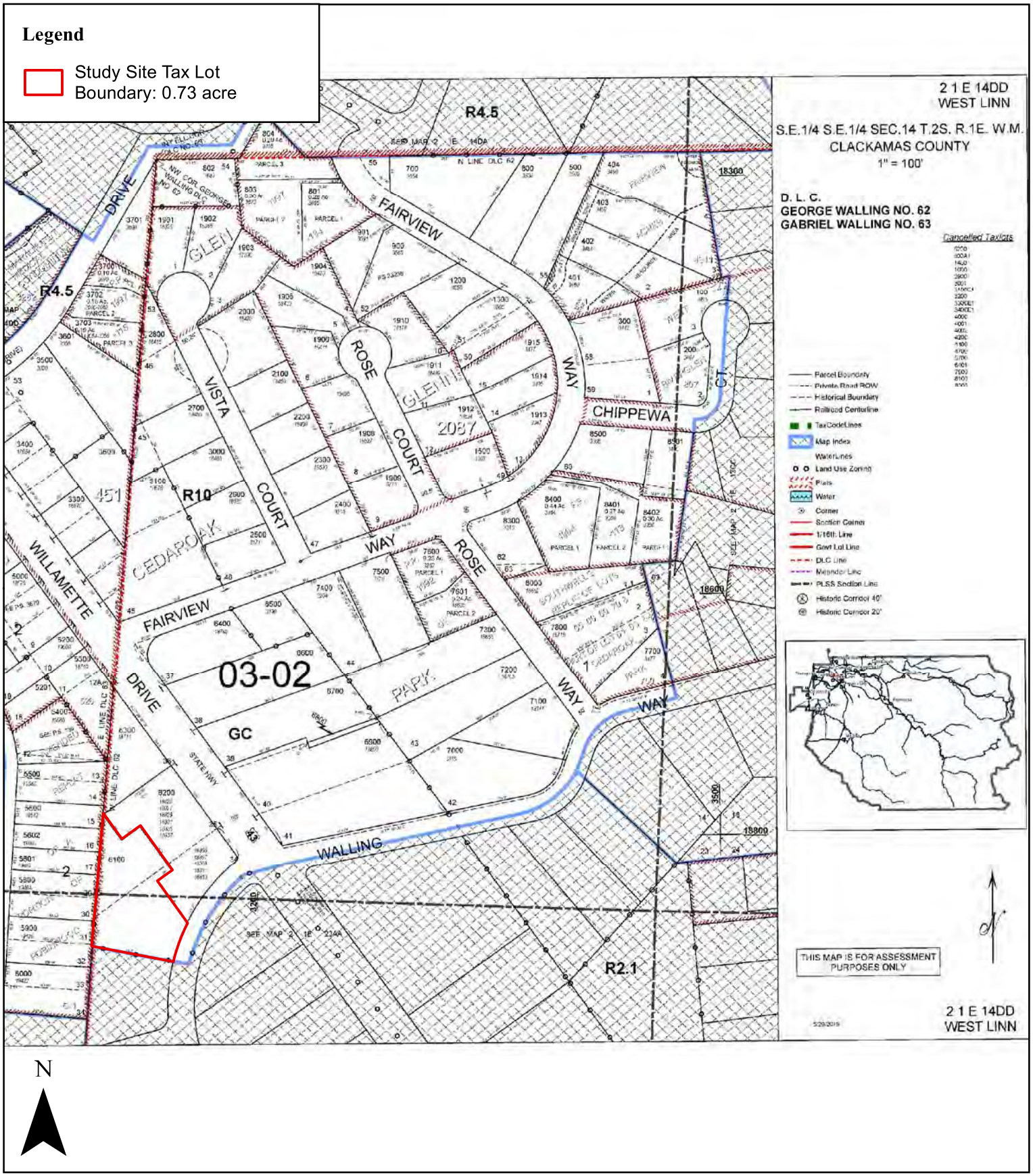
Date: 9/18/2024

Data Source: ESRI, 2024; Clackamas County GIS Dept, 2024

Figure 1.Location Map

SCHOTT & ASSOCIATES, INC.

Willamette Drive Project Site: S&A # 3096



Date: 9/18/2024

Data Source: ESRI, 2024; Clackamas County GIS Dept, 2024

Figure 2. Tax Map - 21E14DD

Willamette Drive Project Site: S&A # 3096

SCHOTT & ASSOCIATES, INC.

0 100 200 400 Feet

Mapping Method and Precision Statement: The sample plots and feature boundaries were recorded utilizing a Trimble DA2 hand-held unit with a horizontal accuracy of 0.6m. The GPS data were then imported into ArcGIS software to produce maps. The tax lot boundaries were sourced from the Clackamas County GIS Department and are assumed to have an accuracy of <= 3ft.

Date: 9/18/2024

Data Source: ESRI, 2024; Clackamas County GIS Dept, 2024; DOGAMI, 2009

DSL WD # 2024-0526
Approval Issued 1/2/2025
Approval Expires 1/2/2030

Figure 6. Wetland Delineation Map

Willamette Drive Project Site: S&A # 3096

SCHOTT & ASSOCIATES, INC.

0 25 50 100 Feet

Docusign Envelope ID: 01C2B43C-7441-4575-93BF-4652A2647382

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Use separate sheet for additional tax and location information

City: West Linn County: Clackamas

Waterway: unnamed trib River Mile: Unk

Wetland Delineation Information

Wetland Consultant Name, Firm and Address:
Juniper Tagliabue & Jodi Forgione
Schott and Associates
PO Box 589
Aurora, OR 97002

Phone # (503) 678-6028
Mobile phone # (if applicable)
E-mail: juniper@schottandassociates.com
jodi@schottandassociates.com

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.
Consultant Signature: Juniper Tagliabue Date: Sep. 24, 2024

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☐ Mitigation bank site
☐ EFSC/ODOE Proj. Mgr: _____
☐ Wetland restoration/enhancement project (not mitigation)
☐ Previous delineation/application on parcel
If known, previous DSL # _____

☐ Fee payment submitted $ electronically
☐ Resubmittal of rejected report ($100)
☐ Request for Reissuance. See eligibility criteria. (no fee)
DSL # _____ Expiration date _____
☐ LWI shows wetlands or waters on parcel
Wetland ID code _____

For Office Use Only

DSL Reviewer: _____ Fee Paid Date: ___/___/___ DSL WD # _____

Date Delineation Received: ___/___/___ DSL App.# _____

SCHOTT & ASSOCIATES, INC.
Ecologists & Wetland Specialists
P.O. BOX 589 | AURORA, OR 97002 | (503)678-6007

JURISDICTIONAL WETLAND DELINEATION REPORT FOR

Willamette Drive Project Site

18825 Willamette Drive
T1N, R1E, Section 14DD, Tax Lot 6100
West Linn, Clackamas County, Oregon

Prepared for

Jordan Matin
Matin Real Estate
5441 S Macadam Ave., Suite 208
Portland, OR 97239

Prepared by

Juniper Tagliabue
&
Jodi Forgione
of
Schott & Associates, Inc.

Date:

September 2024

Project #: 3096

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APPENDIX C: GROUND LEVEL PHOTOGRAPHS
APPENDIX D: LITERATURE CITATIONS

(A) Landscape Setting and Land Use

Schott & Associates (S&A) was contracted to conduct a wetland delineation on the 0.73-acre study site located at the address of 18825 Willamette Drive, West Linn, Clackamas County, Oregon (T1N, R1E, Section 14DD, Tax Lot 6100); Figures 1 and 2). The purpose of this study was to conduct a delineation to document the presence and extent of existing onsite wetlands and other waters that may be regulated under the Clean Water Act (CWA) by the U.S. Army Corps of Engineers (Corps) and under the Removal-Fill Law by the Oregon Department of State Lands (DSL). This report complies with all standards and requirements set forth in Oregon Administrative Rules (OAR) 141-090-0035 (1-17) for wetland delineation reports and jurisdictional determinations for the purpose of regulating fill and removal within waters of the state. This report will be used to fulfill federal and state regulatory requirements for project permitting and determine boundaries from which to measure local regulated vegetated buffers.

The mostly undeveloped study site consisted primarily of a forested hillslope down to an intermittent tributary to the Willamette River. To the north and extending offsite was a parking lot. The eastern portion of the site consisted of a hillslope up to S Walling Circle which defined the eastern study site boundary. The tributary flowed northeast through the bottom of a well-defined channel, exiting via a drain grate in the northeast part of the site. Vegetation was dominated by a mix of cottonwood (*Populus balsamifera*) and cherry (*Prunus avium*) trees with a few western red cedar (*Thuja plicata*) and Oregon oak (*Quercus garryana*). Himalayan blackberry (*Rubus armeniacus*) as well as knotweed (*Fallopia japonica*) and English ivy (*Hedera helix*) were dominant in the understory and climbing into the tree canopy. Vegetation surrounding the stream was predominantly blackberry thicket.

Surrounding land use was commercial to the north and east and residential to the west and south.

(B) Site Alterations

Aerial photographs for the time period between 2000 and 2024, available from Google Earth, were reviewed to assess site history. The site appears generally unchanged throughout this time period, dominated by what appears to be Himalayan blackberry through most of the site and forested in the north and south extents; area of canopy cover increases in the center of the site gradually through the time period. The stream is not visible in aerial photographs but the drain grate in the northeast portion of the site is visible from 2021 onward. A large fill pile was observed at the northern peak of the property (Photo Point 5).

(C) Precipitation Data and Analysis

Precipitation data for the date of fieldwork and the time period preceding it were reviewed to evaluate observed wetland hydrology conditions relative to actual and statistically normal precipitation. Precipitation that deviates from normal ranges can

affect site conditions and impact observed wetland hydrology indicators. Precipitation data were acquired from the Natural Resources Conservation Service (NRCS) Agricultural Applied Climate Information System (AgACIS) for the Oregon City station to provide context for observed hydrological conditions of the study area at the time of the site visit (AgACIS 2022-2024). Tables 1 -3 provide the precipitation data, comparison to the normal water year average, as well as normal monthly ranges of precipitation in the three months prior to site visits, representing 70% probability as reported for the Oregon City NRCS WETS station (NRCS 1991-2021).

Table 1. Precipitation Summary for the Date of Fieldwork and Preceding Water Year (October 1, 2022 – Date of Fieldwork)

	Observed Precipitation*				
Date of Field Visit	Date of Visit (in.)	2 weeks prior (in.)	Water Year to-Date (in.)	Normal Water Year thru August[1] (in.)	% of Normal Water Year thru August
September 7, 2023	0.0	0.17	39.00	41.95	93%
September 2, 2024	0.0	0.15	42.24	41.95	101%

*Data provided by NRCS AgACIS data from the Oregon City Station, OR, 2022-2024
[1]Data provided by NRCS WETS station for Oregon City Station, OR, 1991-2021

Table 2. Precipitation Assessment for The Three Months Preceding 2024 Fieldwork

Month	Total Precipitation (inches)[1]	WETS Normal Range (inches)[2]	Condition (Value)	Month Weight	Weighted Condition (value*weight)[3]
August	0.63	0.16-0.60	Wet (3)	3	9
July	0.05	0.15-0.45	Dry (1)	2	2
June	1.64	0.94-1.82	Normal (2)	1	2
				Sum	**13 (Normal)**

[1]Data provided by NRCS AgACIS data from the Oregon City station, OR, 2023-2024
[2]Data provided by NRCS WETS station for Oregon City station, 1991-2021
[3]Sum = 6-9: Dry conditions, Sum = 10-14: Normal conditions, Sum = 15-18: Wet conditions

Table 3. Precipitation Assessment for The Three Months Preceding 2023 Fieldwork

Month	Total Precipitation (inches)[1]	WETS Normal Range (inches)[2]	Condition (Value)	Month Weight	Weighted Condition (value*weight)[3]
August	0.03	0.16-0.60	Dry (1)	3	3
July	0.01	0.15-0.45	Dry (1)	2	2
June	0.68	0.94-1.82	Dry (1)	1	1
Sum					**6 (Dry)**

[1]Data provided by NRCS AgACIS data from the Oregon City station, OR, 2022-2023

[2]Data provided by NRCS WETS station for Medford Intl. Airport station, 1991-2021
[3]Sum = 6-9: Dry conditions, Sum = 10-14: Normal conditions, Sum = 15-18: Wet conditions

Fieldwork took place on September 7, 2023 and again on September 2, 2024; no precipitation was observed on either date. In the two weeks preceding fieldwork, 0.37 inches of precipitation 0.17 and 0.15 inches of precipitation was observed, respectively. Precipitation for the previous water year (October 1, 2022-September 7, 2023) was observed at 93% of normal and precipitation for the current water year (Oct.1, 2023-September 2, 2024) was 101% of normal as compared to the NRCS WETS table for Oregon City.

Based on a weighted summary of weather conditions in the three months preceding fieldwork, hydrological conditions were estimated to be dry during the time of 2023 fieldwork and normal during the time of 2024 fieldwork.

(D) Site Specific Methods

Prior to visiting the site, the following existing data and information was reviewed:

- Clackamas County tax map (Figure 2)
- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI), Oregon Department of Forestry (ODF) stream mapping, and the U.S. Geological Survey (USGS) National Hydrography Dataset (NHD; Figure 3)
- U.S. Department of Agriculture (USDA) National Resource Conservation Service (NRCS) gridded Soil Survey Geographic (gSSURGO) database for Clackamas County (Figure 4)
- Recent and historical aerial photographs provided by Google Earth (Figures 5a-5b)
- Department of Oregon Geology and Mineral Industries (DOGAMI) 2009 LiDAR data (Figure 6)

One soil series was mapped within the study site boundary according to the USDA NRCS soil survey for Clackamas County: Cascade silt loam, 8 to 15 percent slopes, a non-hydric, somewhat poorly drained soil series.

Schott & Associates visited completed the initial fieldwork on September 7, 2023 and revisited the site on September 4, 2024. Data were collected according to methods described in the *Corps Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Delineation Manual: Western Mountains, Valleys, and Coast (Version 2)* (Environmental Laboratory 2010). Three sample plots were established onsite to document existing conditions. For each sample plot data on vegetation, hydrology, and soils were collected, recorded in the field, and later transferred to data forms (Appendix B). Plant indicator status was determined using the 2022 National Wetland Plant List (Corps 2022). The onsite stream was delineated via the ordinary high-water mark (OHWM) as indicated by top of bank, wrack or scour lines, and change in vegetation communities.

Identified wetlands and waters are classified according to the USFWS *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979).

Representative ground level photographs were recorded to document site conditions (Appendix C; Figure 6).

(E) Description of All Wetlands and Other Non-Wetland Waters

Based on soils, vegetation, and hydrology data taken onsite, no wetlands were identified onsite. One intermittent drainage was delineated based on onsite conditions. Sample plot, OHWM, and photo point locations are shown in Figure 6.

One intermittent tributary (138 lf onsite) to the Willamette River was mapped flowing northeast through the eastern portion of the site, exiting via a drain grate near the northeast property corner. The banks of the stream were nearly vertical (approximately 2-3 feet) and clearly defined with five inches or less of slow to moderately flowing water observed at the time of both site visits. The maximum width onsite was seven feet. OHWM indicators were based on top of bank (at vertical embankments). The substrate was a mix of cobble/gravel and sand.

The stream was classified as a riverine flow through (RFT) HGM class and a riverine intermittent streambed seasonally flooded (RS4BC) Cowardin class. Adjacent riparian vegetation consisted predominantly of thickets of Himalayan blackberry (FAC) with some vine maple (*Acer circinatum*, FAC), red osier dogwood (*Cornus sericea*, FACW), and cherry trees (FACU).

The western portion of the property consisted of a moderately sloped hillside dominated by a forested canopy of cottonwood (FAC) and cherry trees with a few western red cedar (FAC) in the overstory. Himalayan blackberry, English ivy (FACU), and a patch of knotweed (FACU) were dominant in the understory. Soils were generally brown (10YR 3/2) silt loam with no redoximorphic concentrations. No hydrology indicators were observed outside the intermittent drainage.

(F) Deviation from LWI or NWI

LWI mapping does not identify any water resources onsite. NWI mapping shows an R4SBC water corresponding approximately with the location of the onsite drainage.

(G) Mapping Method

OWHM, photo point, and sample plot locations were recorded with a handheld Trimble DA2 GPS unit capable of sub-meter accuracy. An average horizontal accuracy of 0.6m was achieved during fieldwork. These data were converted to ESRI shapefile and mapped using ArcMap 10.8.2 desktop software. The study site boundary was sourced from the Clackamas County GIS department and is assumed to have an accuracy of at least 1m.

(H) Additional Information

Oregon Department of Forestry (ODF) mapping shows a small sized stream running northeast along the eastern edge of the study site boundary (ORWAP Map Viewer; 2024) correlating approximately with the onsite drainage. The NHD mapped an intermittent drainage with a piped section to the north starting at Rose Way and just offsite to the south.

(I) Summary and Conclusions

Based on vegetation, soils, and hydrology and OHWM data, no wetlands and one water (138 lf) were observed within the study site. The onsite drainage is a tributary to the Willamette River and classified as RFT/R4SBC.

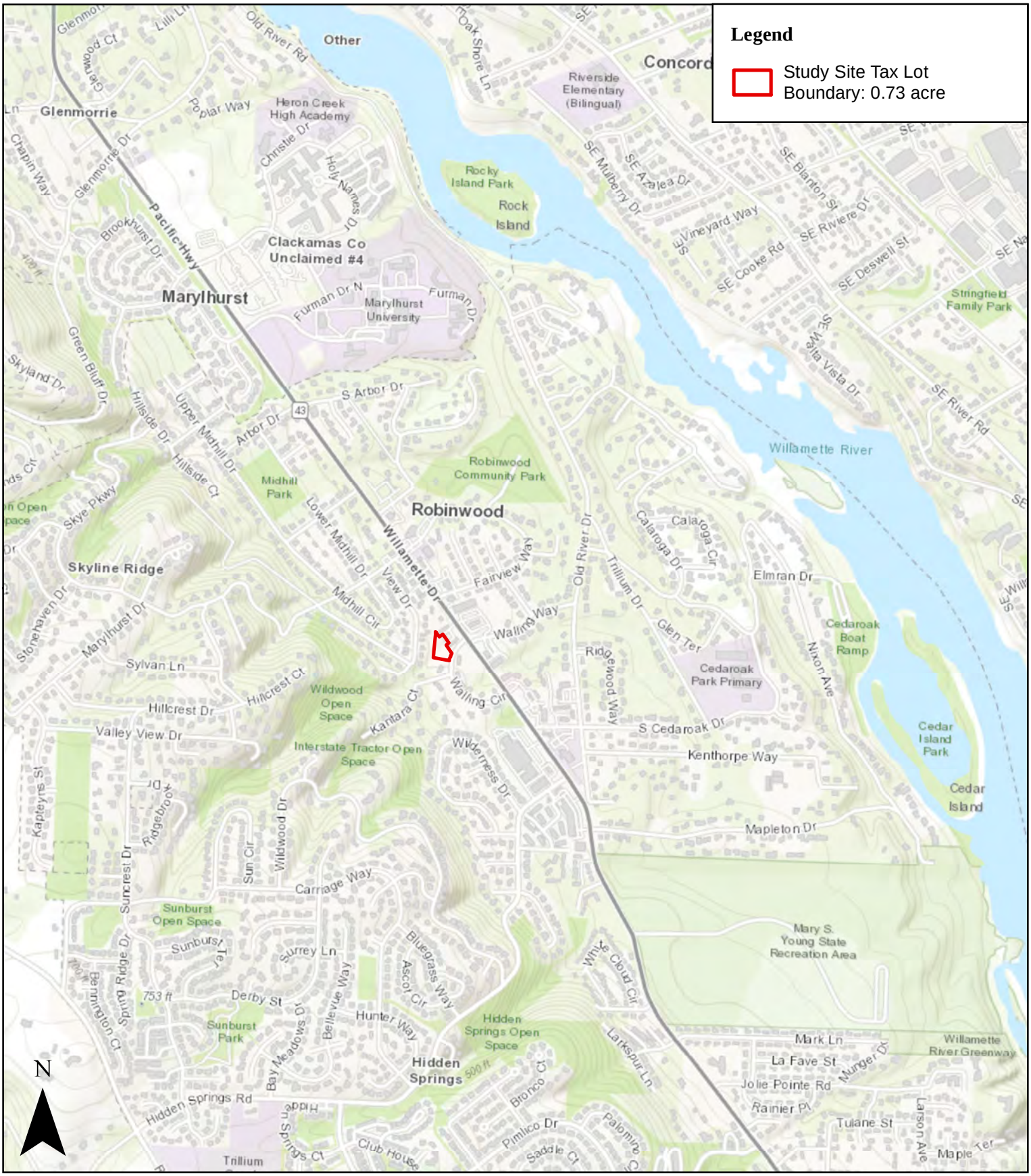
(J) Disclaimer

This report documents the investigation, best professional judgment, and conclusions of the investigators. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State lands in accordance with OAR 141-090-0005 through 141-090-0055.

Additionally, this report is a preliminary determination of potential Waters of the US (WOTUS) regulated by the Corps of Engineers under the Clean Water Act. It is used at your own risk until an Approved Jurisdictional Determination (AJD) has been issued by that agency.

APPENDIX A: FIGURES

FIGURE 1: LOCATION MAP



Date: 9/18/2024

Data Source: ESRI, 2024; Clackamas County GIS Dept, 2024

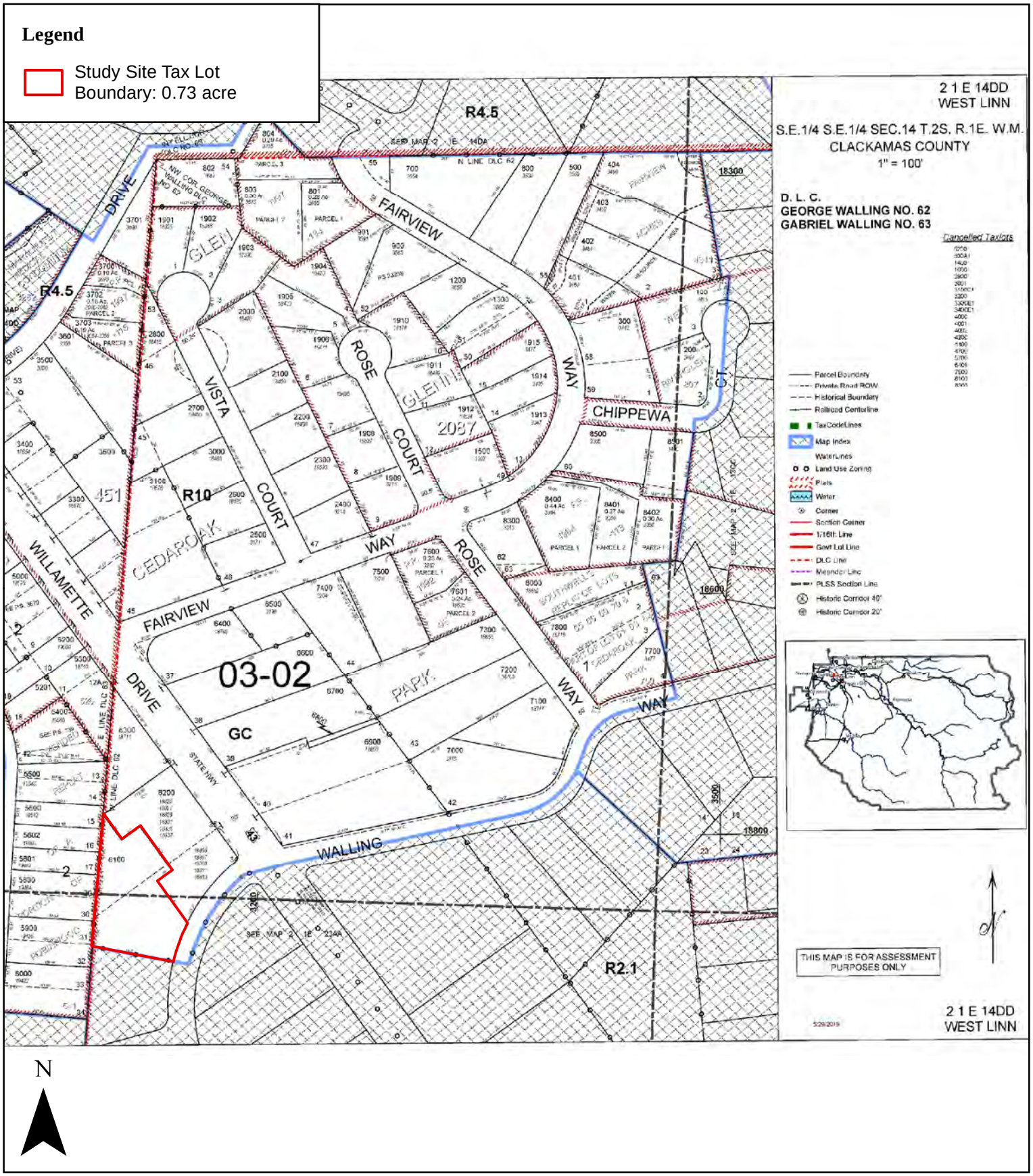
Figure 1.Location Map

Willamette Drive Project Site: S&A # 3096

SCHOTT & ASSOCIATES, INC.

0 500 1,000 2,000 Feet

FIGURE 2: TAX MAP



Date: 9/18/2024

Data Source: ESRI, 2024; Clackamas County GIS Dept, 2024

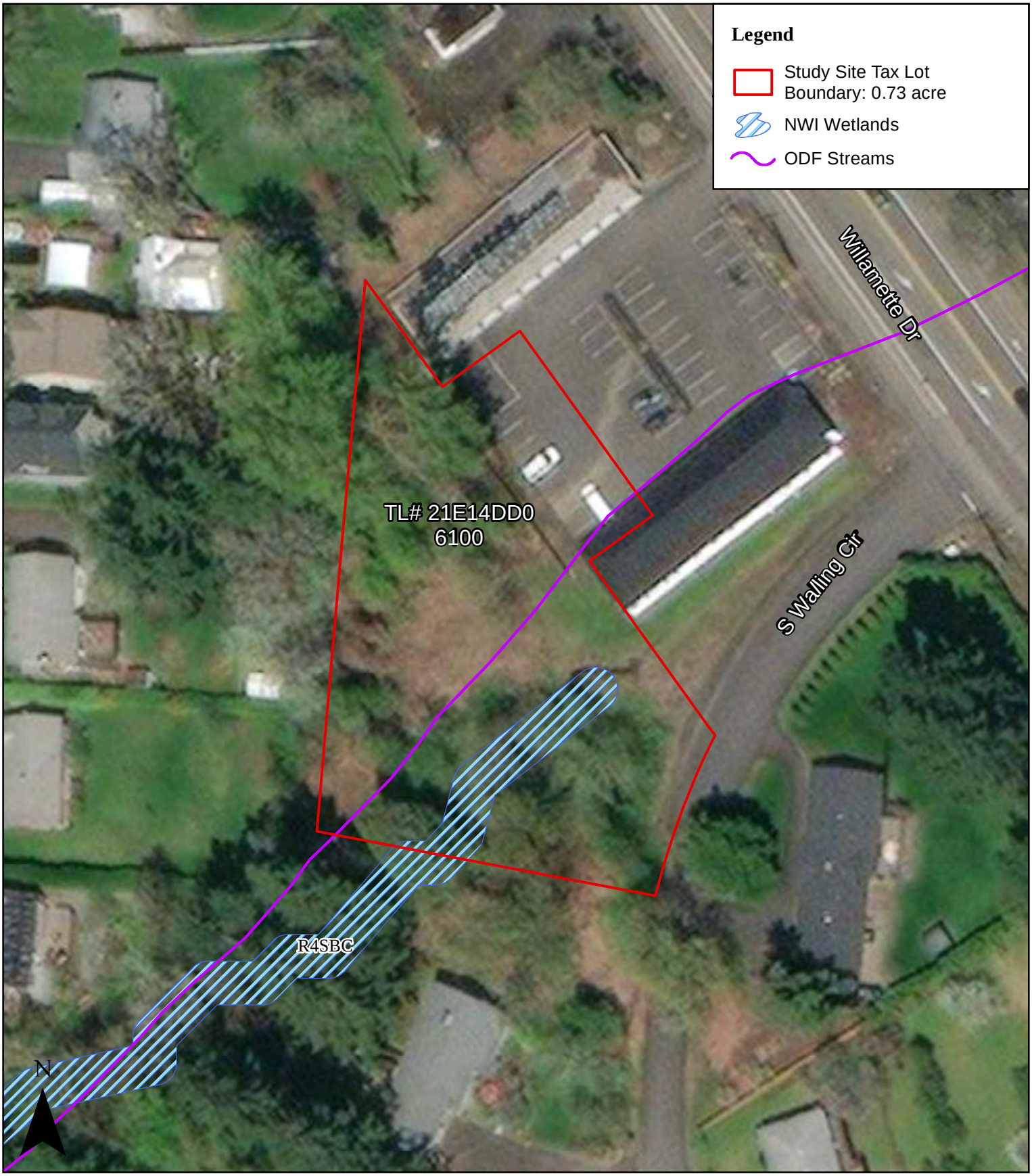
Figure 2. Tax Map - 21E14DD

Willamette Drive Project Site: S&A # 3096

SCHOTT & ASSOCIATES, INC.

0 100 200 400 Feet

FIGURE 3: WETLAND INVENTORY MAP



Date: 9/18/2024

Data Source: ESRI, 2024; Clackamas County GIS Dept, 2024; USFWS, NWI, 2024; ODF, 2024; West Linn LWI, 2005

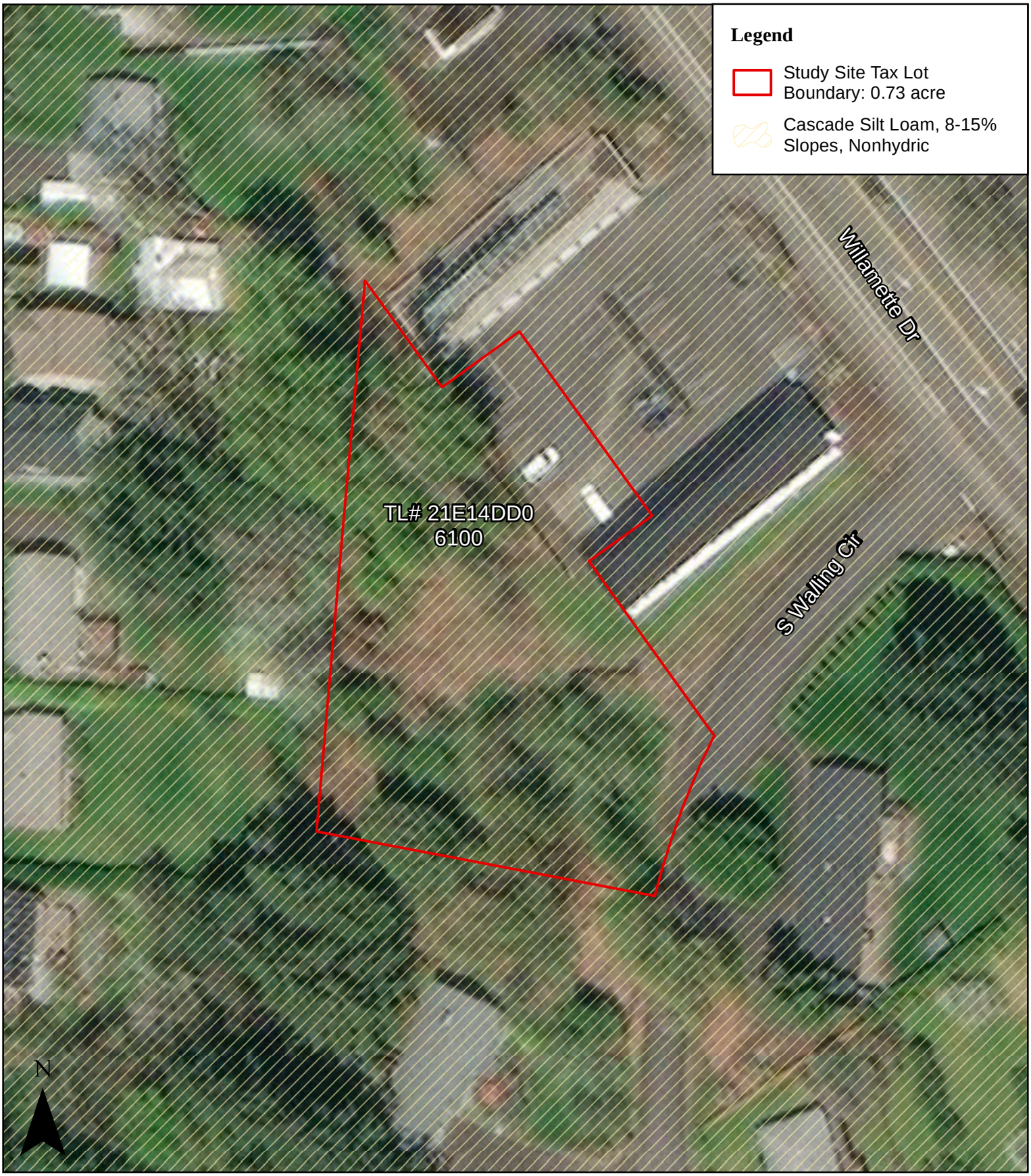
Figure 3. Wetland Inventory Map

Willamette Drive Project Site: S&A # 3096

SCHOTT & ASSOCIATES, INC.

0 25 50 100 Feet

FIGURE 4: USDA/NRCS SOIL SURVEY MAP



Date: 9/18/2024

Data Source: ESRI, 2024; Clackamas County GIS Dept, 2024; USDA, NRCS, 2024

Figure 4. Soil Survey Map

Willamette Drive Project Site: S&A # 3096

SCHOTT & ASSOCIATES, INC.

0 25 50 100 Feet

FIGURE 5A: RECENT AERIAL IMAGE

Date: 9/18/2024

Data Source: ESRI, 2024; Clackamas County GIS Dept, 2024

Figure 5a. Recent Aerial Imagery - April 27, 2023

Willamette Drive Project Site: S&A # 3096

SCHOTT & ASSOCIATES, INC.

0 25 50 100 Feet

FIGURE 5B: HISTORICAL AERIAL IMAGE

Date: 9/18/2024

Data Source: ESRI, 2024; Clackamas County GIS Dept, 2024

Figure 5b. Historical Aerial Imagery - July 28, 2000

Willamette Drive Project Site: S&A # 3096

SCHOTT & ASSOCIATES, INC.

0 25 50 100 Feet

FIGURE 6: WETLAND DELINEATION MAP

Date: 9/18/2024

Data Source: ESRI, 2024; Clackamas County GIS Dept, 2024; DOGAMI, 2009

Figure 6. Wetland Delineation Map

Willamette Drive Project Site: S&A # 3096

SCHOTT & ASSOCIATES, INC.

0 25 50 100 Feet

APPENDIX B: DATA FORMS

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

Project/Site: 18825 Willamette Drive City/County: West Linn/Clackamas Sampling Date: Sep. 7, 2023
Applicant/Owner: J. Matin State: OR Sampling Point: 1
Investigator(s): J. Forgione Section, Township, Range: Sec.14DD, T1N, R1E
Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): none Slope (%): 8-15%
Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 45.3891190 Long: -122.6447436 Datum:
Soil Map Unit Name: Cascade SiL NWI Classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" Present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes x No	**Is the Sampled Area within a Wetland?** **Yes** **No x**
Hydric Soil Present?	Yes No x	
Wetland Hydrology Present?	Yes No x	

Remarks: Plot located outside of stream on a hillside. Significantly higher in elevation. No wetlands associated with the stream in this area. Plot was revisted in 2024, no signicfant changes noted.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status?
1.			
2.			
3.			
4.			
Total Cover:	0		
Shrub Stratum			
1. *Rubus armeniacus*	50	Y	FAC
2. *Sambucus racemosa*	10		FACU
3.			
4.			
5.			
Total Cover:	60		
Herb Stratum			
1. *Geranium robertianum*	20	Y	FACU
2. *Dipsacus fullonum*	15	Y	FAC
3. *Equisetum arvense*	10		FAC
4. *Polystichum munitum*	5		FACU
5. *Urtica dioica*	5		FAC
6.			
7.			
8.			
9.			
10.			
11.			
Total Cover:	55		
Woody Vine Stratum			
1. *Clematis ligusticifolia*	30	Y	FAC
2.			
Total Cover:	30		

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **3** (A)
Total Number of Dominant Species Across All Strata: **4** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **75%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	**0**
FACW species		x2 =	**0**
FAC species		x3 =	**0**
FACU species		x4 =	**0**
UPL species		x5 =	**0**
Column Totals:	**0** (A)		**0** (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
- 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptation1 (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks:

SOIL

Sampling Point: 1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR3/2	100					SiL	

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

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

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]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 (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___	
Water table Present?	Yes ___	No X	Depth (inches): ___	
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___	**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: 18825 Willamette Drive City/County: West Linn/Clackamas Sampling Date: Sep. 7, 2023
Applicant/Owner: J. Matin State: OR Sampling Point: 2
Investigator(s): J. Forgione Section, Township, Range: Sec.14DD, T1N, R1E
Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): convex Slope (%): 8-15%
Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 45.389141 Long: -122.644631 Datum:
Soil Map Unit Name: Cascade SiL NWI Classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" Present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes x No	**Is the Sampled Area within a Wetland?** **Yes** **No x**
Hydric Soil Present?	Yes No x	
Wetland Hydrology Present?	Yes No x	

Remarks: Plot adjacne to stream, approximatley 5 feet higher in elevation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status?
1.			
2.			
3.			
4.			
Total Cover:	0		

Shrub Stratum			
1. *Rubus armeniacus*	10	Y	FAC
2.			
3.			
4.			
5.			
Total Cover:	10		

Herb Stratum			
1. *Equisetum arvense*	40	Y	FAC
2. *Cirsium vulgare*	20	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
Total Cover:	60		

Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **2** (A)
Total Number of Dominant Species Across All Strata: **3** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **67%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	**0**
FACW species		x2 =	**0**
FAC species		x3 =	**0**
FACU species		x4 =	**0**
UPL species		x5 =	**0**
Column Totals:	**0** (A)		**0** (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
- 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptation1 (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks:

SOIL

Sampling Point: 2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR3/3	100					SiL	Rock and cobble mixed in

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

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

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]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 (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

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: 18825 Willamette Drive City/County: West Linn/Clackamas Sampling Date: Sep. 2, 2024
Applicant/Owner: J. Matin State: OR Sampling Point: 3
Investigator(s): J. Forgione Section, Township, Range: Sec.14DD, T1N, R1E
Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): none Slope (%): 8-15%
Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 45.3892202 Long: -122.6450011 Datum:
Soil Map Unit Name: Cascade SiL NWI Classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" Present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes x No	**Is the Sampled Area within a Wetland?** **Yes** **No x**
Hydric Soil Present?	Yes No x	
Wetland Hydrology Present?	Yes No x	

Remarks: Lots of litter and debris in the area. No sign of wetlands/waters. Area is sloped and dry.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status?
1. *Quercus garryana*	15	Y	FACU
2. *Populus balsamifera*	20	Y	FAC
3.			
4.			
Total Cover:	35		

Shrub Stratum			
1. *Rubus armeniacus*	20	Y	FAC
2. *Populus balsamifera*	25	Y	FAC
3.			
4.			
5.			
Total Cover:	45		

Herb Stratum			
1. *Polygonum cuspidatum*	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
Total Cover:	5		

Woody Vine Stratum			
1. *Clematis ligusticifolia*	60	Y	FAC
2.			
Total Cover:	60		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **4** (A)
Total Number of Dominant Species Across All Strata: **6** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **67%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	**0**
FACW species		x2 =	**0**
FAC species		x3 =	**0**
FACU species		x4 =	**0**
UPL species		x5 =	**0**
Column Totals:	**0** (A)		**0** (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
- 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptation1 (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks:

SOIL

Sampling Point: 3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR3/2	100					SiL	

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

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

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]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 (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

APPENDIX C: GROUND LEVEL PHOTOGRAPHS

Photo Point 1. Facing north (September 2023).

Photo Point 1. Facing east (September 2023).

Schott & Associates
P.O. Box 589
Aurora, OR. 97002
503.678.6007

Photo Point 1. Facing south (September 2023).

Photo Point 1. Facing west (September 2023).

Schott & Associates
P.O. Box 589
Aurora, OR. 97002
503.678.6007

Photo Point 2. Facing northeast, along creek (September 2023).

Photo Point 2. Facing northwest (September 2023).

Schott & Associates
P.O. Box 589
Aurora, OR. 97002
503.678.6007

Photo Point 2. Facing south, along creek (September 2023).

Photo Point 3. Facing southwest (September 2023).

Schott & Associates
P.O. Box 589
Aurora, OR. 97002
503.678.6007

Photo Point 3. Facing southeast (September 2023).

Photo Point 3. Facing east, showing storm drain inlet (September 2023).

Schott & Associates
P.O. Box 589
Aurora, OR. 97002
503.678.6007

Photo Point 3. Facing northwest (September 2023).

Photo Point 4. Facing northwest (September 2023).

Schott & Associates
P.O. Box 589
Aurora, OR. 97002
503.678.6007

Photo Point 4. Facing northeast (September 2023).

Photo Point 4. Facing southeast (September 2023).

Schott & Associates
P.O. Box 589
Aurora, OR. 97002
503.678.6007

Photo Point 4. Facing southwest (September 2023).

Photo Point 5. Facing north (September 2024).

Schott & Associates
P.O. Box 589
Aurora, OR. 97002
503.678.6007

Photo Point 5. Facing northeast (September 2024).

Photo Point 5. Facing southeast (September 2024).

Schott & Associates
P.O. Box 589
Aurora, OR. 97002
503.678.6007

Photo Point 5. Facing south (September 2024).

Schott & Associates
P.O. Box 589
Aurora, OR. 97002
503.678.6007

APPENDIX D: LITERATURE CITATIONS

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APPENDIX B: SITE DEVELOPMENT PLAN AND MITIGATION ENHANCEMENT AREA

PRELIMINARY PLANS FOR

MATIN PARKING FACILITY

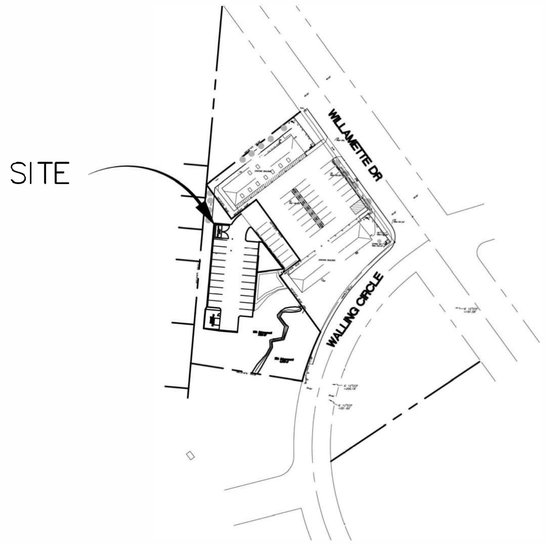
WEST LINN, OREGON

VICINITY MAP

NOT TO SCALE

SHEET INDEX

C100	COVER SHEET
C200	EXISTING CONDITIONS
C300	SITE PLAN



LOCATION MAP

SCALE: 1"=100'

PROPERTY DESCRIPTION

TAX MAP & TL:
TAX MAP 2 1E 14DD, TAX LOT 6100

SITE SIZE:
0.72 ACRES

PROPOSAL:
PARKING LOT

STREET ADDRESS

ADJACENT TO
18825 WILLAMETTE DR
WEST LINN, OR 97068

APPLICANT

JORDAN MATIN
18825 WILLAMETTE DR
WEST LINN, OR 97068
PHONE—971—285—2180
EMAIL: JMATIN@MATINREALESTATE.COM

ENGINEER

WESTLAKE CONSULTANTS, INC.
PACIFIC CORPORATE CENTER
15115 S.W. SEQUOIA PARKWAY,
SUITE 150 TIGARD, OREGON 97224
PHONE: (503) 684—0652
CONTACT: DANIEL BAILEY, PE
EMAIL: DBAILEY@WESTLAKECONSULTANTS.COM

ENVIRONMENTAL CONSULTANT

SCHOTT & ASSOCIATES, INC.
PHONE: (503) 678—6007
CONTACT: JODI FORGIONE, PWS GE
OWNER, WETLAND ECOLOGIST
PO BOX 589
AURORA, OREGON 97002

ATTENTION:

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952—001—0010 THROUGH OAR 952—001—0090. YOU MAY OBTAIN COPIES OF THESE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503) 232—1987).

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UTILITY VERIFICATION:

CONTRACTOR SHALL POTHOLE TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION AND SHALL PROVIDE WESTLAKE CONSULTANTS, INC. 72—HOURS NOTICE OF ANY POTENTIAL CONFLICTS.

ORS UTILITY STATEMENT

THIS DESIGN COMPLIES WITH ORS 92.044 (7) IN THAT NO UTILITY INFRASTRUCTURE IS DESIGNED TO BE WITHIN ONE (1) FOOT OF A SURVEY MONUMENT LOCATION SHOWN ON A SUBDIVISION OR PARTITION PLAT. NO DESIGN EXCEPTIONS NOR FINAL FIELD LOCATION CHANGES SHALL BE PERMITTED IF THAT CHANGE WOULD CAUSE ANY UTILITY INFRASTRUCTURE TO BE PLACED WITHIN THE PROHIBITED AREA.

811 Know what's **below.** **Call** before you dig.

WESTLAKE CONSULTANTS
Planning | Engineering | Surveying

MATIN PARKING FACILITY
WEST LINN, OR
COVER SHEET

PRELIMINARY

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REVISIONS NO.	DATE	DESCRIPTION	DRAFT BY:	CHECK BY:

SHEET
P100

JOB NO.
3038—001

DRAWING NAME: J:\3038-001 24\6. ENGINEERING\3. CAD\PRODUCTION\1. LU\3038-001 P100 COVER SHEET.DWG 2026/01/16 - 11:25AM - MIA

JOB NO. 3038-001	SHEET P200	REVISIONS						
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PRELIMINARY

MATIN PARKING FACILITY

WEST LINN, OR

EXISTING CONDITIONS AND DEMOLITION

WESTLAKE CONSULTANTS

Planning | Engineering | Surveying

LEGEND

- PERMANENT IMPACT WITHIN REDUCED WRA
- TEMPORARY IMPACT WITHIN PROPOSED WRA
- PERMANENT IMPACT WITHIN PROPOSED WRA

WESTLAKE CONSULTANTS
Planning | Engineering | Surveying

MATIN PARKING FACILITY

WEST LINN, OR

SITE PLAN

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SHEET
P300

JOB NO.
3038-001

DRAWING NAME: J:\3038-001.24\6. ENGINEERING\3. CAD\EXHIBITS\2026-06-26 SITE IMPACTS\3038-001 P300 SITE PLAN.DWG 2026/06/26 - 03:26PM - JDM

WESTLAKE CONSULTANTS

Planning | Engineering | Surveying

MATIN PARKING FACILITY STORMWATER QUALITY MEMO

June 17, 2026

The purpose of this memo is to demonstrate that the criteria for water quality and detention set forth in the City of West Linn Stormwater Management Manual are met. Water quality treatment and detention shall be achieved using private infiltration facilities designed in accordance with section 1.5.2-3 of the Stormwater Management Manual.

The existing site is a 0.72 acre lot of undeveloped land located behind an existing parking lot. The NRCS Web Soil Survey Report has been generated, and hydrologic soil type C has been determined. A geotechnical investigation conducted by GeoPacific Engineering Inc. showed no infiltration occurs onsite.

The proposed site shows development of 9,424 sf of impervious areas, consisting of proposed parking spaces, storage structures, and a patio area. Runoff from new impervious areas will be captured in a Contech Stormfilter catch basin, which will provide water quality treatment using three low drop cartridges. Treated runoff will then be conveyed to a system of 24" detention pipes for flow control. Flows exiting the detention system will be restricted by a 1" orifice, which provides flow control to the maximum extent practicable, while adhering to minimum orifice size standards outlined in section 3.7.3 of the City of West Linn stormwater management manual. See the table below for pre and post-development flows and the attached HydroCAD report for details on detention system dimensions.

Table 1 – Detention Flow Rate Summary

DESIGN STORM EVENT	DEPTH (IN)	PRE-DEVELOPED PEAK FLOW RATE (CFS)	POST-DEVELOPED PEAK FLOW RATE BEFORE FACILITY (CFS)	POST-DEVELOPED PEAK FLOW RATE AFTER FACILITY (CFS)
2 YEAR, 24-HR	2.50	0.007	0.125	0.025
10 YEAR, 24-HR	3.45	0.032	0.175	0.030
25 YEAR, 24-HR	3.90	0.047	0.198	0.034

With a peak-25-year water surface elevation of 188.00', the proposed detention system meets freeboard requirements as the lowest upstream rim has an elevation of 189.00'.

The proposed orifice will be situated in a flow control manhole, which will also contain an overflow weir for storm events larger than the design storms used to size the detention system. Detained

flows will outfall directly uphill of the water resource area located southeast of the development, then enter a public 24” culvert.

This memo demonstrates how it is anticipated that the stormwater design will comply with the requirements set forth by the City of West Linn Stormwater Management Manual.

Josh Meyer

Josh Meyer, PE
Project Engineer
Westlake Consultants, Inc.

List of Addendums:

1. Proposed Site Plan
2. NCRS Web Soil Survey Report
3. Geotechnical Report – GeoPacific Engineering Inc.
4. HydroCAD Reports – Detention Pipe System and Water Quality Flow
5. Stormfilter Sizing Spreadsheet

Attachment 1

LEGEND

- SS SS SS — PROPOSED SANITARY LATERAL
- SD SD SD — PROPOSED STORM MAIN
- (D) — PROPOSED MANHOLE
- PROPOSED STORMFILTER CATCH BASIN

DRAWING NAME: J:\3038-001.24\6. ENGINEERING\3. CAD\PRODUCTION\1. LU\3038-001 P500 CUP.DWG 2026/06/26 - 08:25AM - JDM

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MATIN PARKING FACILITY

WEST LINN, OR

COMPOSITE UTILITY PLAN

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1	6/8/2026	COMPLETENESS LETTER REDLINES	JDM	DAB

SHEET
P500

JOB NO.
3038-001

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Clackamas County Area, Oregon

January 22, 2026

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:834 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N 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 1:20,000.

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: Clackamas County Area, Oregon
Survey Area Data: Version 22, Sep 9, 2025

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

Date(s) aerial images were photographed: Mar 1, 2024—Jul 1, 2024

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
13C	Cascade silt loam, 8 to 15 percent slopes	3.7	100.0%
Totals for Area of Interest		**3.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Clackamas County Area, Oregon

13C—Cascade silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2235
Elevation: 250 to 1,400 feet
Mean annual precipitation: 50 to 60 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 165 to 210 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Cascade and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cascade

Setting

Landform: Hillslopes
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Interfluve, crest
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty material

Typical profile

H1 - 0 to 11 inches: silt loam
H2 - 11 to 21 inches: silt loam
H3 - 21 to 60 inches: silty clay loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 30 inches to fragipan
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F002XB005OR - Loess Hill Group
Forage suitability group: Somewhat Poorly Drained (G002XY005OR)
Other vegetative classification: Somewhat Poorly Drained (G002XY005OR)
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

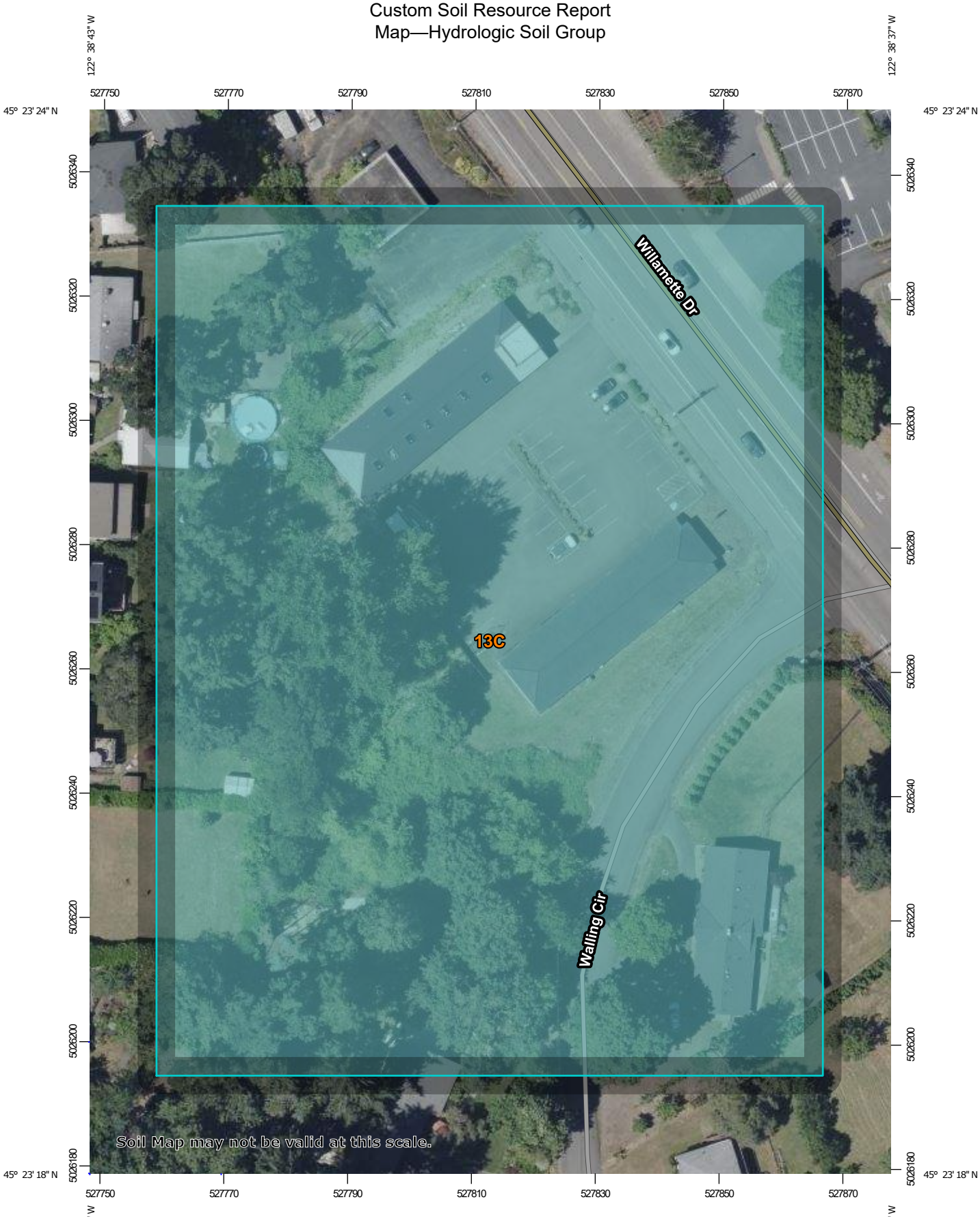
Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.



Map Scale: 1:834 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 10 20 40 60

Feet
0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

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

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

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 1:20,000.

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: Clackamas County Area, Oregon
Survey Area Data: Version 22, Sep 9, 2025

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

Date(s) aerial images were photographed: Mar 1, 2024—Jul 1, 2024

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.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
13C	Cascade silt loam, 8 to 15 percent slopes	C	3.7	100.0%
Totals for Area of Interest			**3.7**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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Real-World Geotechnical Solutions
Investigation • Design • Construction Support

Geotechnical Engineering Report

18825 Willamette Drive Parking Lot Expansion

18825 Willamette Drive
West Linn, Oregon

GeoPacific Engineering, Inc. Job No. 26-6985
May 29, 2026

14835 SW 72nd Avenue
Portland, Oregon 97224

Tel (503) 598-8445
Fax (503) 941-9281

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Real-World Geotechnical Solutions
Investigation • Design • Construction Support

May 29, 2026
Project No. 26-6985

Jordan Matin
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SUBJECT: **GEOTECHNICAL ENGINEERING REPORT**
18825 WILLAMETTE DRIVE PARKING LOT EXPANSION
18825 WILLAMETTE DRIVE
WEST LINN, OREGON

1.0 PROJECT INFORMATION

This report presents the results of a geotechnical engineering study conducted by GeoPacific Engineering, Inc. (GeoPacific) for the above-referenced project. The purpose of our investigation was to evaluate subsurface conditions at the site, and to provide geotechnical recommendations for site development. This geotechnical study was performed in accordance with GeoPacific Proposal No. P-9322, dated January 23, 2026, and your subsequent authorization of our proposal and *General Conditions for Geotechnical Services*.

Site Location:	18825 Willamette Drive 21E14DD 06100 West Linn, Oregon (see Figure 1)
Developer:	Jordan Matin Matin Real Estate 18825 Willamette Drive West Linn, Oregon 97068 Phone: (971) 285-2180 Email: jmatin@matinrealestate.com
Jurisdictional Agency:	City of West Linn, Oregon
Geotechnical Engineer:	GeoPacific Engineering, Inc 14835 SW 72nd Avenue Portland, Oregon 97224 Tel (503) 598-8445

2.0 SITE AND PROJECT DESCRIPTION

The subject site is an irregularly shaped parcel adjacent to the existing parking lot and commercial buildings located at 18825 Willamette Drive in the City of West Linn, Oregon. The site is approximately 0.5 acres in size. The property is bordered by Willamette Drive to the northeast, S Walling Circle to the southeast, a wooded area to the south, and residential properties to the west. The property is currently occupied by two commercial structures and associated paved areas. The subject site is located directly southwest of the commercial structures and consists of wooded areas. Topography on the site is sloping up towards the southwest, with site elevations ranging from approximately 185 to 195 feet amsl. At the time of writing this report, the site has not been developed.

It is our understanding that the project will involve the construction of a new parking lot with a storage building and trash enclosure, a stormwater management facility, and associated underground utilities. We have not been provided with a grading plan at this time but we anticipate cuts and fills will be on the order of 4 feet or less.

3.0 REGIONAL GEOLOGIC SETTING

Regionally, the subject site lies within the Willamette Valley/Puget Sound lowland, a broad structural depression situated between the Coast Range on the west and the Cascade Range on the east. A series of discontinuous faults subdivide the Willamette Valley into a mosaic of fault-bounded, structural blocks (Yeats et al., 1996). Uplifted structural blocks form bedrock highlands, while down-warped structural blocks form sedimentary basins.

The site is underlain by the Quaternary age (last 1.6 million years) Catastrophic Flood Deposits associated with repeated glacial outburst flooding of the Willamette Valley (Beeson et al., 1989; Madin, 1990). The last of these outburst floods occurred about 10,000 years ago. These flood deposits typically consist of horizontally layered, micaceous, silt to coarse sand forming poorly defined to distinct beds less than 3 feet thick. The silt and sand units may contain inclusions of gravel.

Regional geologic mapping indicates the Catastrophic Flood Deposits are underlain by basalt bedrock belonging to the Columbia River Basalt Formation (Beeson et al., 1989; Madin, 1990). The Miocene aged (about 14.5 to 16.5 million years ago) Columbia River Basalt Formation is a thick sequence of lava flows which form the crystalline basement of the Tualatin Valley (Beeson et al., 1989). The basalts are composed of dense, finely crystalline rock that is commonly fractured along blocky and columnar vertical joints. Individual basalt flow units typically range from 25 to 125 feet thick and interflow zones are typically vesicular, scoriaceous, brecciated, and sometimes include sedimentary rocks. The upper portion of the basalt is typically weathered to a residual soil composed of silt to clay.

The Web Soil Survey (United States Department of Agriculture, Natural Resource Conservation Service (USDA NRCS 2026 Website), indicates that near-surface soils consist of Cascade Silt Loam soils (13C), generally consisting of deep, moderately well drained, silty or clayey loam.

4.0 FIELD EXPLORATION AND SUBSURFACE CONDITIONS

Our site-specific explorations for this report were conducted on May 6, 2026. Explorations consisted of three exploratory test pits excavated with a medium-sized excavator to depths of ranging from 6.5 to 8.5 feet below the ground surface (bgs). The approximate locations of our explorations are presented on Figures 2 and 3. It should be noted that our explorations were located in the field by pacing or taping distances from apparent property corners and other site features shown on the plans provided. As such, the locations of the explorations should be considered approximate.

A GeoPacific engineering staff member continuously monitored the field exploration program and logged the explorations. Soils observed in the explorations were classified in general accordance with the Unified Soil Classification System (USCS). During exploration, we also noted geotechnical conditions such as soil consistency, moisture, and groundwater conditions. After the completion of each exploration, test pits were backfilled loosely with on-site soil. The following report sections are based on the exploration program and summarize subsurface conditions encountered at the site.

4.1 Soil Descriptions

Topsoil: Directly underlying the ground surface in all of our test pits, we encountered a topsoil layer which generally consisted of moderately organic SILT (OL) with fine roots throughout. In our explorations, the topsoil layer generally extended to depths of 4 to 7 inches, with an average depth of approximately 4 inches.

Undocumented Fill: Directly underlying the topsoil in test pit TP-2, we observed undocumented fill material. The fill material generally consisted of rounded cobbles and angular gravel in a matrix of sandy silt and extended to a depth of approximately 6 feet, overlying native clayey silt (Catastrophic Flood Deposits). We observed cobbles up to 6 inches in diameter. The upper 2 feet of fill consisted of poorly-compacted sandy SILT (ML) with some organics and gravel, and the lower 4 feet consisted of well-compacted silty GRAVEL (GM) and sandy SILT (ML) with varying amounts of 4 to 6 inch diameter cobbles.

Catastrophic Flood Deposits: Underlying the topsoil layer in test pits TP-1 and TP-3, and underlying undocumented fill in test pit TP-2, we encountered Catastrophic Flood Deposits. These soils generally consisted of sandy to clayey SILT (ML) and silty SAND (SM). In general, this material was stiff/dense and was light brown in color.

Catastrophic Flood Deposit soils extended beyond the termination depths of all our test pit explorations, 8.5 feet, 6.5 feet, and 8.5 feet bgs, respectively. Groundwater was encountered within this layer in test pits TP-1 and TP-3 at depths of 8 feet bgs and 2 feet bgs, respectively.

Laboratory tests indicated that this material has an in-situ moisture content of approximately 35 percent. Soil samples collected from test pit TP-1 showed between 49 and 62 percent fines contents for the silty sand and sandy silt layers, respectively. Soil samples collected from test pit TP-3 showed approximately 50 percent fines content for the sandy silt layer.

4.2 Shrink-Swell Potential

Low plasticity fine-grained soils were encountered throughout our test pit explorations. Based upon our observations and our local experience with the soil layers in the vicinity of the subject site, the shrink-swell potential of the soil types is considered to be low. Special design measures are not considered necessary to minimize the risk of uncontrolled damage of foundations as a result of potential soil expansion at this site.

4.3 Groundwater and Soil Moisture

On May 6, 2026 the soil moisture conditions observed in test pits ranged from moist to wet. Groundwater seepage was encountered in test pits TP-1 and TP-3 at depths of 8 feet and 2 feet, respectively. The shallow groundwater seepage encountered in TP-3 was observed to seep solely from the western side wall of the test pit during excavation, indicative of a perched groundwater layer. Seeps and springs may exist in areas not explored, and may become evident during site grading.

Experience has shown that temporary storm related perched groundwater within the near surface soils often occur over fine-grained native deposits such as those beneath the site during the wet season. It is anticipated that groundwater conditions will vary depending on the season, local subsurface conditions, changes in site utilization, and other factors. According to the Oregon Water Resources Department Well Report Mapping Tool, groundwater has been recorded at approximate depths of 10 to 20 feet below the ground surface, with a moderate level of uncertainty.

4.4 Infiltration Testing

On May 6, 2026, a representative of GeoPacific Engineering, Inc. (GeoPacific) performed one pushed-pipe, falling head infiltration test at a depth of 6.5 feet in test pit TP-2. The test was conducted in native soils at the bottom of the test pit. During the test, water levels were measured over regular intervals until three successive measurements showing a consistent infiltration rate were achieved. Descriptions of the soils encountered in the test location are presented on the following table. Approximate test locations are shown in Figure 2. As shown below in Table 1, an infiltration rate was not measurable in the field.

Table 1 - Results of Infiltration Testing

Location	Depth (ft)	Soil Description	Infiltration Rate (in/hr)
TP-2	6.5	Clayey SILT with Sand (ML) – Catastrophic Flood Deposits	0.0

Our observations indicate that subsurface infiltration of stormwater into the native Catastrophic Flood Deposit soils at the test location and depth is not feasible.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Our site investigation indicates that the proposed construction appears to be geotechnically feasible, provided that the recommendations of this report are incorporated into the design and construction phases of the project. In our opinion, there are three primary geotechnical issues which may affect site development:

1. The presence of poorly-compacted fill near the area of the proposed stormwater facility. In our test pit exploration TP-2, we observed a layer of poorly-compacted fill material. This material is not considered suitable for the support of the proposed parking areas or other settlement-sensitive improvements. Due to the variable thicknesses and distribution of the poorly-compacted fill, total settlement and/or differential settlement across the area could exceed tolerable limits if those layers are not removed and replaced with engineered fill. We recommend that soft/loose soils be removed from the influence zones of proposed structures, parking areas, or areas to receive fill and be replaced with engineered fill.

2. The presence of shallow groundwater seepage across the site. Perched groundwater seepage was encountered within test pits TP-1 and TP-3 at depths of 8 feet bgs and 2 feet bgs, respectively. Site grading and excavations for utility trenches may be impacted or complicated by shallow groundwater. A grading plan was not provided to us at the time of writing this report. It is our understanding that cuts and fills will be less than 4 feet, however perched groundwater seepage may be encountered at shallow depths underlying the proposed parking lot extension. If it is desired to reduce the moisture conditions of this area, it may be advantageous to install a trench drain along the southern and/or western property boundary. If a trench drain is desired, GeoPacific may be consulted to review the proposed grading plan and provide recommendations for drainage.

3. Stormwater infiltration within the native subsurface soils is not feasible at the desired location. The native soil at the location of the planned storm facility exhibited an infiltration rate of 0.0 in/hr.

The following report sections provide recommendations for site development and construction in accordance with the current applicable codes and local standards of practice. GeoPacific should be consulted to review the proposed grading and development plans and to provide specific recommendations for the proposed plans prior to construction.

5.1 Site Preparation Recommendations

Areas of proposed construction and areas to receive fill should be cleared of any organic and inorganic debris, disturbed soil, and loose stockpiled soils. Inorganic debris and organic materials from clearing should be removed from the site or stockpiled only in designated areas. Organic-rich soils and root zones should then be stripped from construction areas of the site or where engineered fill is to be placed. The average depth of stripping of existing organic topsoil is estimated to be approximately 6 inches at the site but may be deeper in the vicinity of trees and bushes. The final depth of soil removal should be determined by the geotechnical engineer or designated representative during site inspection while stripping/excavation is being performed.

In areas of roadways, structures, or where engineered fill material is proposed, undocumented fills, disturbed soils, and any subsurface structures (dry wells, basements, driveway and landscaping fill, old utility lines, septic leach fields, etc.) should be completely removed and the excavations backfilled with engineered fill. During our investigation, we observed a layer of poorly-compacted undocumented fill material in test pit TP-2, extending to a depth of approximately 2 feet bgs. The undocumented fill layer is not suitable to support the proposed parking lot or other settlement-sensitive improvements. In areas where structures, pavement, or engineered fill are planned, this poorly-compacted fill layer should be removed and replaced with engineered fill. There may be more undocumented fill present in areas outside of our explorations.

Site earthwork may be impacted by wet weather conditions. Stabilization of subgrade soils may require aeration and re-compaction. If subgrade soils are found to be difficult to stabilize, over-excavation or placement of granular soils may be feasible options. GeoPacific should be onsite to observe preparation of subgrade soil conditions prior to placement of engineered fill.

5.2 Engineered Fill

All grading for the proposed construction should be performed as engineered grading in accordance with the applicable building code at the time of construction with the exceptions and additions noted herein. Site grading should be conducted in accordance with the requirements outlined in the 2021 International Building Code (IBC), and 2022 Oregon Structural Specialty Code (OSSC), Chapter 18 and Appendix J. Areas proposed for fill placement should be prepared as described in the section of this report titled Site Preparation. Site preparation, soil stripping, and grading activities should be observed and documented by a geotechnical engineer or his representative. Proper test frequency and earthwork documentation usually requires daily observation and testing during stripping, rough grading, and placement of engineered fill.

Onsite fine-grained soils generally appear to be suitable for use as engineered fill, however moisture conditioning and compacting fill comprised of a soil-rock mixture may be difficult. If utilized, the fill should be wet of optimum and large cobbles and boulders culled from the fill. Soils may need to be root picked prior to being placed as engineered fill. Soils containing greater than 5 percent organic content should not be used as structural fill. The soil should be blended to achieve uniform proportions prior to compacting and the compaction effort on each lift should be substantial. Oversize material greater than 6 inches in size should not be used within 3 feet of foundation footings, and material greater than 12 inches in diameter should not be used in engineered fill. Imported fill material must be approved by the geotechnical engineer prior to being imported to the site.

Engineered fill should be compacted in horizontal lifts not exceeding 12 inches using standard compaction equipment. We recommend that engineered fill be compacted to at least 95 percent of the maximum dry density determined by ASTM D698 (Standard Proctor) or equivalent. Soils should be moisture conditioned to within two percent of optimum moisture. Field density testing should conform to ASTM D2922 and D3017, or D1556. All engineered fill should be observed and tested by the project geotechnical engineer or his representative. Typically, one density test is performed for at least every 2 vertical feet of fill placed or every 500 yd^3, whichever requires more

testing. Because testing is performed on an on-call basis, we recommend that the earthwork contractor be held contractually responsible for test scheduling and frequency.

Site earthwork may be impacted by soil moisture and wet weather conditions. Earthwork in wet weather would likely require extensive use of additional crushed aggregate, or other special measures, at considerable additional cost compared to earthwork performed under dry-weather conditions.

5.3 Excavating Conditions and Utility Trench Backfill

We anticipate that on-site soils can be excavated using conventional heavy equipment. Maintenance of safe working conditions, including temporary excavation stability, is the responsibility of the contractor. Actual slope inclinations at the time of construction should be determined based on safety requirements and actual soil and groundwater conditions. All temporary cuts in excess of 4 feet in height should be sloped in accordance with U.S. Occupational Safety and Health Administration (OSHA) regulations (29 CFR Part 1926) or be shored. The existing native soils classify as Type C Soil and temporary excavation side slope inclinations as steep as 1.5H:1V may be assumed for planning purposes. This cut slope inclination is applicable to excavations above the water table only.

Shallow, perched groundwater may be encountered during the dry or wet weather seasons, and should be anticipated in excavations and utility trenches. During our investigation of the site, groundwater seepage was observed in several areas of the site. Standard dewatering of trench excavations, such as sump pumps, should be adequate to address the amount of seepage encountered; however, groundwater conditions should be reviewed during the time of construction. Rates of seepage and presence of perched groundwater is expected to vary depending on the season, local subsurface conditions, changes in site utilization, and other factors.

Vibrations created by traffic and construction equipment may cause some caving and raveling of excavation walls. In such an event, lateral support for the excavation walls should be provided by the contractor to prevent loss of ground support and possible distress to existing or previously constructed structural improvements.

PVC pipe should be installed in accordance with the procedures specified in ASTM D2321 and the City of West Linn standards. We recommend that structural trench backfill be compacted to at least 95 percent of the maximum dry density obtained by Modified Proctor (ASTM D1557) or equivalent. Initial backfill lift thicknesses for a ¾”-0 crushed aggregate base may need to be as great as 4 feet to reduce the risk of flattening underlying flexible pipe. Subsequent lift thickness should not exceed 1 foot. If imported granular fill material is used, then the lifts for large vibrating plate-compaction equipment (e.g. hoe compactor attachments) may be up to 2 feet, provided that proper compaction is being achieved and each lift is tested. Use of large vibrating compaction equipment should be carefully monitored near existing structures and improvements due to the potential for vibration-induced damage.

Adequate density testing should be performed during construction to verify that the recommended relative compaction is achieved. Typically, at least one density test is taken for every 4 vertical feet of backfill on each 200-lineal-foot section of trench.

5.4 Erosion Control Considerations

During our field exploration program, we did not observe soil conditions that may be considered highly susceptible to erosion. In our opinion, the primary concern regarding erosion potential will occur during construction in areas that have been stripped of vegetation, particularly in sloping areas. Erosion at the site during construction can be minimized by implementing the project erosion control plan, which should include judicious use of straw wattles, fiber rolls, and silt fences. If used, these erosion control devices should remain in place throughout site preparation and construction.

Erosion and sedimentation of exposed soils can also be minimized by quickly re-vegetating exposed areas of soil, and by staging construction such that large areas of the project site are not denuded and exposed at the same time. Areas of exposed soil requiring immediate and/or temporary protection against exposure should be covered with either mulch or erosion control netting/blankets. Areas of exposed soil requiring permanent stabilization should be seeded with an approved grass seed mixture, or hydroseeded with an approved seed-mulch-fertilizer mixture.

5.5 Wet Weather Earthwork

Soils underlying the site are likely to be moisture sensitive and will be difficult to handle or traverse with construction equipment during periods of wet weather. Earthwork is typically most economical when performed under dry weather conditions. Earthwork performed during the wet-weather season will require expensive measures such as cement treatment or imported granular material to compact areas where fill may be proposed to the recommended engineering specifications. If earthwork is to be performed or fill is to be placed in wet weather or under wet conditions when soil moisture content is difficult to control, the following recommendations should be incorporated into the contract specifications.

- Earthwork should be performed in small areas to minimize exposure to wet weather. Excavation or the removal of unsuitable soils should be followed promptly by the placement and compaction of clean engineered fill. The size and type of construction equipment used may have to be limited to prevent soil disturbance. Under some circumstances, it may be necessary to excavate soils with a backhoe to minimize subgrade disturbance caused by equipment traffic;
- The ground surface within the construction area should be graded to promote run-off of surface water and to prevent the ponding of water;
- Material used as engineered fill should consist of clean, granular soil containing less than 5 percent passing the No. 200 sieve. The fines should be non-plastic. Alternatively, cement treatment of on-site soils may be performed to facilitate wet weather placement;
- The ground surface within the construction area should be sealed by a smooth drum vibratory roller, or equivalent, and under no circumstances should be left uncompacted and exposed to moisture. Soils which become too wet for compaction should be removed and replaced with clean granular materials;

- Excavation and placement of fill should be observed by the geotechnical engineer to verify that all unsuitable materials are removed and suitable compaction and site drainage is achieved; and
- Geotextile silt fences, straw wattles, and fiber rolls should be strategically located to control erosion.

If cement or lime treatment is used to facilitate wet weather construction, GeoPacific should be contacted to provide additional recommendations and field monitoring.

5.6 Stormwater Management

It is our understanding that subsurface disposal of stormwater is being considered at the site. However, due to the presence of poorly-draining fine-grained native soil, it is our opinion that subsurface disposal of stormwater is not feasible at the site in the proposed location of the stormwater facility. Additionally, existing undocumented fill material, such as encountered in test pit TP-3, should not be relied upon for infiltration. It is our opinion that the native soil present at the location and depth of our testing should not be relied upon for stormwater infiltration.

Stormwater management systems should be constructed as specified by the designer and/or in accordance with the applicable stormwater design codes. All systems should include an adequate factor of safety. Stormwater exceeding storage capacities will need to be directed to a suitable surface discharge location, away from structures. Stormwater management systems may need to include overflow outlets, surface water control measures and/or be connected to the street storm drain system, if available. In no case should stormwater be allowed to flow uncontrolled over the ground surface. Evaluating environmental implications of stormwater disposal at this site is beyond the scope of this study.

5.7 Spread Foundations

Any proposed structures may be supported on shallow foundations bearing on the native, stiff soils and/or engineered fill, appropriately designed and constructed as recommended in this report. During our investigation, we observed a layer of undocumented fill soil extending to approximately 2 feet bgs in the area of the proposed storm water facility. This layer of fill is not suitable for construction activities. In areas where structures or engineered fill are planned, this disturbed layer should be completely removed and replaced with engineered fill. Foundation design, construction, and setback requirements should conform to the applicable building code at the time of construction. For maximization of bearing strength and protection against frost heave, spread footings should be founded on bedrock with slight embedment and embedded at a minimum depth of 12 inches below exterior grade. If soft soil conditions are encountered at footing subgrade elevation, they should be removed and replaced with compacted crushed aggregate or the footing should extend through the soil and be embedded within the bedrock.

The anticipated allowable soil bearing pressure is 1,500 lbs/ft^2 for footings bearing on competent native soil. For footings bearing on approved engineered fill placed and compacted over competent, native soils, the anticipated allowable soil bearing pressure is 2,000 lbs/ft^2. The

recommended maximum allowable bearing pressure may be increased by 1/3 for short-term transient conditions such as wind and seismic loading. The coefficient of friction between on-site soil and poured-in-place concrete may be taken as 0.42, which includes no factor of safety. The maximum anticipated total and differential footing movements (generally from soil expansion and/or settlement) are 1 inch and ¾ inch over a span of 20 feet, respectively. We anticipate that the majority of the estimated settlement will occur during construction, as loads are applied. Excavations near structural footings should not extend within a 1H:1V plane projected downward from the bottom edge of footings.

Footing excavations should penetrate through topsoil and disturbed soil to competent subgrade that is suitable for bearing support. During our investigation, we observed a layer of poorly-compacted, undocumented fill soil extending to depths of approximately 2 feet bgs. In areas where structures or engineered fill are planned, this disturbed layer should be removed and replaced with engineered fill. All footing excavations should be trimmed neat, and all loose or softened soil should be removed from the excavation bottom prior to placing reinforcing steel bars. Due to the moisture sensitivity of on-site native soils, foundations constructed during the wet weather season may require over-excavation of footings.

5.8 Concrete Slabs-on-Grade

Preparation of areas beneath concrete slab-on-grade floors should be performed as described in Section 6.1, *Site Preparation Recommendations* and Section 6.6, *Spread Foundations*. Care should be taken during excavation for foundations and floor slabs, to avoid disturbing subgrade soils. If subgrade soils have been adversely impacted by wet weather or otherwise disturbed, the surficial soils should be scarified to a minimum depth of 8 inches, moisture conditioned to within about 3 percent of optimum moisture content, and compacted to engineered fill specifications. Alternatively, disturbed soils may be removed and the removal zone backfilled with additional crushed rock.

For evaluation of the concrete slab-on-grade floors using the beam on elastic foundation method, a modulus of subgrade reaction of 150 kcf (87 pci) should be assumed for the medium dense, fine to coarse-grained soils anticipated to be present at foundation subgrade elevation following adequate site preparation as described above. This value assumes the concrete slab system is designed and constructed as recommended herein, with a minimum thickness of 8 inches of 1½"-0 crushed aggregate beneath the slab. The total thickness of crushed aggregate will be dependent on the subgrade conditions at the time of construction, and should be verified visually by proof-rolling. Under-slab aggregate should be compacted to at least 90 percent of its maximum dry density as determined by ASTM D1557 (Modified Proctor) or equivalent.

In areas where moisture will be detrimental to floor coverings or equipment inside the proposed structure, appropriate vapor barrier and damp-proofing measures should be implemented. Appropriate design professionals should be consulted regarding vapor barrier and damp proofing systems, ventilation, building material selection and mold prevention issues, which are outside GeoPacific's area of expertise.

5.9 Pavement Section Design

We understand that plans for development include an expansion of the existing parking lot. We have made assumptions based on the location and size of the existing office buildings and parking spaces regarding the amount and size of vehicles in the anticipated traffic. We designed for an anticipated ESAL count of approximately 20,863 over 20 years for the new section of the private parking lot. We assume that traffic for the parking lot will primarily consist of passenger vehicles, garbage trucks, and occasional fire trucks, weighing up to 75,000 pounds and point loads of up to 12,500 pounds. For design purposes, we used a resilient modulus of 4,450 for competent, native soils or engineered fill. Table 2 presents our pavement section design input factors.

Table 2: Flexible Pavement Section Design Input Parameters for Private Drive Lanes

Input Parameter	Design Value
18-kip ESAL Initial Performance Period (20 Years)	20,863
Initial Serviceability	4.2
Terminal Serviceability	2.5
Reliability Level	85 Percent
Overall Standard Deviation	0.5
Roadbed Soil Resilient Modulus (PSI)	4,450
Required Structural Number	**2.18**

Table 3 presents our minimum dry-weather pavement section for the private parking lot with estimated structural coefficients calculated into a structural number. For the areas where road subgrade consists of bedrock, the thickness of the 1 ½”-0 crushed aggregate base layer can be reduced. If bedrock is encountered at subgrade elevation during construction, GeoPacific can be consulted to provide a reduced base rock thickness. Design calculations are attached to this report.

Table 3: Minimum Dry-Weather Flexible Pavement Section for Private Roadways

Material Layer	Section Thickness (in.)	Structural Coefficient	Compaction Standard
Asphaltic Concrete Pavement (ACP)	3	0.42	91% / 92% of Rice Density AASHTO T-209
¾"-0 Crushed Aggregate	2	0.10	95% of Modified Proctor AASHTO T-180
1½"-0 Crushed Aggregate Base	8	0.10	95% of Modified Proctor AASHTO T-180
Subgrade	12	4,450	95% of Standard Proctor AASHTO T-99, approved engineered fill or equivalent
Calculated Structural Number 2.26 > 2.18			

Any pockets of organic debris or loose fill encountered during subgrade preparation should be removed and replaced with engineered fill (see *Site Preparation* Section). As discussed previously, we observed a layer of poorly-compacted undocumented fill extending to approximately 2 feet bgs. The poorly-compacted layer of soil should be removed and replaced with engineered fill in any areas where the aggregate base is not directly founded on the native subgrade. GeoPacific should be consulted to evaluate the subgrade in roadway areas during construction by proof rolling, probing, and/or potholing. In order to evaluate subgrade strength, we recommend proof-rolling directly on subgrade with a loaded dump truck during dry weather and on top of base course in wet weather. Soft areas that pump, rut, or weave should be stabilized prior to paving. If pavement areas are to be constructed during wet weather, the subgrade and construction plan should be reviewed by the project geotechnical engineer at the time of construction so that condition specific recommendations can be provided. The moisture sensitive subgrade soils make the site a difficult wet weather construction project. General recommendations for wet weather pavement sections are provided below.

During placement of pavement section materials, density testing should be performed to verify compliance with project specifications. Generally, one subgrade and one base course test is performed for every 100 to 200 linear feet of roadway.

5.10 Wet Weather Pavement Construction

This section presents our recommendations for wet weather pavement section and construction for new pavement sections at the project. These wet weather pavement section recommendations are intended for use in situations where it is not feasible to compact the subgrade soils to Clackamas County requirements, due to wet subgrade soil conditions, and/or construction during wet weather. Based on our site review, we recommend a wet weather section with a minimum subgrade deepening of 6 inches to accommodate a working subbase of additional 1½"-0 crushed rock. Geotextile fabric, Mirafi 500x or equivalent, should be placed on subgrade soils prior to placement of base rock.

In some instances, it may be preferable to use biaxial geogrid or granular subbase materials. GeoPacific should be consulted for additional recommendations if it is desired to pursue alternatives.

With implementation of the above recommendations, it is our opinion that the resulting pavement section will provide equivalent or greater structural strength than the dry weather pavement section currently planned. However, it should be noted that construction in wet weather is risky and the performance of pavement subgrades depend on a number of factors including the weather conditions, the contractor's methods, and the amount of traffic the road is subjected to. There is a potential that soft spots may develop even with implementation of the wet weather provisions recommended in this letter. If soft spots in the subgrade are identified during roadway excavation, or develop prior to paving, the soft spots should be overexcavated and backfilled with additional crushed rock.

During subgrade excavation, care should be taken to avoid disturbing the subgrade soils. Removals should be performed using an excavator with a smooth-bladed bucket. Truck traffic should be limited until an adequate working surface has been established. We suggest that the crushed rock be spread using bulldozer equipment rather than dump trucks, to reduce the amount of traffic and potential disturbance of subgrade soils.

Care should be taken to avoid overcompaction of the base course materials, which could create pumping, unstable subgrade soil conditions. Heavy and/or vibratory compaction efforts should be applied with caution. Following placement and compaction of the crushed rock to project specifications (95 percent of Modified Proctor), a finish proof-roll should be performed before paving.

The above recommendations are subject to field verification. GeoPacific should be on-site during construction to verify subgrade strength and to take density tests on the engineered fill and base rock materials.

6.0 UNCERTAINTIES AND LIMITATIONS

We have prepared this report for the owner and their consultants for use in design of this project only. This report should be provided in its entirety to prospective contractors for bidding and estimating purposes; however, the conclusions and interpretations presented in this report should not be construed as a warranty of the subsurface conditions. Experience has shown that soil and groundwater conditions can vary significantly over small distances. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, GeoPacific should be notified for review of the recommendations of this report, and revision of such if necessary.

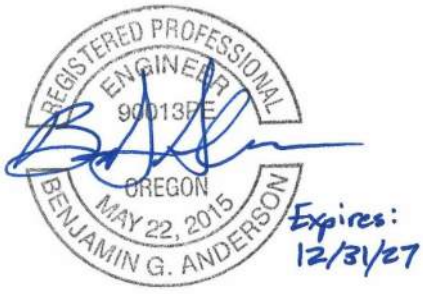
Sufficient geotechnical monitoring, testing and consultation should be provided during construction to confirm that the conditions encountered are consistent with those indicated by explorations. The checklist attached to this report outlines recommended geotechnical observations and testing for the project. Recommendations for design changes will be provided should conditions revealed during construction differ from those anticipated, and to verify that the geotechnical aspects of construction comply with the contract plans and specifications.

Within the limitations of scope, schedule and budget, GeoPacific attempted to execute these services in accordance with generally accepted professional principles and practices in the fields of geotechnical engineering and engineering geology at the time the report was prepared. No warranty, expressed or implied, is made. The scope of our work did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous or toxic substances in the soil, surface water, or groundwater at this site.

We appreciate this opportunity to be of service.

Sincerely,

GEOPACIFIC ENGINEERING, INC.



Andrew Earl Parrott, E.I.T.
Engineering Staff

Benjamin G. Anderson, P.E., G.E.
Associate Geotechnical Engineer

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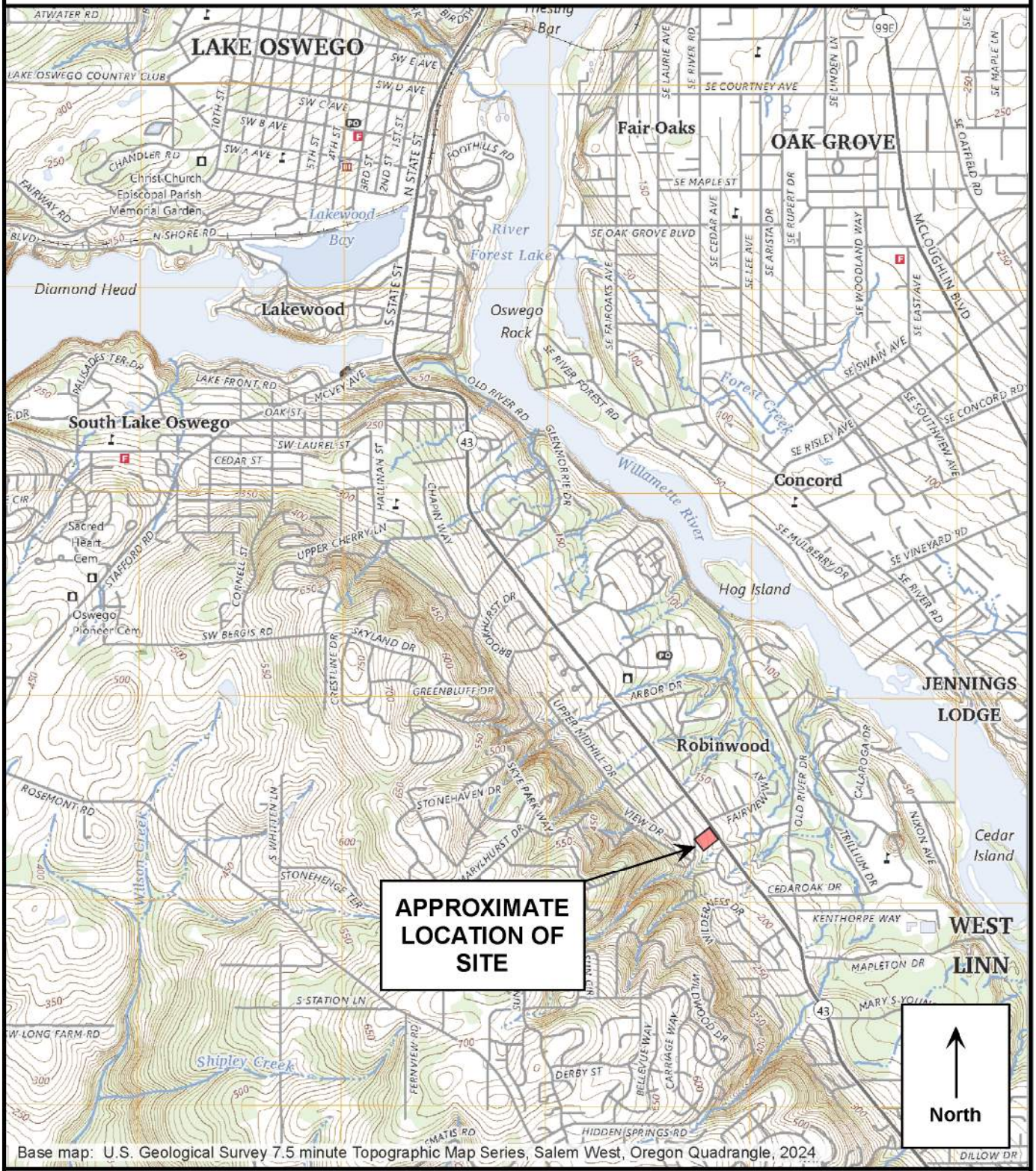
CHECKLIST OF RECOMMENDED GEOTECHNICAL TESTING AND OBSERVATION

Item No.	Procedure	Timing	By Whom	Done
1	Preconstruction meeting	Prior to beginning site work	Contractor, Developer, Civil and Geotechnical Engineers	
2	Fill removal from site or sorting and stockpiling	Prior to mass stripping	Soil Technician/ Geotechnical Engineer	
3	Stripping, aeration, and root-picking operations	During stripping	Soil Technician	
4	Compaction testing of engineered fill (95% of Standard Proctor)	During filling, tested every 2 vertical feet	Soil Technician	
5	Foundation Subgrade Compaction (95% of Standard Proctor)	During Foundation Preparation, Prior to Placement of Reinforcing Steel	Soil Technician/ Geotechnical Engineer	
7	Parking Lot Subgrade Inspection (95% of Standard Proctor)	Prior to placing base course	Soil Technician	
8	Base course compaction (95% of Modified Proctor)	Prior to paving, tested every 200 linear feet	Soil Technician	
9	Asphalt Compaction (92% Rice Value)	During paving, tested every 100 linear feet	Soil Technician	
10	Final Geotechnical Engineer's Report	Completion of project	Geotechnical Engineer	

FIGURES

GEOPACIFIC
14835 SW 72nd Avenue
Portland, Oregon 97224
Tel: (503) 598-8445

SITE VICINITY MAP



Legend

0 2,000

Approximate Scale: 1" = 2,000'

Date: 4/23/26
Drawn by: AEP

Project: 18825 Willamette Drive Parking Lot West Linn, Oregon	Project No. 26-6985	FIGURE 1

GEOPACIFIC
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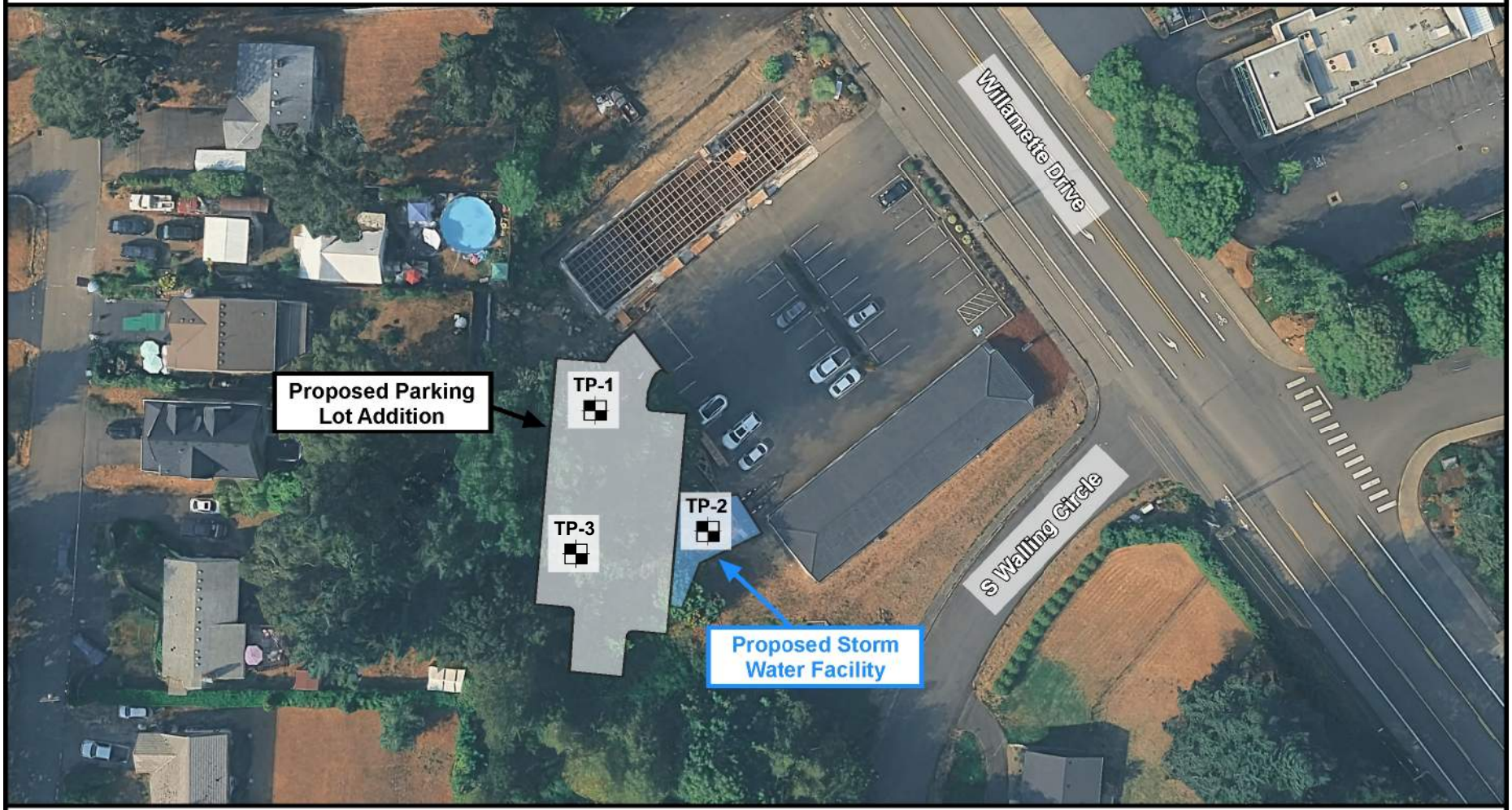
Portland, Oregon 97224
Tel: (503) 598-8445 Fax: (503) 941-9281

SITE AERIAL AND EXPLORATION LOCATIONS



Legend: TP-1 Test Pit Designation and Approximate Location

0 60'
APPROXIMATE SCALE 1"=60'

North

Date: 5/6/26
Drawn by: AEP

Project: 18825 Willamette Drive Parking Lot West Linn, Oregon	Project No. 26-6985	FIGURE 2

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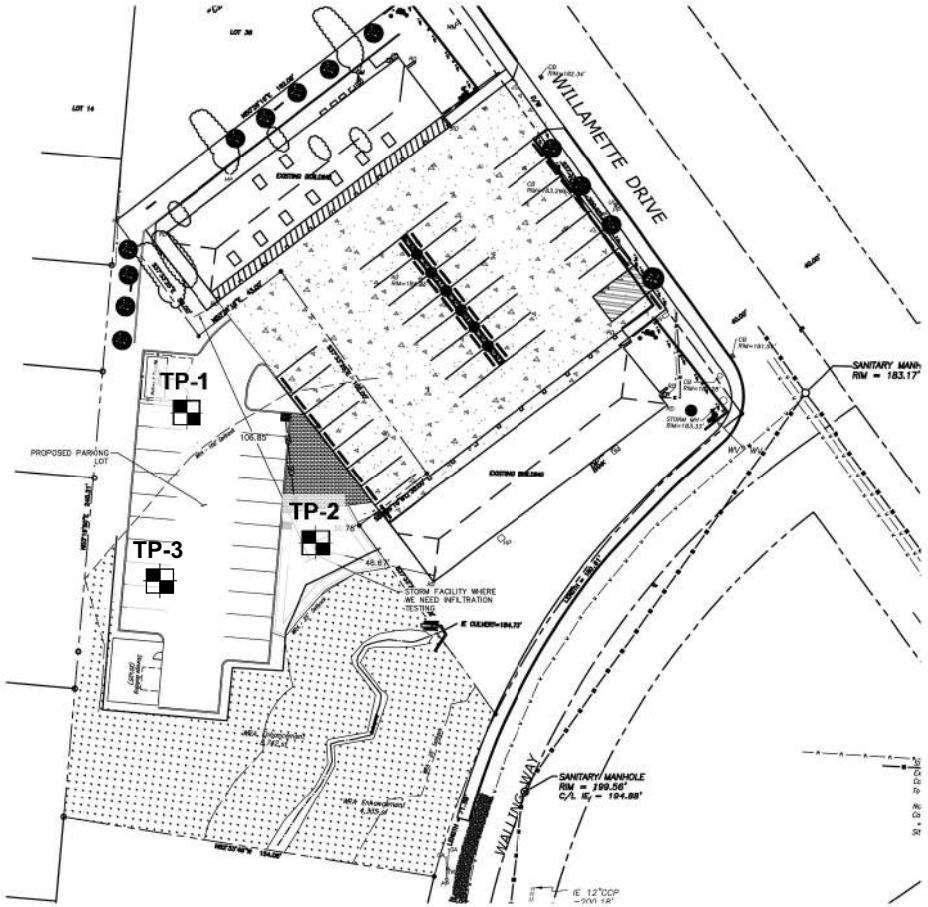
SITE PLAN AND EXPLORATION LOCATIONS



Legend: **TP-1** Test Pit Designation and Approximate Location

0 80'
APPROXIMATE SCALE 1"=80'

North

Base Map Provided by West Lake Consultants

Date: 5/6/26
Drawn by: AEP

Project: 18825 Willamette Drive Parking Lot West Linn, Oregon	Project No. 26-6985	FIGURE 3

EXPLORATION LOGS

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TEST PIT LOG

Project: 18825 Willamette Dr Parking Lot West Linn, Oregon	Project No. 26-6985	Test Pit No. **TP-1**

Depth (ft)	Pocket Penetrometer (tons/ft²)	Sample Type	Moisture Content (%)	Water Bearing Zone	Material Description
					Moderately Organic SILT (OL), brown, fine roots to 4 in., moist (Topsoil)
					Sandy SILT (ML) with some organics, light brown, medium stiff, large roots, moist (Catastrophic Flood Deposits)
1	0.75				Sandy SILT (ML), light brown, medium stiff, moist (Catastrophic Flood Deposits)
2	1.0				
3	1.5				Sandy SILT (ML) with clay, light brown, stiff, moist (Catastrophic Flood Deposits)
4	2.5	100 to 1,000 g	34.5		Percent Passing #200 = 62.4%
5					
6					Silty SAND (SM) with some clay, brown/orange/gray, dense, moist (Catastrophic Flood Deposits)
					Clayey SILT (ML) with sand, light brown, stiff, moist (Catastrophic Flood Deposits)
7					Silty SAND (SM), light brown, medium dense, moist to wet (Catastrophic Flood Deposits)
8		100 to 1,000 g	34.3		Percent Passing #200 = 49.7%
					Test pit terminated at 8.5 feet Groundwater seepage encountered at 96 to 102 inches bgs No caving observed

LEGEND

100 to 1,000 g — Bag Sample
5 Gal. Bucket — Bucket Sample
Shelby Tube Sample
Seepage
Water Bearing Zone
Static Water Level

Bucket Type: Rock Teeth
Bucket Size: 2 Feet
Excavator: Hitachi ZX26U-5N
Contractor: Dan Fischer Excavating

Date Excavated: 5.6.2026
Logged By: AEP
Surface Elevation: ~190'
Surface Conditions: Grass

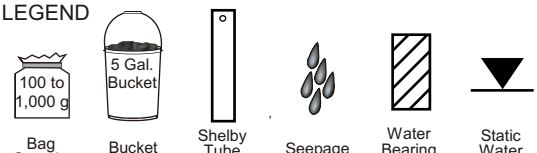
GEOPACIFIC
14835 SW 72nd Avenue
Portland, Oregon 97224
Tel: (503) 598-8445 Fax: (503) 941-9281

TEST PIT LOG

Project: 18825 Willamette Dr Parking Lot West Linn, Oregon	Project No. 26-6985	Test Pit No. **TP-2**

Depth (ft)	Pocket Penetrometer (tons/ft²)	Sample Type	Moisture Content (%)	Water Bearing Zone	Material Description
0					Moderately Organic SILT (OL), brown, fine roots to 4 in., moist (Topsoil)
1					Sandy SILT (ML) with gravel and some organics, light brown, medium stiff, angular gravel up to 6 inches in diameter, large roots, moist (Poorly-Compacted Fill)
2	2.0				Silty GRAVEL (GM) with cobbles, dark brown, medium dense, up to 6 inch diameter rounded cobbles, moist (Well-Compacted Fill)
3	4.0				
4	4.0				Sandy SILT (ML) with gravel, brown, medium stiff, angular gravel up to 4 inches in diameter, moist (Well-Compacted Fill)
5					
6		100 to 1,000 g			Clayey SILT (ML) with sand, light brown, stiff, moist (Catastrophic Flood Deposits)
7					Test pit terminated at 6.5 feet Groundwater not encountered No caving observed
8					

LEGEND



Bucket Type: Rock Teeth
Bucket Size: 2 Feet
Excavator: Hitachi ZX26U-5N
Contractor: Dan Fischer Excavating

Date Excavated: 5.6.2026
Logged By: AEP
Surface Elevation: ~191'
Surface Conditions: Grass

GEOPACIFIC
14835 SW 72nd Avenue
Portland, Oregon 97224
Tel: (503) 598-8445 Fax: (503) 941-9281

TEST PIT LOG

Project: 18825 Willamette Dr Parking Lot
West Linn, Oregon

Project No. 26-6985

Test Pit No. **TP-3**

Depth (ft)	Pocket Penetrometer (tons/ft²)	Sample Type	Moisture Content (%)	Water Bearing Zone	Material Description
0					Moderately Organic SILT (OL), dark brown/gray, fine roots to 4 in., large roots to 7 in., moist (Topsoil)
1					Sandy SILT (ML) with clay and some organics, light brown/orange, medium stiff, large roots to 24 inches bgs, moist (Catastrophic Flood Deposits)
2	1.5				Sandy SILT (ML), light brown, stiff, moist (Catastrophic Flood Deposits)
3	2.0				
4	2.5				
5					
6					Sandy SILT (ML) with some clay, brown/orange/gray, stiff, moist (Catastrophic Flood Deposits)
7					
8		100 to 1,000 g	35.0		Percent Passing #200 = 50.1%
					Test pit terminated at 8.5 feet Groundwater seepage encountered at 24 to 102 inches bgs on west side of test pit No caving observed

LEGEND

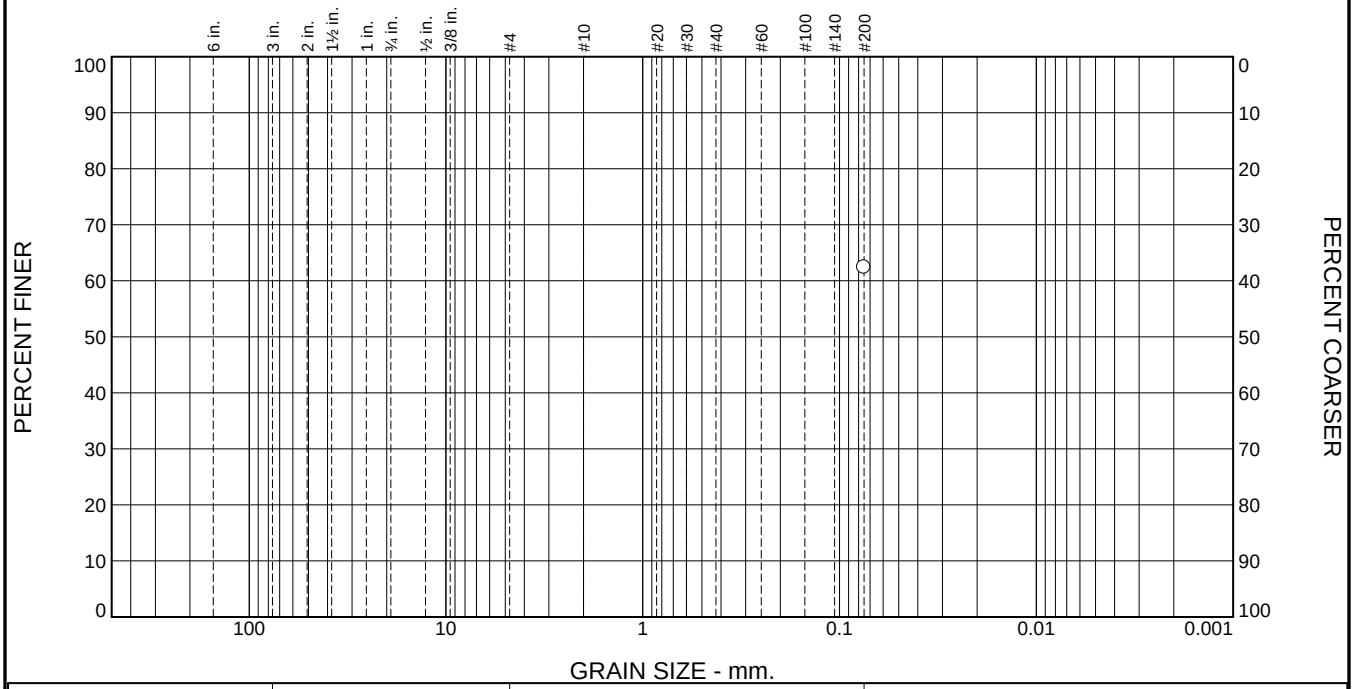
100 to 1,000 g — Bag Sample
5 Gal. Bucket — Bucket Sample
Shelby Tube Sample
Seepage
Water Bearing Zone
Static Water Level

Bucket Type: Rock Teeth
Bucket Size: 2 Feet
Excavator: Hitachi ZX26U-5N
Contractor: Dan Fischer Excavating

Date Excavated: 5.6.2026
Logged By: AEP
Surface Elevation: ~193'
Surface Conditions: Grass

LABORATORY RESULTS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
						62.4	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#200	62.4		

* (no specification provided)

Material Description

Sandy Silt

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Moisture Content = 34.5 Percent

Date Received: _____ **Date Tested:** 5.13.226

Tested By: ALL

Checked By: MTB

Title: PM:BGA

Location: TP-1
Sample Number: S26-063 **Depth:** 4ft

Date Sampled: 5.6.26 AEP

GEOPACIFIC ENGINEERING, INC.

Client: Matin Real Estate
Project: 18825 Willamette Drive Parking Lot Expansion

Project No: 26-6985 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

5/18/2026

Client: Matin Real Estate
Project: 18825 Willamette Drive Parking Lot Expansion
Project Number: 26-6985
Location: TP-1
Depth: 8ft
Sample Number: S26-064
Material Description: Silty Sand
Sample Date: 5.2.26 AEP
#200 Wash Method: AASHTO T 11
Testing Remarks: Moisture Content = 34.3 Percent
Tested By: ALL
Test Date: 5.13.26
Checked By: MTB
Title: PM:BGA

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 1220.30
Tare Wt. = 537.20
Minus #200 from wash = 49.7%

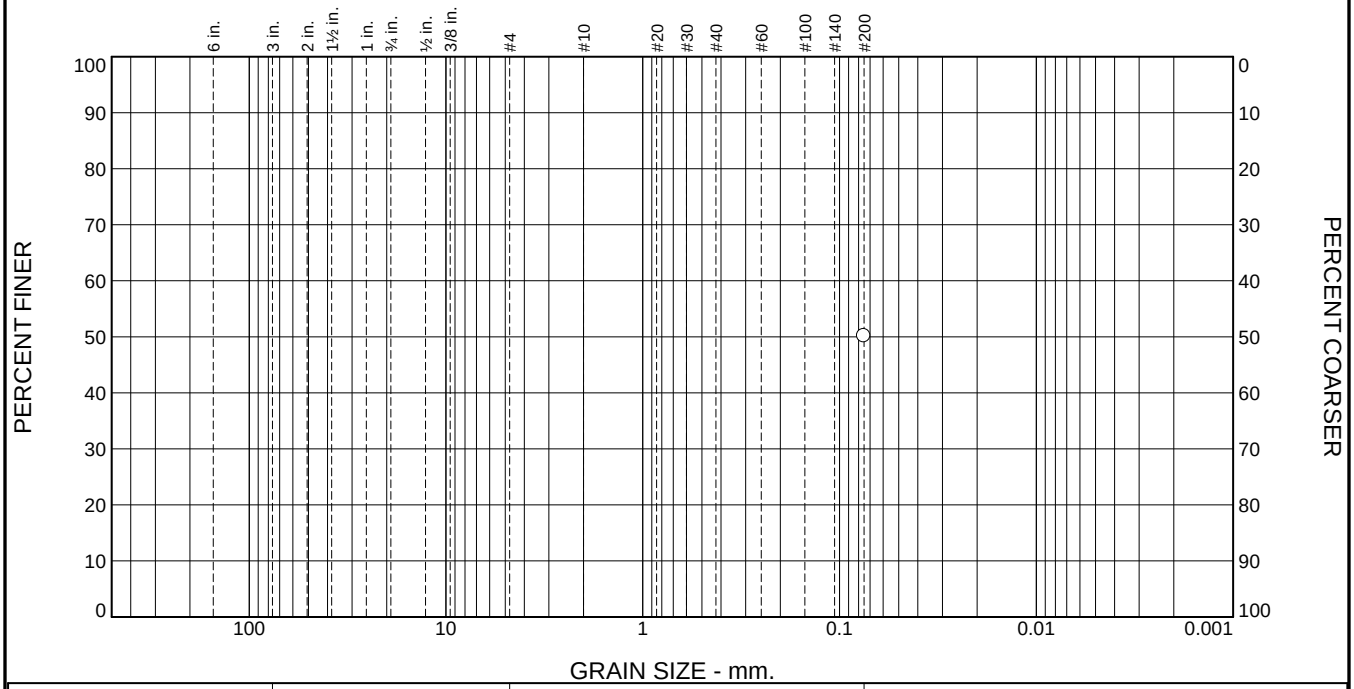
Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
1895.40	537.20	537.20	#200		49.7	50.3

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
										49.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
						50.1	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#200	50.1		

* (no specification provided)

Material Description

Silty Sand

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Moisture Content = 35.0 Percent

Date Received: _____ **Date Tested:** 5.13.26

Tested By: ALL

Checked By: MTB

Title: PM:BGA

Location: TP-3
Sample Number: S26-065 **Depth:** 8ft

Date Sampled: 5.6.26 AEP

GEOPACIFIC ENGINEERING, INC.

Client: Matin Real Estate
Project: 18825 Willamette Drive Parking Lot Expansion

Project No: 26-6985 **Figure**

Real-World Geotechnical Solutions
Investigation • Design • Construction Support

PAVEMENT DESIGN

==========

DARWin(tm) - Pavement Design

A Proprietary AASHTOWARE(tm)
Computer Software Product

Flexible Structural Design Module

Project Description
26-6985 - 18825 Willamette Drive Parking Lot Expansion - Private Parking Areas - New Pavement Section

Flexible Structural Design Module Data
18-kip ESALs Over Initial Performance Period: 20,863
Initial Serviceability: 4.2
Terminal Serviceability: 2.5
Reliability Level (%): 85
Overall Standard Deviation: .5
Roadbed Soil Resilient Modulus (PSI): 4,450
Stage Construction: 1

Calculated Structural Number: 2.18

Specified Layer Design

Layer: 1
Material Description: New A/C
Structural Coefficient (Ai): .42
Drainage Coefficient (Mi): 1
Layer Thickness (Di) (in): 3.00
Calculated Layer SN: 1.26

Layer: 2
Material Description: 3/4" Aggregate Levelling
Structural Coefficient (Ai): .1
Drainage Coefficient (Mi): 1
Layer Thickness (Di) (in): 2.00
Calculated Layer SN: .20

Layer: 3
Material Description: 1.5" Aggregate Base
Structural Coefficient (Ai): .1
Drainage Coefficient (Mi): 1
Layer Thickness (Di) (in): 8.00
Calculated Layer SN: .80

Total Thickness (in): 13.00
Total Calculated SN: 2.26

Simple ESAL Calculation
Initial Performance Period (years): 20
Initial Two-Way Daily Traffic (ADT): 200
% Heavy Trucks (of ADT) FHWA Class 5 or Greater: 2
Number of Lanes In Design Direction: 1
Percent of All Trucks In Design Lane (%): 100
Percent Trucks In Design Direction (%): 50
Average Initial Truck Factor (ESALs/truck): 1.2
Annual Truck Factor Growth Rate (%): 0
Annual Truck Volume Growth Rate (%): 2
Growth: Simple

Total Calculated Cumulative Esals: 20,863

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PHOTOGRAPHIC LOG

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Test Pit TP-1

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Test Pit TP-2

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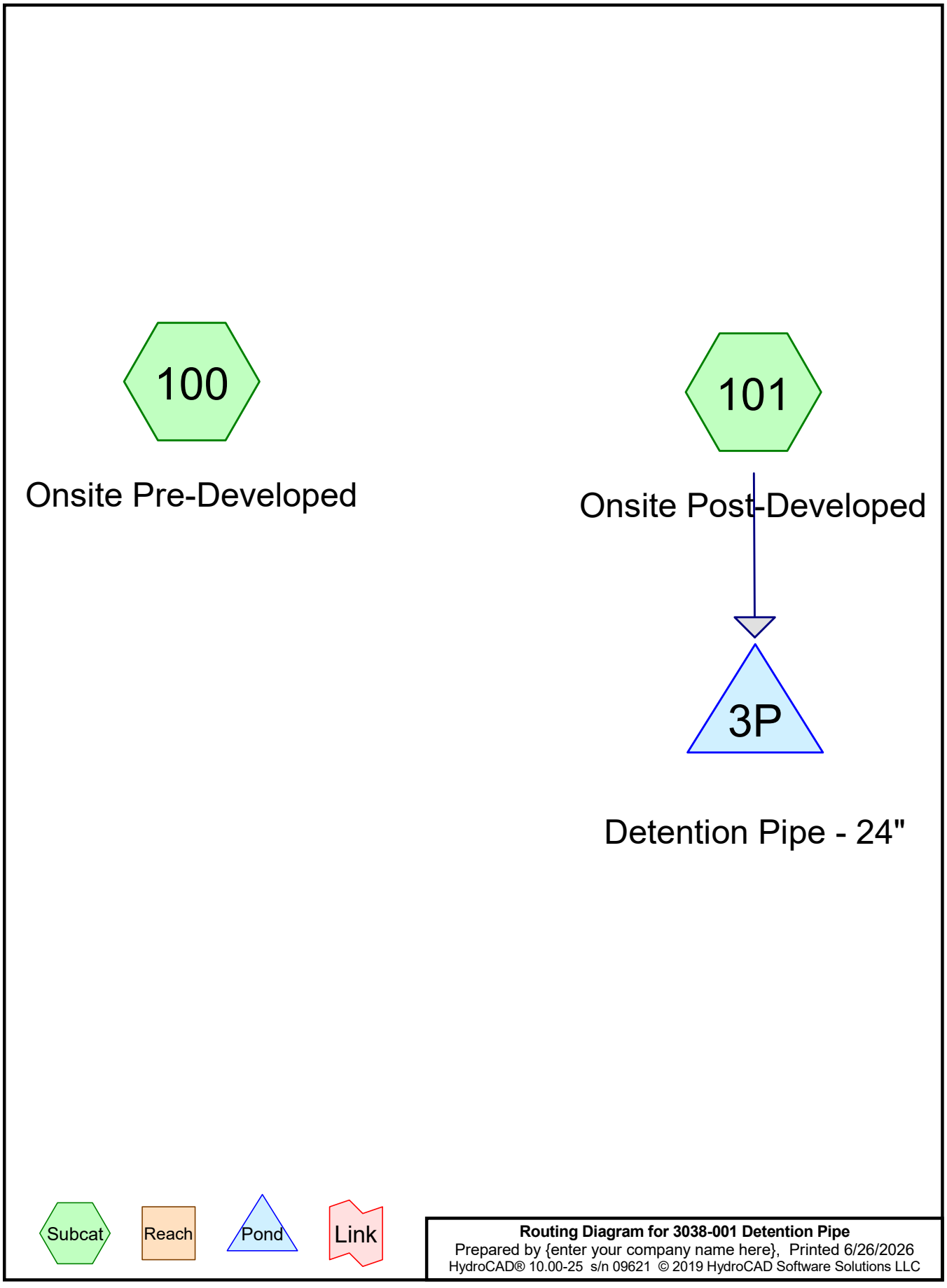
Test Pit TP-3



Routing Diagram for 3038-001 Detention Pipe
Prepared by {enter your company name here}, Printed 6/26/2026
HydroCAD® 10.00-25 s/n 09621 © 2019 HydroCAD Software Solutions LLC

Summary for Subcatchment 100: Onsite Pre-Developed

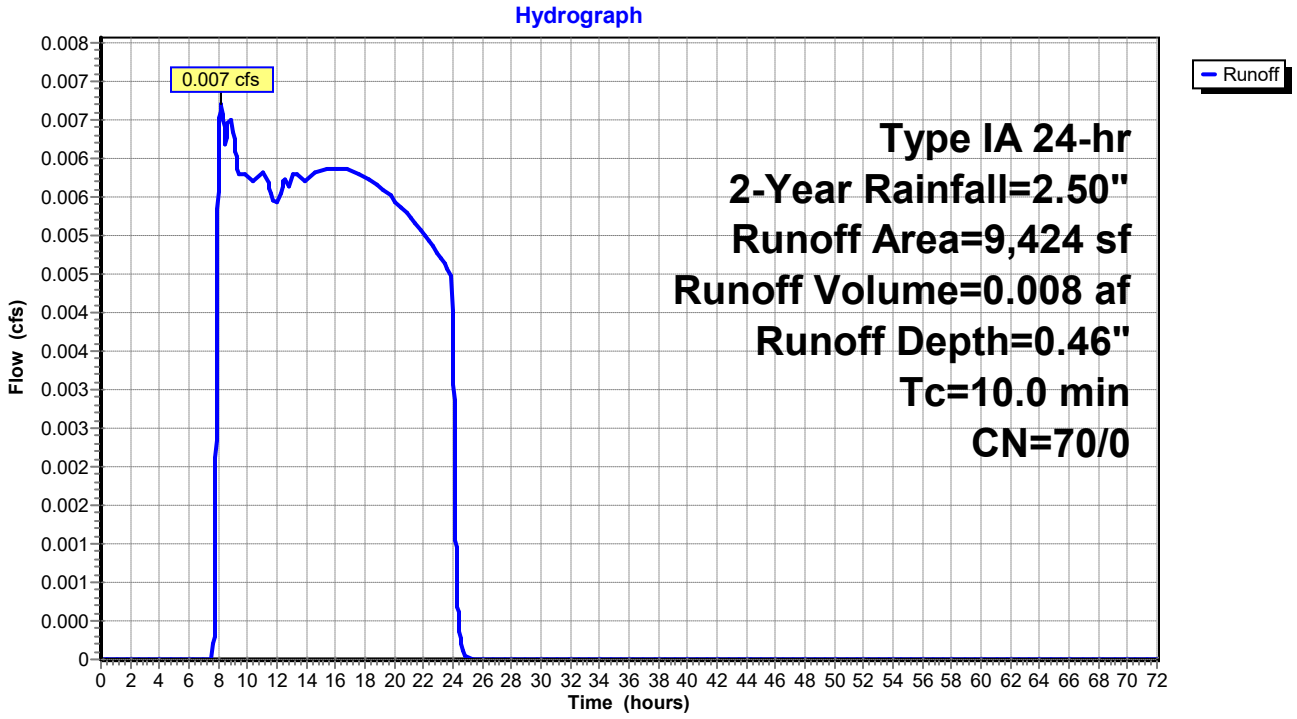
Runoff = 0.007 cfs @ 8.21 hrs, Volume= 0.008 af, Depth= 0.46"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2-Year Rainfall=2.50"

	Area (sf)	CN	Description
*	9,424	70	Pervious
	9,424	70	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 100: Onsite Pre-Developed



Summary for Subcatchment 101: Onsite Post-Developed

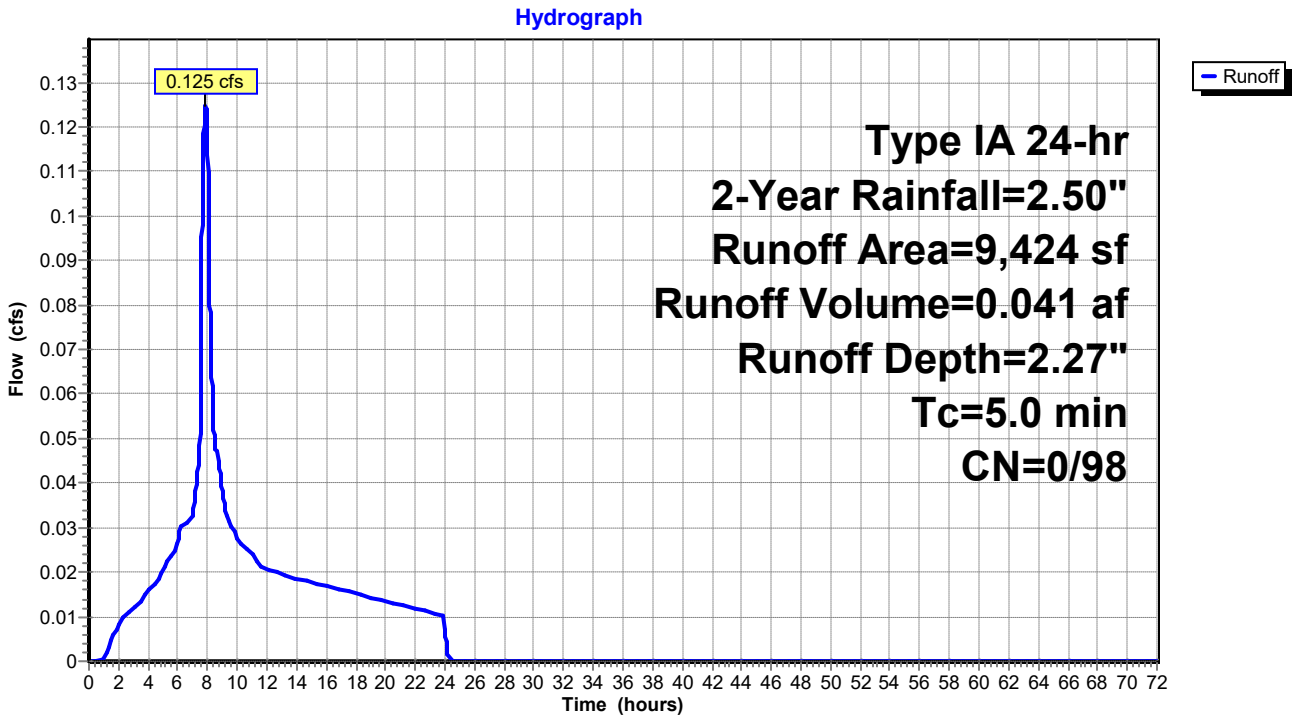
Runoff = 0.125 cfs @ 7.88 hrs, Volume= 0.041 af, Depth= 2.27"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2-Year Rainfall=2.50"

	Area (sf)	CN	Description
*	8,224	98	Parking Lot
*	1,200	98	Patio
	9,424	98	Weighted Average
	9,424	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 101: Onsite Post-Developed



Summary for Pond 3P: Detention Pipe - 24"

Inflow Area = 0.216 ac,100.00% Impervious, Inflow Depth = 2.27" for 2-Year event
Inflow = 0.125 cfs @ 7.88 hrs, Volume= 0.041 af
Outflow = 0.025 cfs @ 10.83 hrs, Volume= 0.041 af, Atten= 80%, Lag= 176.7 min
Primary = 0.025 cfs @ 10.83 hrs, Volume= 0.041 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 187.29' @ 10.83 hrs Surf.Area= 734 sf Storage= 527 cf

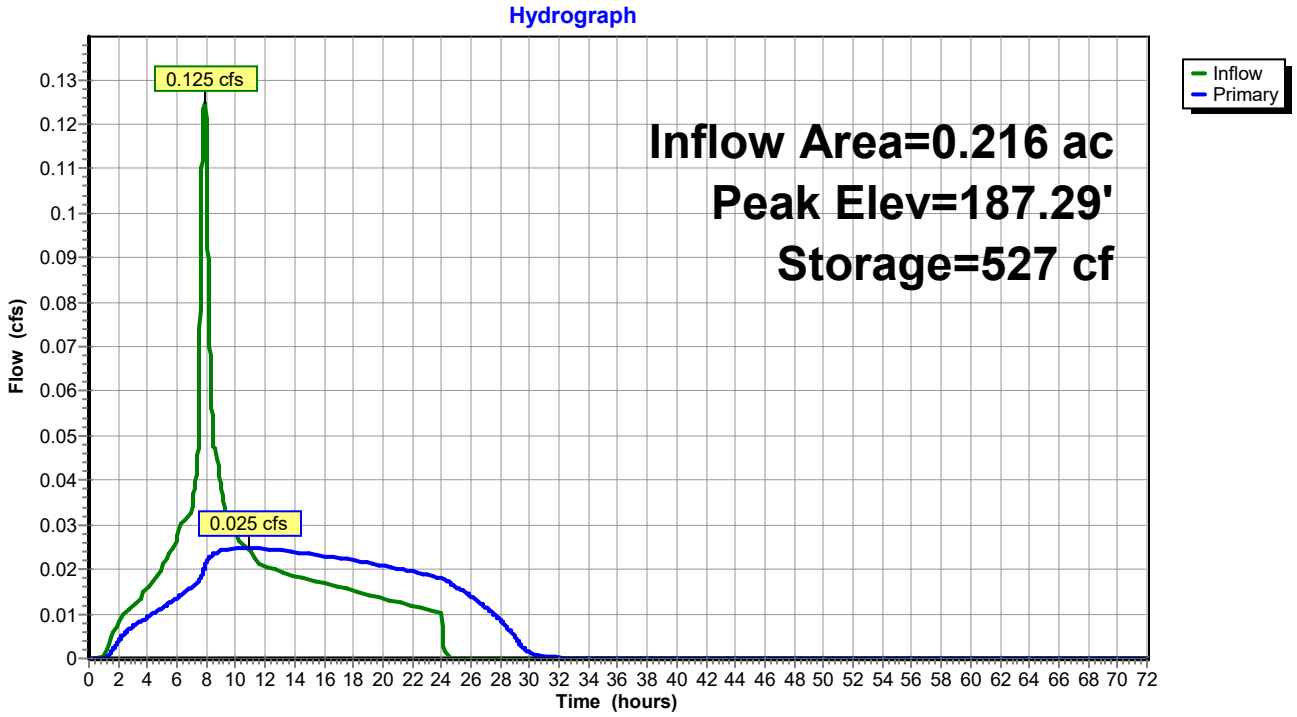
Plug-Flow detention time= 262.1 min calculated for 0.041 af (100% of inflow)
Center-of-Mass det. time= 262.2 min (934.8 - 672.6)

Volume	Invert	Avail.Storage	Storage Description
#1	186.36'	1,100 cf	**24.0" Round Pipe Storage** x 5 L= 70.0'
#2	186.36'	57 cf	**24.0" Round Pipe Storage** L= 18.0'
		1,156 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	186.36'	**12.0" Round Culvert** L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 186.36' / 186.14' S= 0.0044 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	186.36'	**1.0" Vert. Orifice** C= 0.600
#3	Device 1	188.00'	**4.0' long x 0.5' breadth Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.025 cfs @ 10.83 hrs HW=187.29' (Free Discharge)
└**1=Culvert** (Passes 0.025 cfs of 1.904 cfs potential flow)
  └**2=Orifice** (Orifice Controls 0.025 cfs @ 4.54 fps)
  └**3=Overflow Weir** (Controls 0.000 cfs)

Pond 3P: Detention Pipe - 24"



Summary for Subcatchment 100: Onsite Pre-Developed

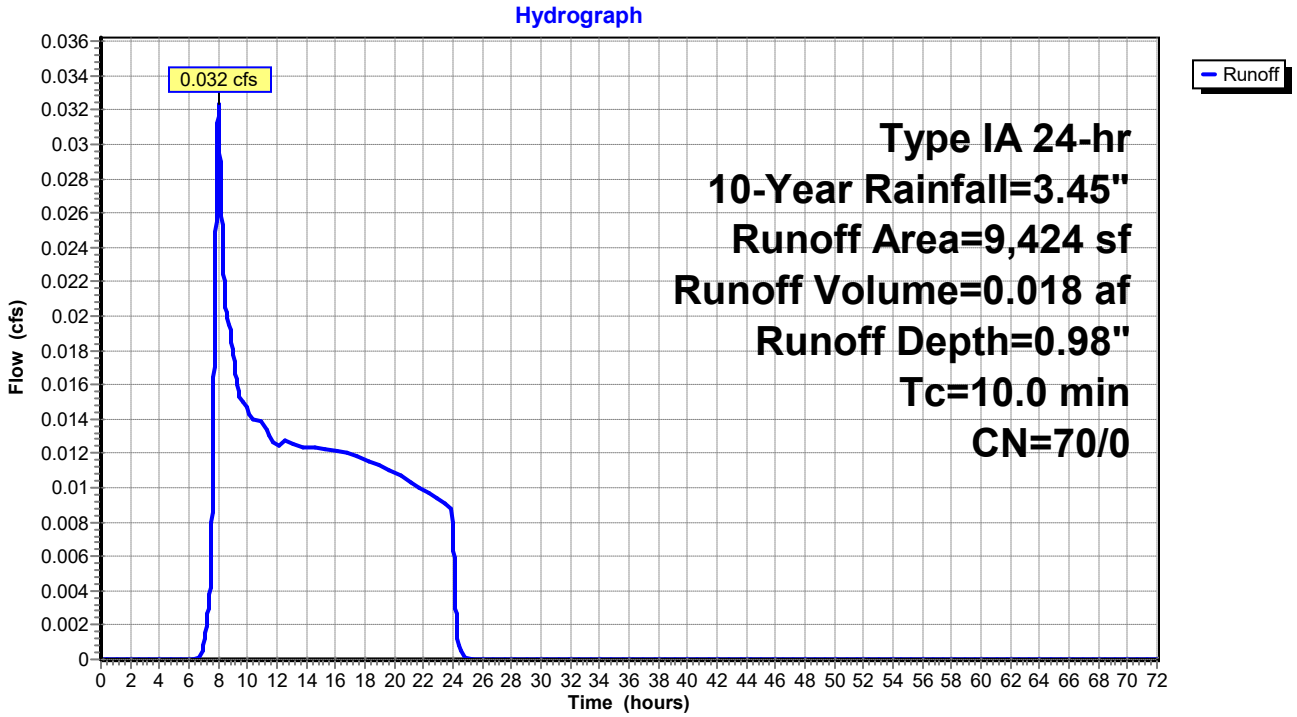
Runoff = 0.032 cfs @ 8.01 hrs, Volume= 0.018 af, Depth= 0.98"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10-Year Rainfall=3.45"

	Area (sf)	CN	Description
*	9,424	70	Pervious
	9,424	70	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 100: Onsite Pre-Developed



Summary for Subcatchment 101: Onsite Post-Developed

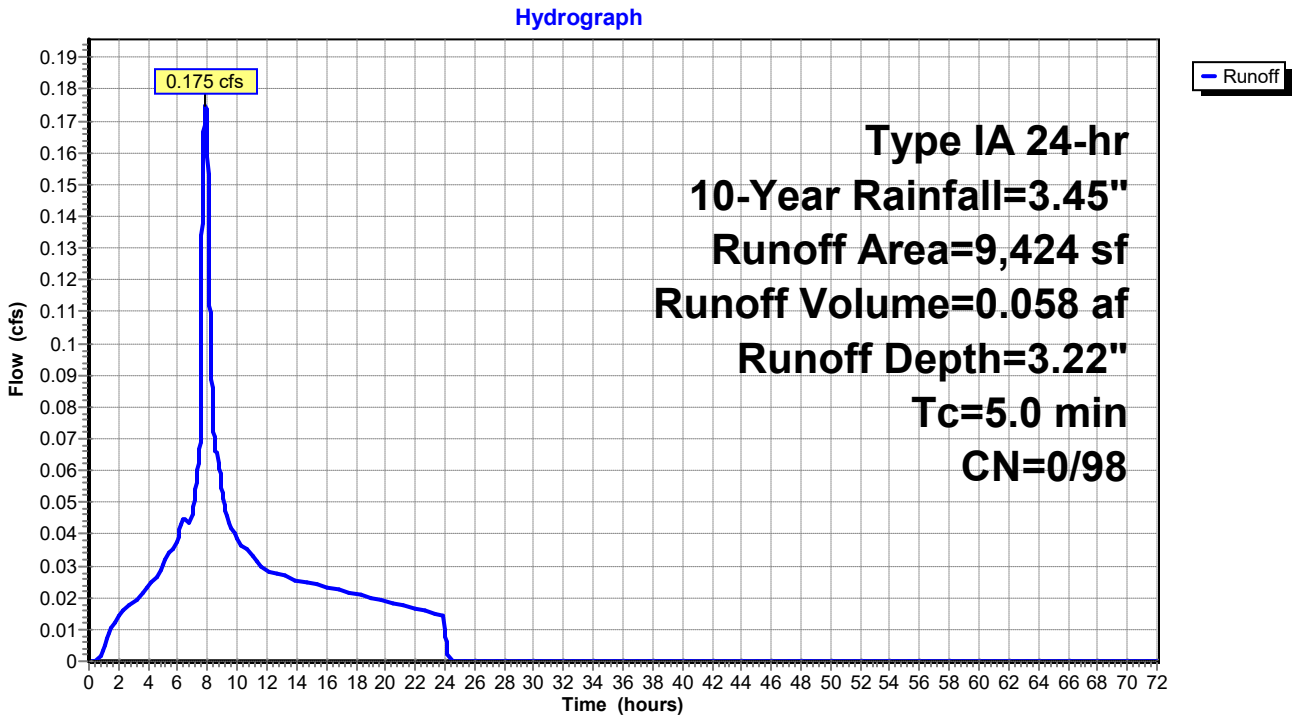
Runoff = 0.175 cfs @ 7.88 hrs, Volume= 0.058 af, Depth= 3.22"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10-Year Rainfall=3.45"

	Area (sf)	CN	Description
*	8,224	98	Parking Lot
*	1,200	98	Patio
	9,424	98	Weighted Average
	9,424	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 101: Onsite Post-Developed



Summary for Pond 3P: Detention Pipe - 24"

Inflow Area = 0.216 ac,100.00% Impervious, Inflow Depth = 3.22" for 10-Year event
Inflow = 0.175 cfs @ 7.88 hrs, Volume= 0.058 af
Outflow = 0.030 cfs @ 11.50 hrs, Volume= 0.058 af, Atten= 83%, Lag= 217.1 min
Primary = 0.030 cfs @ 11.50 hrs, Volume= 0.058 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 187.74' @ 11.50 hrs Surf.Area= 679 sf Storage= 854 cf

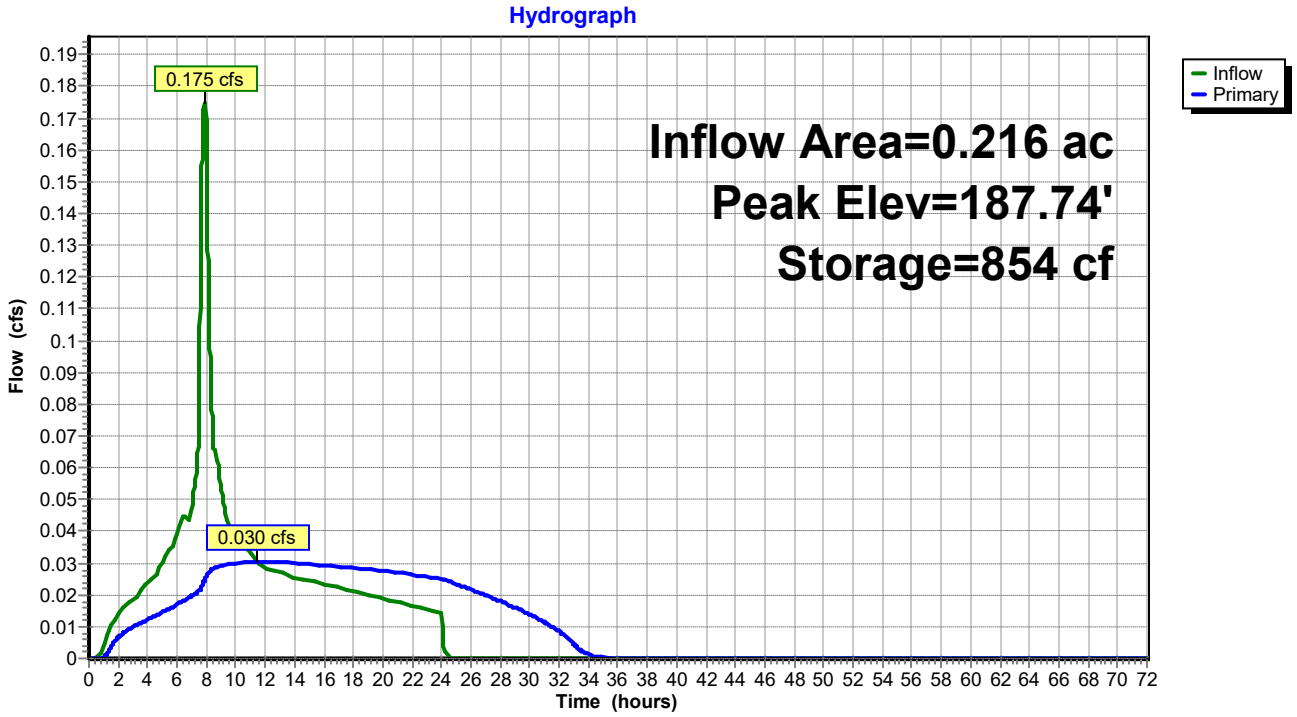
Plug-Flow detention time= 357.0 min calculated for 0.058 af (100% of inflow)
Center-of-Mass det. time= 356.9 min (1,020.1 - 663.2)

Volume	Invert	Avail.Storage	Storage Description
#1	186.36'	1,100 cf	**24.0" Round Pipe Storage** x 5 L= 70.0'
#2	186.36'	57 cf	**24.0" Round Pipe Storage** L= 18.0'
		1,156 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	186.36'	**12.0" Round Culvert** L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 186.36' / 186.14' S= 0.0044 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	186.36'	**1.0" Vert. Orifice** C= 0.600
#3	Device 1	188.00'	**4.0' long x 0.5' breadth Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.030 cfs @ 11.50 hrs HW=187.74' (Free Discharge)
└**1=Culvert** (Passes 0.030 cfs of 2.796 cfs potential flow)
└**2=Orifice** (Orifice Controls 0.030 cfs @ 5.58 fps)
└**3=Overflow Weir** (Controls 0.000 cfs)

Pond 3P: Detention Pipe - 24"



Summary for Subcatchment 100: Onsite Pre-Developed

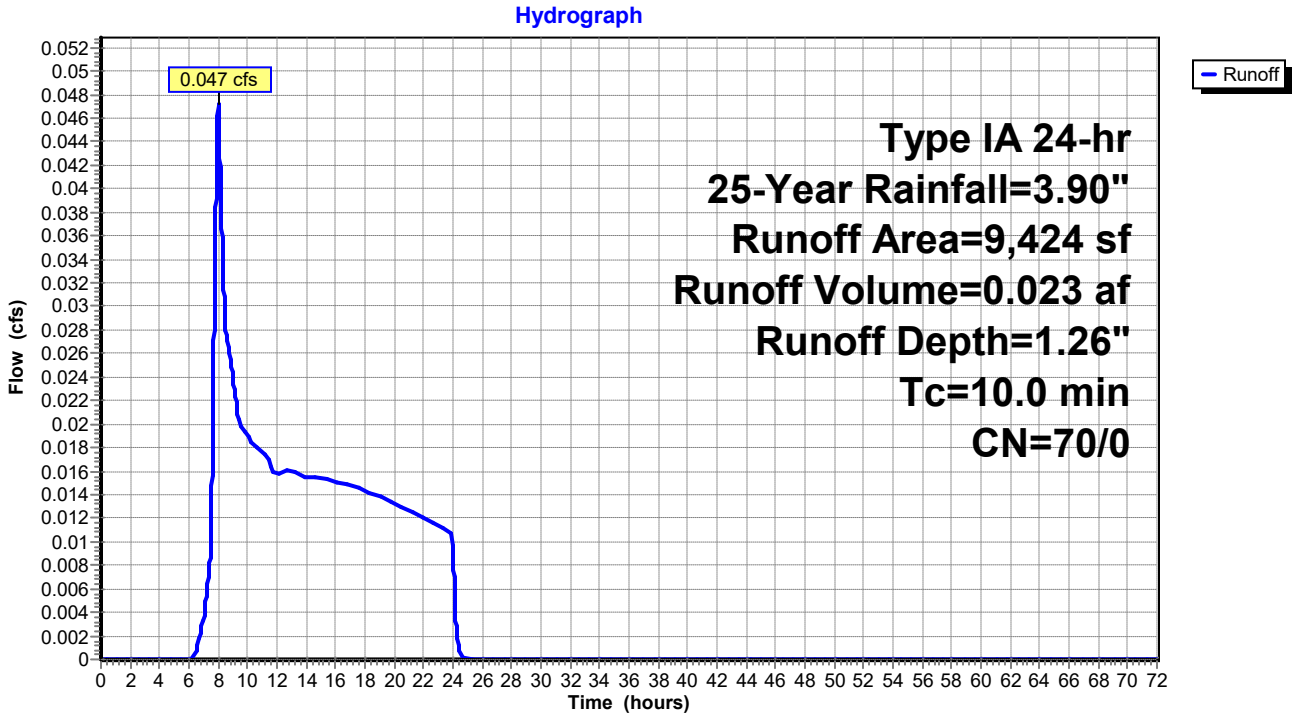
Runoff = 0.047 cfs @ 8.00 hrs, Volume= 0.023 af, Depth= 1.26"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25-Year Rainfall=3.90"

	Area (sf)	CN	Description
*	9,424	70	Pervious
	9,424	70	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 100: Onsite Pre-Developed



Summary for Subcatchment 101: Onsite Post-Developed

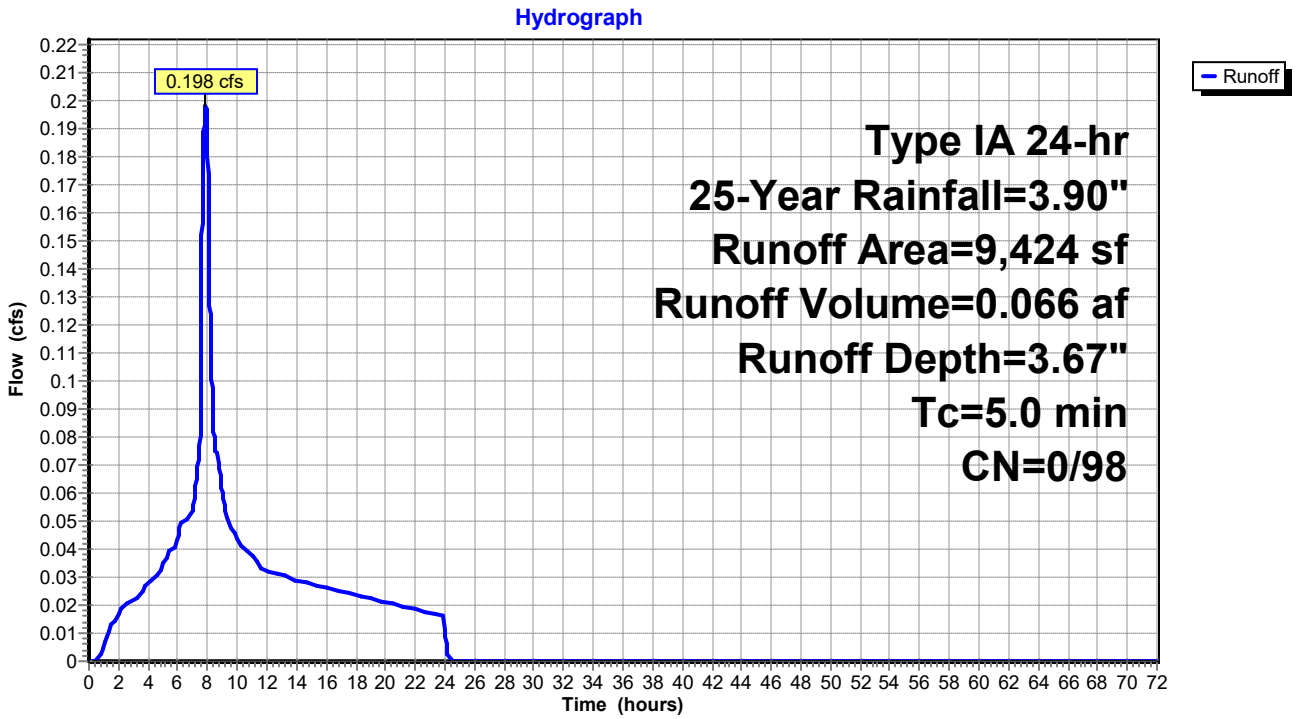
Runoff = 0.198 cfs @ 7.88 hrs, Volume= 0.066 af, Depth= 3.67"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25-Year Rainfall=3.90"

	Area (sf)	CN	Description
*	8,224	98	Parking Lot
*	1,200	98	Patio
	9,424	98	Weighted Average
	9,424	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 101: Onsite Post-Developed



Summary for Pond 3P: Detention Pipe - 24"

Inflow Area = 0.216 ac,100.00% Impervious, Inflow Depth = 3.67" for 25-Year event
Inflow = 0.198 cfs @ 7.88 hrs, Volume= 0.066 af
Outflow = 0.034 cfs @ 11.50 hrs, Volume= 0.066 af, Atten= 83%, Lag= 217.3 min
Primary = 0.034 cfs @ 11.50 hrs, Volume= 0.066 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 188.00' @ 11.50 hrs Surf.Area= 565 sf Storage= 1,015 cf

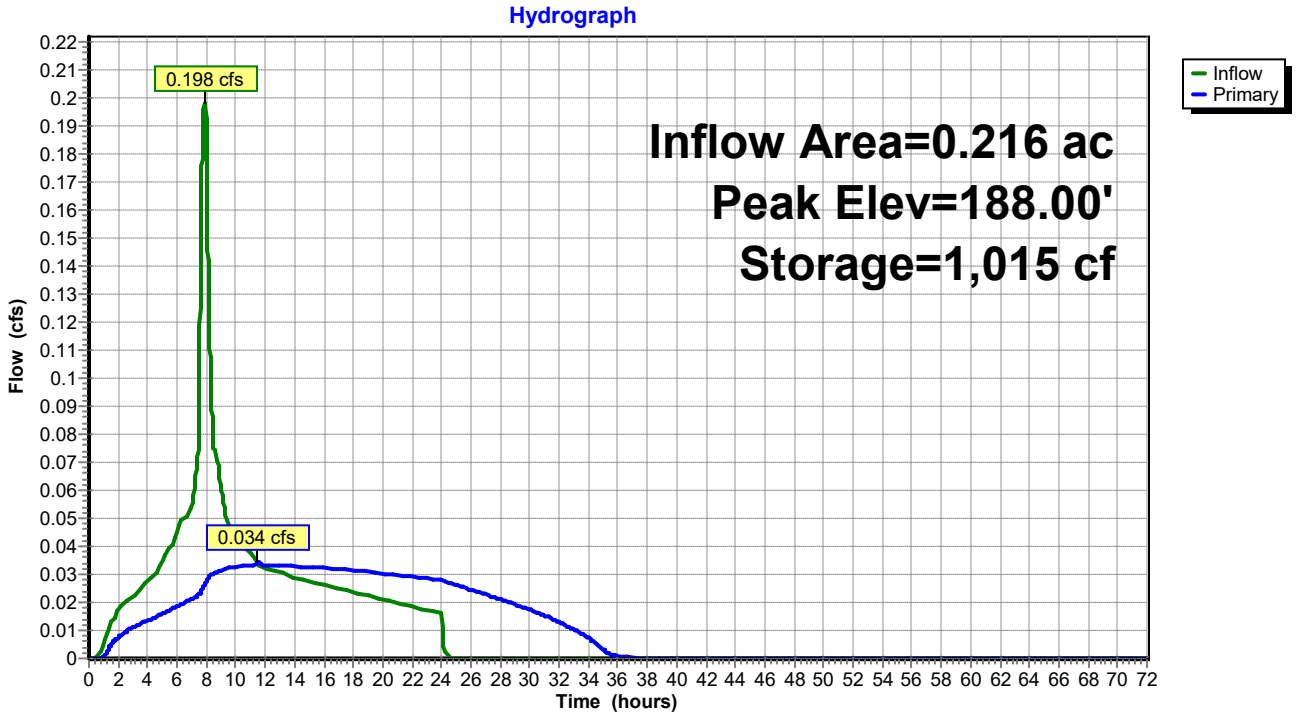
Plug-Flow detention time= 394.2 min calculated for 0.066 af (100% of inflow)
Center-of-Mass det. time= 394.1 min (1,054.2 - 660.1)

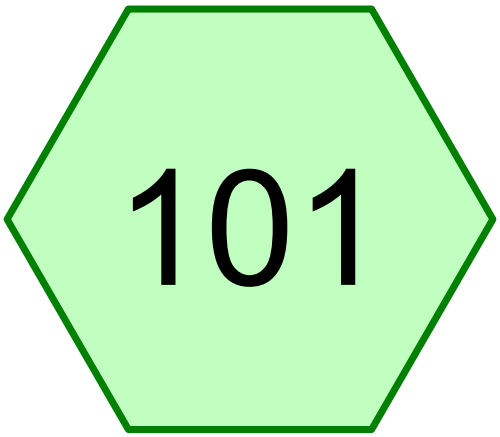
Volume	Invert	Avail.Storage	Storage Description
#1	186.36'	1,100 cf	**24.0" Round Pipe Storage** x 5 L= 70.0'
#2	186.36'	57 cf	**24.0" Round Pipe Storage** L= 18.0'
		1,156 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	186.36'	**12.0" Round Culvert** L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 186.36' / 186.14' S= 0.0044 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	186.36'	**1.0" Vert. Orifice** C= 0.600
#3	Device 1	188.00'	**4.0' long x 0.5' breadth Overflow Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.033 cfs @ 11.50 hrs HW=188.00' (Free Discharge)
└─**1=Culvert** (Passes 0.033 cfs of 3.337 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.033 cfs @ 6.09 fps)
  └─**3=Overflow Weir** (Weir Controls 0.000 cfs @ 0.08 fps)

Pond 3P: Detention Pipe - 24"





Onsite Post-Developed

Subcat Reach Pond Link

Routing Diagram for 3038-001 Detention Pipe
Prepared by {enter your company name here}, Printed 6/26/2026
HydroCAD® 10.00-25 s/n 09621 © 2019 HydroCAD Software Solutions LLC

Summary for Subcatchment 101: Onsite Post-Developed

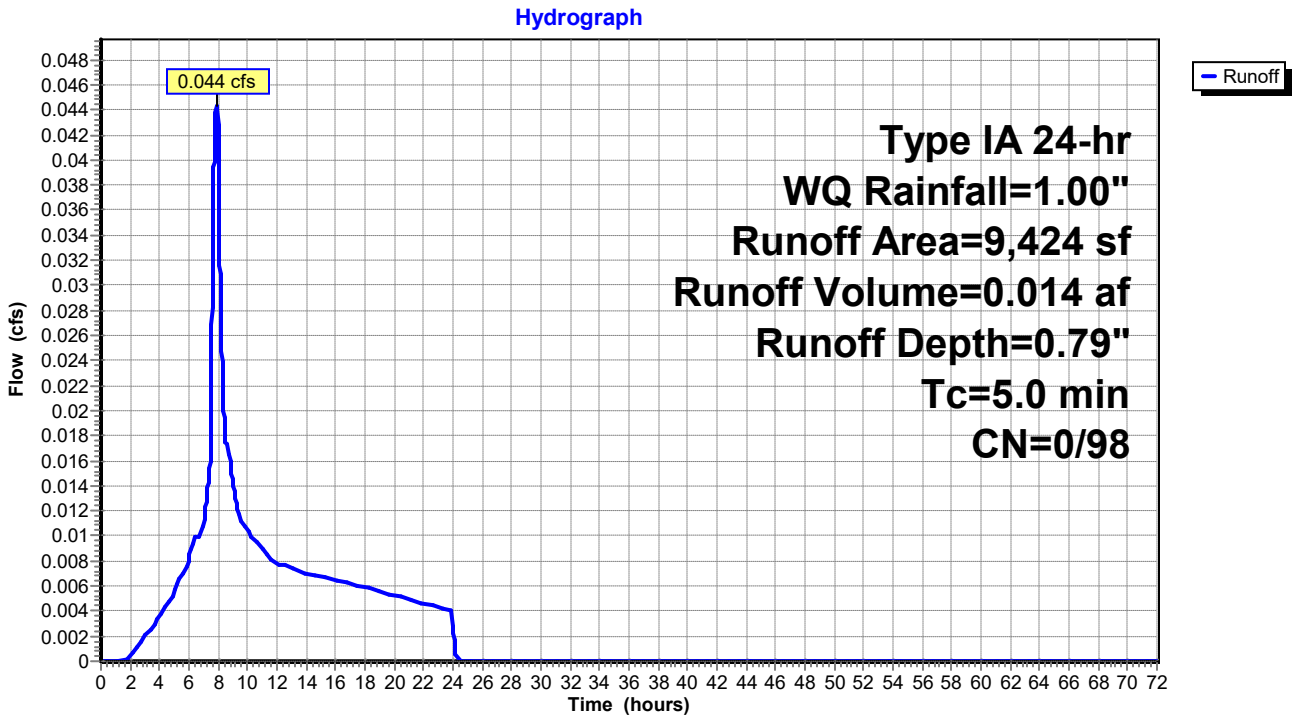
Runoff = 0.044 cfs @ 7.90 hrs, Volume= 0.014 af, Depth= 0.79"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr WQ Rainfall=1.00"

	Area (sf)	CN	Description
*	8,224	98	Parking Lot
*	1,200	98	Patio
	9,424	98	Weighted Average
	9,424	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 101: Onsite Post-Developed



WATER QUALITY/STORMFILTER ANALYSIS

Attachment 5
Matin Parking Facility

StormFilter Cartridges

REFERENCES:
1. Stormwater Management, Inc. Product Design Manual; Version 3.3; Released September 2005

2. Cityof West Linn Stormwater Management Manual

Precipitation:	1	inches
Storm Duration:	24	hours

The number of StormFilter cartridges needed for the onsite tributary impervious area =

Design Impervious Area	9,424.00	SF
	0.22	Ac.
Design flow rate (Q_{treat})=	0.044	cfs
Maximum flow rate a cartridge can treat (Q_{cart}) =	7.50	gpm/cart

Number of cartridges required to treat the water quality design flow rate for the site (N_{flow})

N_{flow} = Q_{treat} (449 gpm/cfs / Qcart gpm/cart)	2.63	cartridges
Round up for a total of	3.00	cartridges

Todd Prager & Associates LLC

Arborist Report and Tree Preservation Plan

Updated from February 10, 2026 Report

For Jordan Matin - Parking Lot at Tax Map/Lot 21E14DD/6100, Adjacent to 18825 Willamette Drive in West Linn, Oregon

Prepared by:
Liliana Morgan, ISA Certified Arborist ® PN-9492A,
Todd Prager & Associates, LLC

7/06/2026

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Purpose 3
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Tree Preservation Plan 4
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Tree Protection Standards 6
Conclusion 9
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Jordan Matin - Parking Lot Adjacent to 18825 Willamette Drive, West Linn, Oregon Arborist Report and Tree Preservation Plan

July 6th, 2026

Purpose

This Arborist Report and Tree Preservation Plan is an updated version of the February 10, 2026 report prepared for Jordan Matin. Based on the client's request, this updated plan provides calculations for significant tree removal and retention within and outside of the WRA 25-foot setback. This report describes the existing trees located on the project site, as well as recommendations for tree removal, retention and protection. This report is based on observations made by ISA Certified Arborist (PN-9492A) and Qualified Tree Risk Assessor Liliana Morgan during a site visit conducted on February 3, 2026 and site plan coordination with Jordan Matin and associated consultants.

Scope of Work and Limitations

Todd Prager & Associates, LLC was contracted by Jordan Matin to collect tree inventory data for individual trees that appear on the provided survey within and near the work limits at the site, and to develop a tree preservation plan for the project. The site is planned for a parking lot adjacent to 18825 Willamette Drive. An existing conditions survey and proposed site plan were provided by Westlake Consultants.

A Visual Tree Assessment (VTA) was performed on individual trees located within a defined tree assessment limit covering the area of the site to be impacted by construction activities. The enclosed tree inventory data sheet in Attachment 1 includes data for trees located within the tree assessment limit shown on the site plan in Attachment 2. A VTA is the standard process whereby the inspector visually assesses trees from a distance and up close, looking for significant and obvious defects and evaluating overall condition of individual trees. Trees were evaluated in terms of general structural condition, overall health condition, and potential construction impacts. Following the inventory fieldwork, we coordinated with Westlake Consultants to discuss tree protection and removal recommendations.

This updated plan categorizes trees based on their location within and outside of the WRA 25-foot setback, along with calculations for significant tree removal and retention. See the tree inventory in Attachment 1 for location within or outside the WRA 25-foot setback based on the site plan provided by the client in Attachment 2.

The client may choose to accept or disregard the recommendations contained herein or seek additional advice. Neither this author nor Todd Prager & Associates, LLC have assumed any responsibility for liability associated with the trees on or adjacent to this site.

General Description

The proposed parking lot site is located adjacent to 18825 Willamette Drive in West Linn, Oregon. Trees within the assessment limits consist primarily of native species, dispersed throughout the site.

This stand of native trees are of somewhat similar ages, with some exceptions. The health and structure of these trees cover the ranges from good to very poor, with most trees fitting into the good and fair categories. The species present on this site are characteristic of water tolerant species including black cottonwood (*Populus trichocarpa*), Oregon ash (*Fraxinus latifolia*), bigleaf maple (*Acer macrophyllum*), red alder (*Alnus rubra*), bitter cherry (*Prunus emarginata*), and American plum (*Prunus americana*).

The site plan in Attachment 2 includes the locations of existing trees in relation to proposed construction impacts such as grading, utilities, and parking. Tree numbers were assigned on site during the tree inventory, listed as trees 1 through 45. The tree numbers in Attachment 2 correspond to the tree numbers in the inventory in Attachment 1. The trees were also tagged with their corresponding numbers on site.

Tree Inventory

During site visits conducted in September 2025 and February 3, 2026, our firm assessed existing trees that appeared on the survey, inside the delineated assessment area of the proposed parking lot site. A spreadsheet of the inventoried trees is provided in Attachment 1.

The inventory lists the tree number, species (common and scientific names), DSH[1], crown radius, health condition, structural condition, whether the tree is significant as defined in the City of West Linn Community Development Code, significant tree protected area (dripline plus 10-feet), whether the tree is located within the Wetland Resources Area 25-foot setback, treatment (remove/retain), and pertinent comments. Trees are further denoted as significant or non-significant in the exhibit in Attachment 2.

Tree Preservation Plan

Trees suitable for preservation and tree removals were evaluated based on the site plan provided by Westlake Consultants. Table 1 provides a summary of the number of inventoried non-significant and significant trees by treatment recommendation and location.

[1] Diameter at Standard Height is the trunk diameter at 4.5 feet above ground level unless otherwise prescribed by the City of West Linn, also known as Diameter at Breast Height (DBH).

Table 1. Number of Inventoried Trees by Treatment and Significance

Treatment	Remove	Retain	Total
Non-Significant Trees	22	5 (18%)	**27**
- Within WRA 25-foot Setback	0	2 (100%)	**2**
- Outside WRA 25-foot Setback	22	3 (12%)	**25**
Significant Trees	11	7 (39%)	**18**
- Within WRA 25-foot Setback	0	6 (100%)	**6**
- Outside WRA 25-foot Setback	11	1 (8%)	**12**
Total	33	12 (27%)	**45**

Tree Retention and Removal
Of the 45 inventoried trees at the site, 12 trees are planned for retention, and 33 trees are planned for removal to accommodate the proposed development. The following is a discussion of the proposed significant and non-significant tree retention and removal.

Ash removal
Note that two trees proposed for removal are Oregon ash (*Fraxinus latifolia*), which are susceptible hosts for Emerald Ash Borer (EAB, *Agrilus planipennis*), an invasive forest pest that causes nearly 100 percent mortality of ash trees[2]. West Linn is located within Clackamas County, is within the EAB quarantine boundary and wood waste must remain within the county. This quarantine prohibits the removal of all plant parts of ash (*Fraxinus* spp.) trees from movement outside of the quarantined counties

Ash trees should be felled and left onsite or removed by a qualified tree removal service and disposed of at a wood processing site that is equipped to properly dispose of infected wood. See Attachments 3 and 4 for additional information on EAB.

Significant Tree Retention
The 12 trees planned for retention include seven significant trees, six of which are located within the WRA 25-foot setback. Several trees planned for retention have poor health and/or structural conditions ratings. Trees have value in the landscape long after they die, including value as wildlife habitat, and for improving soil structure and health. For trees that are in state of decline or are structurally compromised, coordination with the City of West Linn will be required to appropriately mitigate the risk in accordance with code requirements.

Non-Significant Tree Retention
The other five trees planned for retention are not designated significant per City of West Linn code, as they are less than 12-inch DSH. They are being retained because they do not conflict with proposed site improvements.

Tree Removal (Significant and Non-Significant)

[2] Roberts, E.S., Glass, J., Hulbert, J., Zobrist, K., Darr, M.N., & Bomberger, R. (2023). *Managing Emerald Ash Borer in Washington State*. WSU Extension Publications.

The 33 trees planned for removal include 11 significant trees and 22 non-significant trees. Trees 1 through 31 are proposed for removal based on their location within the proposed development and grading footprint. Additionally, trees 32 and 33 have very poor structure and are proposed for removal due to their proximity to the final developed parking lot and elevated risk to people and property.

Significant Tree Preservation Standards

The proposed significant tree preservation presented in Table 2 is based on the protected area of significant trees within the established tree assessment limit. The protected area of individually assessed significant trees is provided in the tree inventory in Attachment 1 and calculated based on the square feet beneath the dripline of each significant tree plus 10 feet. Since all trees at the site were individually assessed, with their driplines (plus 10 feet) measured, the tree cluster measurement method allowed by City of West Linn Community Development Code was not utilized. Schott & Associates has done their own assessment addressing West Linn Community Development Code Chapter 32 Water Resource Area Protection standards.

Table 2. Significant Tree Preservation

Treatment	Remove	Retain	% Retain	Total
Significant Trees (Cumulative Area, sq. ft.)	13,609	10,319	43%	23,928
Significant Trees Within WRA 25-foot Setback (Cumulative Area, sq. ft.)	0	8,509	100%	8,509
Significant Trees Outside WRA 25-foot Setback (Cumulative Area, sq. ft.)	13,609	1,810	11%	15,419

As shown in Table 2, 43 percent of the significant tree area at the site is proposed for retention. All six of the significant trees located within the WRA 25-foot setback are proposed to be retained, representing 100 percent retention of significant tree area within the WRA 25-foot setback. Of the 12 significant trees located outside the WRA 25-foot setback, one is proposed to be retained, representing 11 percent retention of significant tree area outside the WRA 25-foot setback. Significant tree preservation at the site has been maximized to the extent practicable given proposed site improvements.

Tree Protection Standards

This section of the report includes tree protection recommendations in accordance with the City of West Linn Code and Tree Technical Manual.

Site Specific Tree Protection Recommendations

The following site-specific tree protection standards apply to this project:

- **Tree Protection Fencing**: The trees to be retained should be protected with tree protection fencing as shown in Attachment 2.
- **Directional Felling**: Fell the trees to be removed away from the trees to be retained so they do not contact or otherwise damage the trunks or branches of

the trees to be retained. No vehicles or heavy equipment should be permitted within the tree protection zones during tree removal operations.

- **Ash tree removal**: Two Oregon ash, trees 11 and 32 are proposed for removal. Given Clackamas County's quarantine status, it is advised that all wood material pertaining to these two trees is left to remain onsite. Tree 11 can be felled and all logs and stump material placed within the designated tree protection area to serve as habitat. Tree 32 should be felled away from trees to remain and all wood materials left in place. Tree protection fencing may be moved temporarily in order to fell tree 32. Tree Protection fencing must be returned to its original placement as indicated in Attachment 2.
- **Stump Removal**: Stumps of trees removed within the tree protection zones shall be retained in place, carefully stump ground, or have their structural roots cut before pulling with a machine under the direction of project arborist to protect the root systems of the trees to be retained.
- **Sediment Fence**: Ensure sediment fence is placed outside the tree protection zones to protect the root systems of the trees to be retained.

General Tree Protection Standards
The following general tree protection standards are consistent with the City of West Linn Code and Tree Technical Manual.

Before Construction

1. **Tree Protection Zone.** The project arborist shall designate the Tree Protection Zone (TPZ) for each tree to be protected. Where feasible, the size of the TPZ shall be established at the dripline of the tree plus 10-feet for significant trees. Alternatively, the TPZ shall be established at a minimum radius from the trunks of .5 feet per inch of DBH. Where improvements (driveways, buildings, and utilities) must be installed closer to the tree(s), the TPZ may be established within the standard setbacks if the project arborist, in coordination with the City Arborist, determines that the tree(s) will not be unduly damaged. The location of TPZs shall be shown on construction drawings.
2. **Protection Fencing.** Protection fencing shall serve as the tree protection zone and shall be erected before demolition, grubbing, grading, or construction begins. All trees to be retained shall be protected by six-foot-high chain link fences installed at the edge of the TPZ. Protection fencing shall be secured to two-inch diameter galvanized iron posts, driven to a depth of at least two feet, placed no further than 10-feet apart. If fencing is located on pavement, posts may be supported by an appropriate grade level concrete base. Protection fencing shall remain in place until final inspection of the project permit, or in consultation with the project arborist.
3. **Signage.** An 8.5x11 –inch sign stating, "WARNING: Tree Protection Zone," shall be displayed on each protection fence section at all times.
4. **Designation of Cut Trees.** Trees to be removed shall be clearly marked with construction flagging, tree-marking paint, or other methods approved in advance by the project or city arborist. Trees shall be carefully removed so as to avoid either above or below ground damage to those trees to be preserved.

5. **Preconstruction Conference.** The project arborist shall be on site to discuss methods of tree removal and tree protection prior to any construction.
6. **Verification of Tree Protection Measures.** Prior to commencement of construction, the project arborist shall verify in writing to the City Arborist that tree protection fencing has been satisfactorily installed.

During Construction

7. **Tree Protection Zone Maintenance.** The protection fencing shall not be moved, removed, or entered by equipment except under direction of the project arborist, in coordination with the City Arborist.
8. **Storage of Material or Equipment.** The contractor shall not store materials or equipment within the TPZ.
9. **Excavation within the TPZ.** Excavation with the TPZ shall be avoided if alternatives are available. If excavation within the TPZ is unavoidable, the project arborist shall evaluate the proposed excavation to determine methods to minimize impacts to trees. This can include tunneling, hand digging or other approaches. All construction within the TPZ shall be under the on-site technical supervision of the project arborist, in coordination with the City Arborist.
10. **Tree Protection Zone.** The project arborist shall monitor construction activities and progress and provide written reports to the City at regular intervals. Tree protection inspections shall occur monthly or more frequently if needed.
11. **Quality Assurance.** The project arborist shall supervise proper execution of this plan during construction activities that could encroach on retained trees. Tree protection site inspection monitoring reports shall be provided to the City on a regular basis throughout construction.

Post Construction

12. **Final Report.** After the project has been completed, the project arborist shall provide a final report to the City. The final report shall include concerns about any trees negatively impacted during construction, and describe the measures needed to maintain and protect the remaining trees for a minimum of two years after project completion.

Conclusion

The recommendations in this report address the applicable requirements in the City of West Linn Code and Tree Technical Manual for the proposed parking lot adjacent to 18825 Willamette Drive, in West Linn, Oregon. Based on the client's request, this updated plan provides calculations for significant tree removal and retention within and outside of the WRA 25-foot setback.

Please contact me if you have questions, concerns, or need any additional information.

Sincerely,

Liliana Morgan
ISA Certified Arborist ®, PN-9492A
ISA Tree Risk Assessment Qualified
ASCA Tree and Plant Appraisal Qualified

Enclosures:
Attachment 1 – Tree Inventory
Attachment 2 – Tree Removal and Protection Plan
Attachment 3 – ODA Emerald Ash Borer Quarantine Alert
Attachment 4 – ODA Qualified Tree Removal Service/Wood Processing
Attachment 5 – Assumptions and Limiting Conditions

Todd Prager & Associates LLC

Attachment 1 - Tree Inventory
Matin Real Estate Parking Lot on Willamette Dr.
February 3, 2026

Tree Number	Common Name	Scientific Name	DBH[1] (in)	Crown radius[2] (ft)	Health condition[3]	Structural condition[3]	Significant Tree[4]	Significant Tree crown radius + 10'	Significant Tree Area[5]	Within WRA 25-foot Setback[6]	Treatment	Site notes/ Comments
1	black cottonwood	*Populus trichocarpa*	19	10	good	good	X	20	1257		remove	thin, trunk wound - sufficient response growth
2	black cottonwood	*Populus trichocarpa*	14	5	fair	fair	X	15	707		remove	thin, asymmetrical crown, epicormic branches
3	black cottonwood	*Populus trichocarpa*	13	4	fair	good	X	14	616		remove	epicormic branches, choked by ivy, DSH may be inaccurate due to ivy vines
4	black cottonwood	*Populus trichocarpa*	21	12	good	good	X	22	1521		remove	multi-stem
5	black cottonwood	*Populus trichocarpa*	20	8	good	fair	X	18	1018		remove	epicormic branches
6	black cottonwood	*Populus trichocarpa*	15	5	fair	good	X	15	707		remove	epicormic branches
7	black cottonwood	*Populus trichocarpa*	8	4	good	good					remove	choked by ivy, DSH may be inaccurate due to ivy vines
8	black cottonwood	*Populus trichocarpa*	20	10	good	good	X	20	1257		remove	
9	black cottonwood	*Populus trichocarpa*	22	12	good	good	X	22	1521		remove	
10	American plum	*Prunus americana*	3	8	good	good					remove	asymmetrical crown
11	Oregon ash	*Fraxinus latifolia*	4	4	good	good					remove	leaning, supporting a failed tree
12	black cottonwood	*Populus trichocarpa*	4	3	good	fair					remove	asymmetrical crown
13	black cottonwood	*Populus trichocarpa*	4	4	good	good					remove	leaning, supporting a failed tree
14	black cottonwood	*Populus trichocarpa*	5	5	good	fair					remove	trunk wound - sufficient response growth, bowed trunk
15	black cottonwood	*Populus trichocarpa*	4	5	good	good					remove	dying from the top down, dead branches greater than 4" diameter, multi-stem
16	bigleaf maple	*Acer macrophyllum*	14	15	poor	very poor	X	25	1963		remove	dying from the top down, bowed trunk, leaning trunk, nearly dead - only a couple lives branches on lower stem
17	red alder	*Alnus rubra*	9	3	very poor	poor					remove	suppressed, epicormic branches
18	black cottonwood	*Populus trichocarpa*	8	5	fair	good					remove	leaning trunk, heavily leaning tree
19	black cottonwood	*Populus trichocarpa*	6	5	fair	poor					remove	bowed trunk
20	American plum	*Prunus americana*	2	8	good	good					remove	multi-stem, bowed trunk
21	American plum	*Prunus americana*	2	5	good	good					remove	
22	black cottonwood	*Populus trichocarpa*	4	4	good	good					remove	leaning trunk, covered by outcompeting vines
23	bitter cherry	*Prunus emarginata*	6	3	poor	fair					remove	leaning trunk, covered by outcompeting vines
24	bitter cherry	*Prunus emarginata*	6	8	poor	poor					remove	leaning trunk
25	bitter cherry	*Prunus emarginata*	9	5	fair	good					remove	
26	bitter cherry	*Prunus emarginata*	6	8	good	good					remove	codominant leaders
27	bitter cherry	*Prunus emarginata*	9	10	good	good					remove	crooked trunk
28	bitter cherry	*Prunus emarginata*	9	7	good	good					remove	
29	bitter cherry	*Prunus emarginata*	7	10	good	good					remove	multi-stem, leaning trunk - heavy lean, lifted roots, has been in this state for a long time as shown by upright branches that have become leaders
30	bitter cherry	*Prunus emarginata*	14	12	fair	poor	X	22	1521		remove	dying from the top down
31	red alder	*Alnus rubra*	8	5	poor	good					remove	thin, dying from the top down, leaning trunk, trunk cavities, fungal fruiting bodies observed
32	Oregon ash	*Fraxinus latifolia*	7	8	poor	very poor					remove	multi-stem, trunk wound - insufficient response growth, dead branches greater than 4" diameter
33	American plum	*Prunus americana*	22	12	fair	very poor	X	22	1521		remove	multi-stem, codominant leaders with inclusion, epicormic branches
34	American plum	*Prunus americana*	13	14	good	poor	X	24	1810		retain	location approximated by arborist, DSH approximated by arborist, dying from the top down. untagged, inaccessible.
35	red alder	*Alnus rubra*	11	4	poor	poor					retain	thin, narrow crown, 0-2"dead branches, canopy dieback - moderate
36	red alder	*Alnus rubra*	10	10	fair	good					retain	0-2" dead branches, canopy dieback - minimal
37	bigleaf maple	*Acer macrophyllum*	18	10	fair	poor	X	20	1257	X	retain	DSH approximated by arborist, multi-stem, canopy dieback - moderate, chlorotic foliage.
38	bigleaf maple	*Acer macrophyllum*	19	10	fair	poor	X	20	1257	X	retain	DSH approximated by arborist, multi-stem, canopy dieback - minimal
39	bigleaf maple	*Acer macrophyllum*	22	10	fair	poor	X	20	1257	X	retain	DSH approximated by arborist, thin, discolored foliage, canopy dieback - moderate
40	red alder	*Alnus rubra*	14	10	fair	fair	X	20	1257	X	retain	0-2" dead branches, asymmetrical crown, canopy dieback - minimal
41	red alder	*Alnus rubra*	11	8	fair	fair					retain	slight phototropic lean, asymmetrical crown, 0-2" dead branches
42	red alder	*Alnus rubra*	10	4	fair	poor				X	retain	narrow, bowed trunk, heavy clematis load, 0-2" dead branches

Todd Prager & Associates LLC

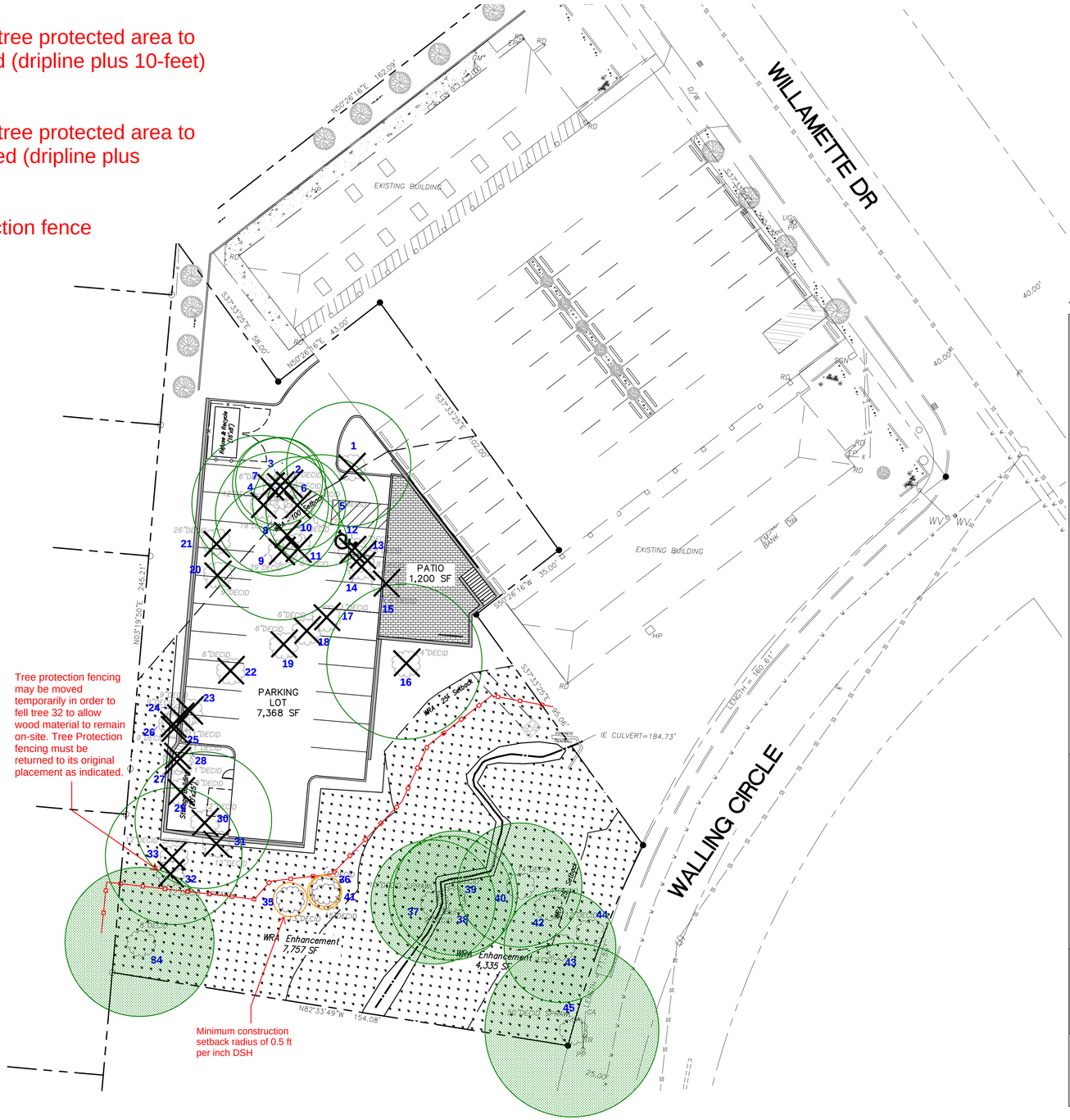
Attachment 1 - Tree Inventory
Matin Real Estate Parking Lot on Willamette Dr.
February 3, 2026

Tree Number	Common Name	Scientific Name	DBH[1] (in)	Crown radius[2] (ft)	Health condition[3]	Structural condition[3]	Significant Tree[4]	Significant Tree crown radius + 10'	Significant Tree Area[5]	Within WRA 25-foot Setback[6]	Treatment	Site notes/ Comments
43	red alder	*Alnus rubra*	12	8	poor	poor	X	18	1018	X	retain	ivy-choked, 2-4" dead branches, narrow, high crown
44	bigleaf maple	*Acer macrophyllum*	9	5	fair	fair				X	retain	multi-stem, asymmetrical crown, invasive groundcover, untagged
45	willow spp.	*Salix spp.*	38	18	poor	poor	X	28	2463	X	retain	multi-stem, epicormic growth, history of major stem failure, topped for utilities, 4-6" dead branches

[1]**DBH** is the trunk diameter in inches at 4.5 feet above ground level, per International Society of Arboriculture (ISA) standards or unless otherwise prescribed by the City of West Linn.
[2]**C-Rad** is the approximate crown radius in feet.
[3]**Condition and Structure** ratings range from dead, very poor, poor, fair, to good.
[4]**Significant Tree** is defined in the City of West Linn Code as, "a tree with a minimum of six-inch DBH for Oregon white oak, Pacific madrone, and Pacific dogwood, and 12-inch DBH for all other tree species. If the tree splits into multiple trunks above grade but below breast height, the diameter shall be determined by adding the total diameter of all trunks two inches or greater DBH."
[5]**Significant Tree Area** is defined in the City of West Linn Code as, "...the area within the dripline of the tree(s), plus an additional 10-foot measurement beyond the dripline" in square feet.

Tree Legend

- Trees proposed for removal
- Significant tree protected area to be removed (dripline plus 10-feet)
- Significant tree protected area to be preserved (dripline plus 10-feet)
- Tree protection fence



The following tree protection measures are recommended:

BEFORE CONSTRUCTION

1. **Tree Protection Zone.** The project arborist shall designate the Tree Protection Zone (TPZ) for each tree to be protected.
   a. Where feasible, the size of the TPZ shall be established at the dripline of the tree plus 10-feet for significant trees. Alternatively, the TPZ shall be established at a minimum radius from the trunks of .5 feet per inch of DBH.
   b. Where improvements (driveways, buildings, and utilities) must be installed closer to the tree(s), the TPZ may be established within the standard setbacks if the project arborist, in coordination with the City Arborist, determines that the tree(s) will not be unduly damaged.
   c. The location of TPZs shall be shown on construction drawings.
2. **Protection Fencing.** Protection fencing shall serve as the tree protection zone and shall be erected before demolition, grubbing, grading, or construction begins as shown in Attachment 2.
   a. All trees to be retained shall be protected by six-foot-high chain link fences installed at the edge of the TPZ.
   b. Protection fencing shall be secured to two-inch diameter galvanized iron posts, driven to a depth of at least two feet, placed no further than 10-feet apart.
   c. If fencing is located on pavement, posts may be supported by an appropriate grade level concrete base.
   d. Protection fencing shall remain in place until final inspection of the project permit, or in consultation with the project arborist.
   e. Ensure sediment fence is placed outside the tree protection zones to protect the root systems of the trees to be retained.
3. **Signage.** An 8.5x11 –inch sign stating, "WARNING: Tree Protection Zone," shall be displayed on each protection fence section at all times.
4. **Designation of Cut Trees.** Trees to be removed shall be clearly marked with construction flagging, tree-marking paint, or other methods approved in advance by the project or city arborist.
   a. Fell the trees to be removed away from the trees to be retained so they do not contact or otherwise damage the trunks or branches of the trees to be retained.
   b. No vehicles or heavy equipment should be permitted within the tree protection zones during tree removal operations.
   c. Stumps of trees removed within the tree protection zones shall be retained in place, carefully stump ground, or have their structural roots cut before pulling with a machine under the direction of project arborist to protect the root systems of the trees to be retained.
5. **Ash tree removal.** Two Oregon ash, trees 11 and 32 are proposed for removal. Given Clackamas County's quarantine status, it is advised that all wood material pertaining to these two trees is left to remain onsite.
   a. Tree 11 can be felled and all logs and stump material placed within the designated tree protection area to serve as habitat.
   b. Tree 32 should be felled away from trees to remain and all wood materials left in place. Tree protection fencing may be moved temporarily in order to fell tree 32.
   c. Tree Protection fencing must be returned to its original placement as indicated in Attachment 2.
6. **Preconstruction Conference.** The project arborist shall be on site to discuss methods of tree removal and tree protection prior to any construction.
7. **Verification of Tree Protection Measures.** Prior to commencement of construction, the project arborist shall verify in writing to the City Arborist that tree protection fencing has been satisfactorily installed.

DURING CONSTRUCTION

8. **Tree Protection Zone Maintenance.** The protection fencing shall not be moved, removed, or entered by equipment except under direction of the project arborist, in coordination with the City Arborist.
9. **Storage of Material or Equipment.** The contractor shall not store materials or equipment within the TPZ.
9. **Excavation within the TPZ.** Excavation with the TPZ shall be avoided if alternatives are available.
   a. If excavation within the TPZ is unavoidable, the project arborist shall evaluate the proposed excavation to determine methods to minimize impacts to trees. This can include tunneling, hand digging or other approaches.
   b. All construction within the TPZ shall be under the on-site technical supervision of the project arborist, in coordination with the City Arborist.
10. **Tree Protection Zone.** The project arborist shall monitor construction activities and progress and provide written reports to the City at regular intervals. Tree protection inspections shall occur monthly or more frequently if needed.
11. **Quality Assurance.** The project arborist shall supervise proper execution of this plan during construction activities that could encroach on retained trees. Tree protection site inspection monitoring reports shall be provided to the City on a regular basis throughout construction.
12. **Supplemental watering.** If construction occurs during the summer months (June through September), supplemental watering is recommended.

AFTER CONSTRUCTION

13. **Final Report.** After the project has been completed, the project arborist shall provide a final report to the City. The final report shall include concerns about any trees negatively impacted during construction, and describe the measures needed to maintain and protect the remaining trees for a minimum of two years after project completion.
14. **Monitoring Trees for Stress.** Trees are often stressed for several years post construction. If trees show signs of decline (thinning foliage, discolored foliage, stunted growth), engage with a qualified arborist to inspect the trees and recommend treatment.

Tree Plan Recommendations prepared by:
Liliana Morgan, ISA Certified Arborist®, PN-9492A
ISA Tree Risk Assessment Qualified
ASCA Tree and Plant Appraisal Qualified
Todd Prager & Associates, LLC
503.837.9730 | liliana@toddprager.com

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MATIN PARKING FACILITY
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NO.	DATE	DESCRIPTION	DRAFT BY:	CHECK BY:
1	6/8/2026	COMPLETENESS LETTER REDLINES	JDM	DAB

REVISIONS

SHEET
P200

JOB NO.
3038–001

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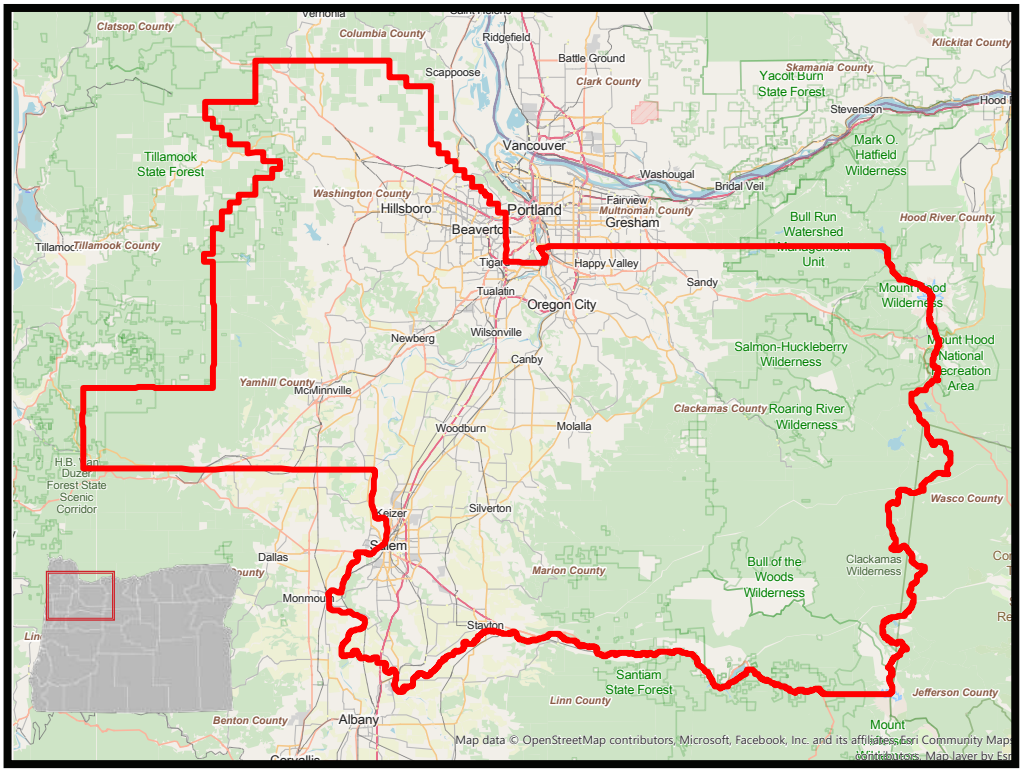
Attachment 3

EMERALD ASH BORER QUARANTINE ALERT

OREGON DEPARTMENT OF AGRICULTURE

WASHINGTON, YAMHILL, MARION, CLACKAMAS COUNTIES, OREGON

A permanent quarantine is now in effect. Emerald ash borer (EAB) has been confirmed in three new counties, triggering an expansion of the quarantine. Tree materials of ash, olive, and white fringe tree, must remain within quarantined counties (Washington, Yamhill, Marion, Clackamas). Wood waste must be processed accordingly and disposed of.



Quarantine Boundary Map: ***Quarantine applies to all of the infested counties, including federal, state, commercial, and private lands.***

Treatment Options for Regulated Materials

- Live plant material is eligible for complaince agreements with ODA if one of the following conditions is met:
  - Diameter at the base of the plants is less than 0.75 inches
  - Plants were grown in a screenhouse approved by the ODA
  - Plants have been properly treated with an approved insecticide
- Debark wood and remove at least 1 inch of underlying wood
- Grind or chip to 1 inch or less
- Heat wood to a minumum of 160°F for at least 60 minutes
- Bury under at least 12 inches of topsoil
- Incinerate wood materials
- Secondary processing to produce wood by-products (i.e. paper)
- Other methods specified within a complaince agreement with ODA

Regulated Ash, Olive, & White Fringe Tree Materials

- Nursery stock
- Scion wood
- Bud wood
- Logs
- Roots and branches
- Stumps
- Green lumber
- Chips and mulch
- Firewood of hardwood species

Quarantine Exceptions

- Nurseries or groups that have a formal compliance agreement with ODA
- Seeds and leaves
- Processed lumber kiln dried, free of bark and material 1 inch below bark.
- Finished wood products without bark, including furniture, baskets, and baseball bats

April 1 - September 30

Avoid felling ash, olive and white fringe trees, including branches,and stumps. Hazardous trees can be mitigated at any time. Chip or process as soon as possible on site. Avoid moving any woody material.

October 1 - March 31

Conduct tree removal and pruning during this time period. Transport trees and parts of trees to a facility within the quarantine zone where it will be processed before April 1st.

EMERALD ASH BORER (EAB) PERMANENT QUARANTINE

OREGON DEPARTMENT OF AGRICULTURE

EAB Quarantine Frequently Asked Questions.

- **Can regulated material be moved within the quarantine?**
  Movement of EAB hosts within the quarantine area (Washington, Yamhill, Marion and Clackamas counties) is permitted. Ash, olive, and white fringe trees can be sold, given away, or planted, as long as they remain within the quarantine boundaries.
- **Why are we concerned?**
  EAB kills ash and white fringe trees and can damage olive trees. To slow the spread of EAB, ODA is placing a quarantine on infested Counties to restrict the movement of tree materials that may spread EAB to new areas in the state.
- **What is a quarantine? What are the consequences for not adhering to the quarantine?**
  Quarantine is the legal enforcement of actions that help slow the spread of pests to new areas or that prevent them from multiplying where they have already gained entry. For this reason, ODA is implementing a permanent EAB quarantine as per Oregon Administrative Rule (OAR 603-052-1075). Non-compliance will result in the spread of EAB and civil penalties of up to $10,000 as provided by ORS 570.995
- **What do I need to do?**
  Nurseries train staff to identify signs of EAB and report sightings to ODA. Communicate clearly to the purchaser that host plants are required to remain within the quarantine boundaries. Inspect EAB host plants prior to moving them within the quarnatine zones, and inspect mother trees.

  If you see symptoms or signs of EAB infestation please call 1-866-INVADER or contact ODA at: EAB@oda.oregon.gov

Ash Tree ID

- Compound leaves with 5-11 leaflets
- Unstaggered opposite branching
- Diamond shape bark pattern
- Seeds are oar-shaped samaras

Oregon Ash leaf
Photo: Jordon Bartosz

Signs & Symptoms of EAB

- Crown dieback in heavily infested trees
- D-shaped emergence holes in bark about 0.118 inch (3mm) in size.
- Sucker shoots emerging from trunk
- S-shaped galleries underneath the bark
- Bark splitting found on trunk or branches
- Woodpecker activity
- The tree is dying from top down

D-shaped emergence hole

Bark splitting

S-shaped galleries

Additional Resources

Example compliance agreement
ODA.direct/EABComplianceAgreement

Pesticides approved for use against EAB
ODA.direct/EABpesticides

Attachment 4 - ODA Qualified Tree Removal Service/Wood Processing

The following is a list put together by the Oregon Department of Agriculture (ODA). The list is intended to help guide residents and businesses to resources that can handle ash, olive, and white fringe tree materials in accordance with the temporary quarantine adopted in Washington County. **ODA will continue to add and update this list as more businesses are identified.**

-It is important to confirm that any business contacted, on or off this list, knows about the temporary quarantine, and can properly handle the wood materials.

Tree removal service/wood processing

Eduardo's Tree Service	41821 NW Kemper Rd Forest Grove , OR 97116	https://www.eduardostree.com/ (503) 360-1923
General Tree Service	6795 SW 111th ave, Beaverton, OR 97008	https://www.generaltree.com (503) 902-7932
Watts Tree Service	10580 NW 309th Ave, North Plains, OR 97133	https://wattstreeservice.com/ (503) 260-1510, (971) 770-7011
Burl & Grain	223 SW Wood St Hillboro, OR 97123	https://www.burlandgrain.com/ (503) 610-3325
For The Love of Trees	PO Box 1996 Beaverton, OR 97075	Fortheloveoftrees.com (503) 515-9520
The Davey Tree Expert Company	5838 NE Columbia Blvd Portland, OR 97218	https://www.davey.com/residential-tree-services/local-offices/portland-tree-service/ (503) 205-6383

Duran Tree Service	2459 SE Tualatin Valley Hwy #355, Hillsboro, OR 97123	https://www.durantreeservice.com/ (503) 405-6720
Halstead	P.O. Box 1182 Tualatin, OR 97062	https://halsteadsarbor.com (503) 245-1383
Marble Tree service	Forest Grove	https://www.marbletreeservice.com/forestry-mulching (503) 303-0726
TRG Tree Service	2820 SE 39th Loop unit c, Hillsboro, OR 97123	www.trgtree.com (971) 228-9975
Arbor Pro Tree Experts	121 fooothills Rd, Lake Oswego, OR 97034	www.arborpronw.com (503) 473-8733

Drop off

S&H Landscape Supply and Recycling	1045 N 4th Ave, Cornelius, OR 97113	https://www.shbark.com/ (503) 357-6090

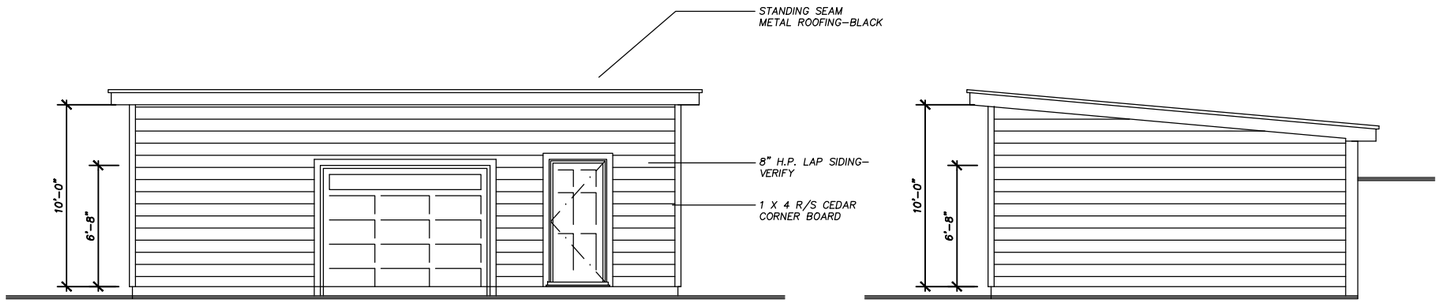
Attachment 5
Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. The site plans and construction information provided by Jordan Matin, Westlake Consultants, and their affiliates was the basis of the information provided in this report.
2. It is assumed that this property is not in violation of any codes, statutes, ordinances, or other governmental regulations.
3. The client is advised to ensure compliance with applicable local, state, and federal laws and regulations that could relate to this project, i.e., Local and State Tree or Natural Resource Regulations, Local and State Development Regulations, Migratory Bird Treaty Act, Endangered Species Act, Clean Water Act, Americans with Disabilities Act, etc. The consultant may advise the client of issues regarding local, state, and federal laws that the consultant believes would be helpful to the client, but any such advice or comment is not a determination or interpretation of local, state, or federal law or regulation.
4. The consultant is not responsible for information gathered from others involved in various activities pertaining to this project. Care has been taken to obtain information from reliable sources.
5. Loss or alteration of any part of this delivered report invalidates the entire report.
6. Drawings and information contained in this report may not be to scale and are intended to be used as display points of reference only.
7. The consultant's role is only to make recommendations. Inaction on the part of those receiving the report is not the responsibility of the consultant.
8. The purpose of this updated report is to provide calculations for significant tree removal and retention within and outside of the WRA 25-foot setback, along with tree removal, preservation, and protection recommendations for Jordan Matin for the parking lot adjacent to 18825 Willamette Drive in West Linn, OR.

STORAGE SHED FOR SUPPLIES

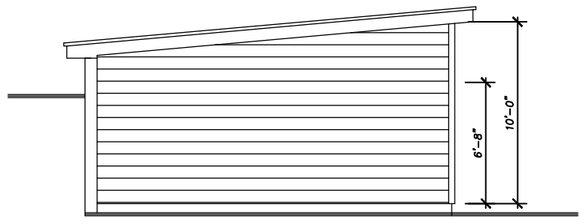
Color Sample:
Charcoal Grey or Black.

Material to be used will be HP Siding as depicted below.



FRONT ELEVATION

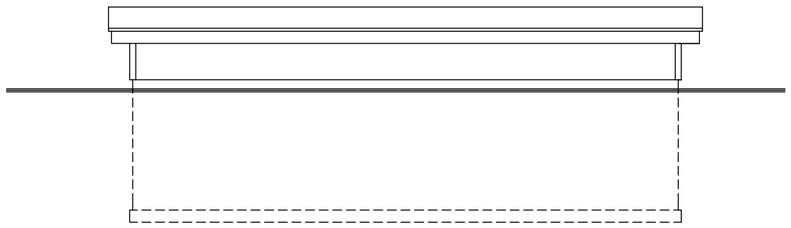
RIGHT–SIDE ELEVATION



LEFT–SIDE ELEVATION

NOTE:
EXTEND ALL FLUES A MIN. OF 2'–0" ABOVE ANY PART OF THE BLD'G W/ IN A 10'–0" HORIZONTAL RADIUS

NOTE:
ALL GRADES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL EXISTING AND FINISH GRADES.



REAR ELEVATION

TABLE N1101.1(2) ADDITIONAL MEASURES

ENVELOPE ENHANCEMENT MEASURE (SELECT ONE)	1	HIGH EFFICIENCY WALLS EXTERIOR WALLS – U–0.045/R–21 CAVITY INSULATION + R–5 CONTINUOUS
	2	UPGRADED FEATURES EXTERIOR WALLS – U–0.057/R–23 INTERMEDIATE OR R–21 ADVANCED FLAT CEILING [e] U–0.026/R–38, AND WINDOWS – U–0.28 (AVERAGE UA)
	3	UPGRADED FEATURES EXTERIOR WALLS – U–0.055/R–23 INTERMEDIATE OR R–21 ADVANCED FLAT CEILING [e] U–0.017/R–60, AND FRAMED FLOOR – U–0.026 / R–38
	4	SUPER INSULATED WINDOWS AND ATTIC OR FRAMED FLOOR WINDOWS – U–0.22 (TRIPLE PANE LOW –E) AND FLAT CEILING – U–0.017 / R–60 OR FRAMED FLOOR – U–0.026 / R–38
	5	AIR SEALING HOME AND DUCTS [f] MANDATORY AIR SEALING OF ALL WALL COVERINGS AT TOP PLATE AND AIR SEALING CHECKLIST, AND MECHANICAL WHOLE–BUILDING VENTILATION SYSTEM WITH RATES MEETING M1503 OR ASHRAE 62.2, AND ALL DUCTS AND AIR HANDLERS CONTAINED WITHIN BUILDING ENVELOPE OR [a] ALL DUCTS SEALED WITH MASTIC. [b]
	6	HIGH EFFICIENCY THERMAL ENVELOPE UA [g] PROPOSED UA IS 8% LOWER THAN THE CODE UA
CONSERVATION MEASURE (SELECT ONE)	A	HIGH EFFICIENCY HVAC SYSTEM: [c] GAS FIRED FURNACE OR BOILER AFUE 94%, OR AIR SOURCE HEAT PUMP HSPF 9.5 / 15.0 SEER COOLING, OR GROUND SOURCE HEAT PUMP COP 3.5 OR ENERGY STAR RATED
	B	DUCTED HVAC SYSTEMS WITHIN CONDITIONED SPACE: [d] ALL DUCTS AND AIR HANDLER ARE CONTAINED WITHIN BUILDING ENVELOPE CANNOT BE COMBINED WITH MEASURE 5
	C	DUCTLESS HEAT PUMP: DUCTLESS HEAT PUMP HSPF 10.0 IN PRIMARY ZONE OR DWELLING
	D	HIGH EFFICIENCY WATER HEATER [c] NATURAL GAS / PROPANE WATER HEATER WITH UEF 0.85 OR ELECTRIC HEAT PUMP WATER HEATER TIER 1 NORTHERN CLIMATE SPECIFICATION PRODUCT

FOR SI: 1 SQUARE FOOT = 0.093 M 2, 1* WATT PER SQUARE FOOT = 10.8 W/M 2.

a. APPLIANCES LOCATED WITHIN THE BUILDING ENVELOPE SHALL HAVE SEALED COMBUSTION AIR INSTALLED. COMBUSTION AIR SHALL BE DUCTED DIRECTLY FROM THE OUTDOORS.
b. ALL DUCT JOINTS AND SEAMS SEALED WITH MASTIC; TAPE IS ONLY ALLOWED AT APPLIANCE OR EQUIPMENT CONNECTIONS (FOR SERVICE AND REPLACEMENT). MEET SEALING CRITERIA OF PERFORMNCE TESTED COMFORT SYSTEM PROGRAM ADMINISTERED BY THE BONNEVILLE POWER ADMINISTRATION (BPA)
c. RESIDENTIAL WATER HEATERS LESS THAN 55 GALLON STORAGE VOLUME. THESE ADDITIONAL MEASURE ADDS AN ADDITIONAL PERCENT TO THE SECTION N1107.2 REQUIREMENT.
d. A TOTAL OF 5 PERCENT OF AN HVAC SYSTEM'S DUCTWORK SHALL BE PERMITTED TO BE OUTSIDE OF THE CONDITIONED SPACE. DUSTS LOCATED OUTSIDE THE CONDITIONED SPACE SHALL HAVE INSULATION INSTALLED AS REQUIRED IN THIS CODE.
e. THE MAXIMUM VAULTED CEILING SURFACE AREA SHALL NOT BE GREATER THAN 50 PERCENT OF THE TOTAL HEATED SPACE FLOOR ARE UNLESS VAULTED AREA HAS U–FACTOR NO GREATER THAN U–0.026.
f. CONTINUOUS AIR BARRIER, ADDITIONAL REQUIREMENT FOR SEALING OF ALL INTERIOR VERTICAL WALL COVERING TO TOP PLATE FRAMING. SEALING WITH FOAM GASKET, CAULK OR OTHER APPROVED SEALANT LISTED FOR SEALING WALL COVERING MATERIAL TO STRUCTURAL MATERIAL (EXAMPLE: GYPSUM BOARD TO WOOD STUD FRAMING).
g. TABLE N1104.1(1) STANDARD BASE CASE DESIGN, CODE UA SHALL BE AT LEAST 8 PERCENT LESS THAN THE PROPOSED UA. BUILDING WITH FENESTRATION LESS THAN 15 PERCENT OF THE TOTAL VERTICAL WALL AREA MAY ADJUST THE CODE UA TO HAVE 15 PERCENT OF THE WALL AREA AS FENESTRATION.

N O T I C E

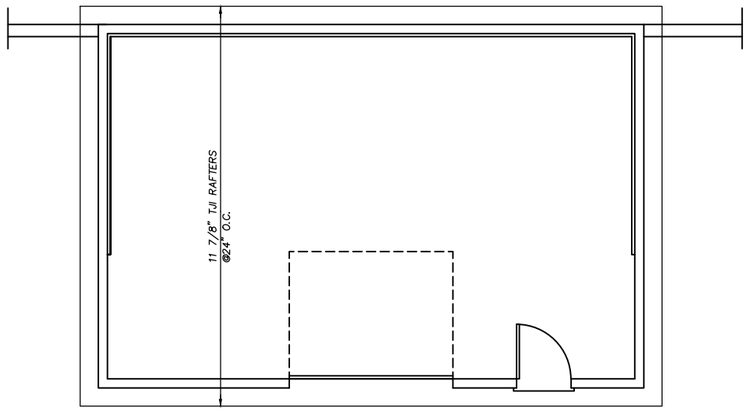
ALL CONSTRUCTION TO COMPLY WITH THE 2017 EDITION OF THE OREGON RESIDENTIAL SPECIALTY CODE / INTERNATIONAL RESIDENTIAL CODE WITH THE OREGON AMENDMENTS AND OREGON RESIDENTIAL ENERGY EFFICIENCY (CHAPTER 11). COORDINATE ALL APPLICABLE MODIFICATIONS TO THESE DRAWINGS AS REQUIRED

SPECIFICATIONS:

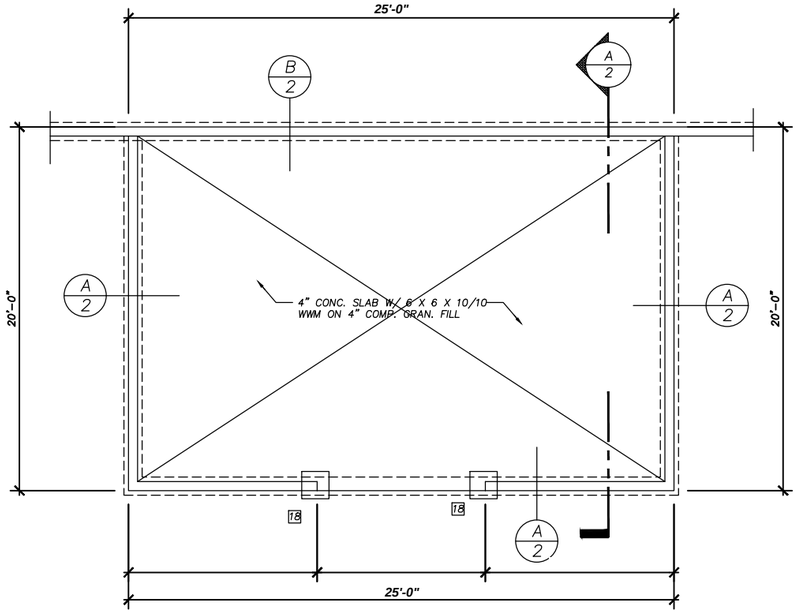
BUILDING COMPONENTS	NEW
Maximum Allowable Window Area	No Limit
Window Class	U=0.30
Doors, Other than Main Entry	U=0.20
Exterior Main Entry Door (maximum 28 s.f.)	U=0.54
Exterior Wall Insulation	R–21
Underfloor Insulation	R–30
Flat Ceilings	R–49
Vaulted Ceilings	R–30
Skylight Class	U=0.50
Skylight Area	< 2%
Basement Walls (that DO NOT extend more than 24" Above Grade)	R–15
Basement Walls (that Extend more than 24" Above Grade)	R–21
Slab Floor Edge Insulation	R–15
Forced Air Duct Insulation	R–8

Taken from Table N1101.1 (1) of the 2017 O.R.S.C.

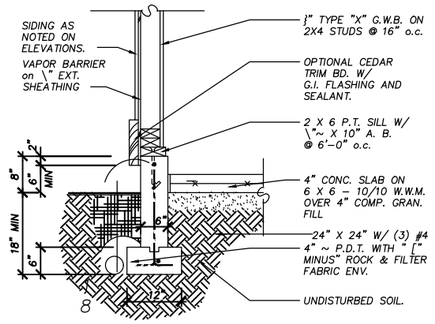
STORAGE SHED FOR SUPPLIES



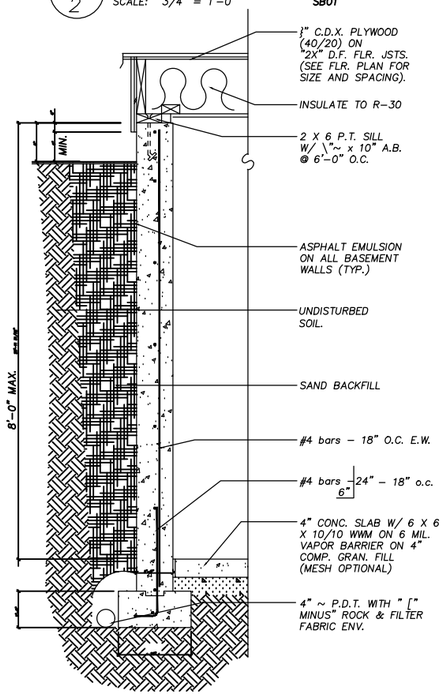
ROOF FRAMING / ROOF PLAN



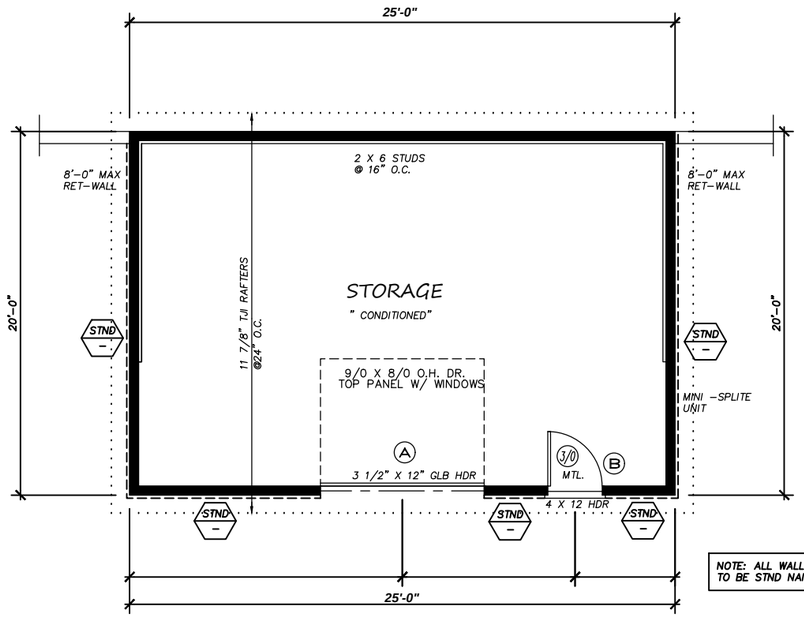
FOUNDATION PLAN



A/2 FOUNDATION DETAIL
SCALE: 3/4" = 1'-0" SB01



B/2 FOUNDATION DETAIL
SCALE: 3/4" = 1'-0" FJ21



NOTE: ALL WALLS TO BE STND NAILING

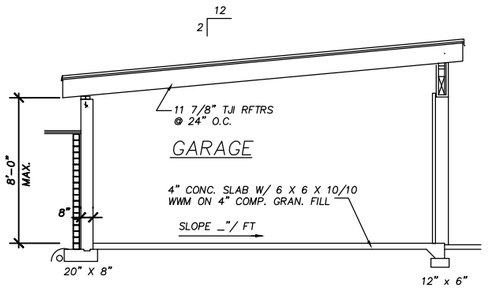
MAIN FLOOR STRUCTURAL

500 SQ. FT.

CONCRETE FOOTINGS

(SOIL PRESSURE= 1500 psf)

	L X	W X	THICKNESS
12	12	12	6
14	14	14	7
16	16	16	8
18	18	18	9
20	20	20	10
22	22	22	11
24	24	24	12
26	26	26	13
28	28	28	14
30	30	30	15
32	32	32	*
34	34	34	*
36	36	36	*
38	38	38	*
40	40	40	*
42	42	42	*
44	44	44	*
46	46	46	*
48	48	48	*
(12)	12	IN. DIA.	6
(16)	16	IN. DIA.	8
(18)	18	IN. DIA.	9
(20)	20	IN. DIA.	10
(24)	24	IN. DIA.	12
(30)	30	IN. DIA.	15
*	16" THK. FTG. REINFORCED W/ #4 @ 12" O.C. EA. WAY		

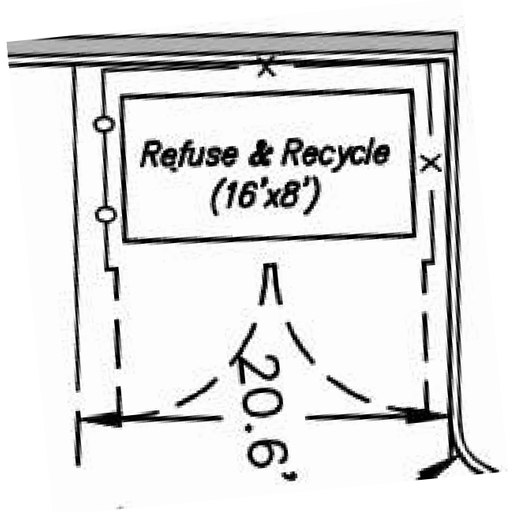


A/2 BUILDING SECTION

GENERAL NOTES:

1. ALL EXTERIOR WALLS TO BE 2 X 6 STUDS AT 16" O.C. (TYP. U.N.O.).
2. ALL INTERIOR WALLS TO BE 2 X 4 STUDS AT 16" O.C. (TYP. U.N.O.).
3. ASSUME A MINIMUM OF (2) 2 X 4 STUDS AS BEAM SUPPORTS AT BEARING WALLS.
4. ALL WINDOWS AND SLIDING GLASS DOORS SHOWN ARE TO BE VINYL SASH (VERIFY ALL ROUGH OPENINGS).
5. ////////// DENOTES INTERIOR BEARING WALL(S).
6. PROVIDE OUTSIDE COMBUSTION AIR FOR ALL FIREPLACES AND FURNACE.
7. CONNECT ALL SMOKE DETECTORS TOGETHER AND TO HOUSE POWER SOURCE.
8. PROVIDE 5/8" TYPE "X" G.W.B. AT ALL ACCESSIBLE AREAS UNDER STAIRS.
9. PROVIDE U.L. LISTED FLUES AT ALL FURNACE AND METAL FIREPLACE LOCATIONS AS REQUIRED BY MANUFACTURER.
10. PROVIDE 18" HIGH NON-COMBUSTIBLE PLATFORM FOR ALL GAS FIRED APPLIANCES LOCATED IN GARAGE.
11. PROVIDE 3" DIA. X 5'-0" CONCRETE FILLED STEEL PIPE BOLLARD IN GARAGE FOR PROTECTION OF FURNACE AND WATER HEATER (EMBED IN 12" DIA. X 24" CONCRETE FOOTING).
12. PROVIDE WATER HEATER SEISMIC ATTACHMENT STRAPPING AS PER MECHANICAL CODE M 1307.2
13. STRUCTURES OVER 3600 SQUARE FEET SHALL BE SPRINKLED. NFPA 13 D SYSTEM OR EQUAL AS PER FIRE CODES.
14. FIRE BLOCKING REQUIRED AT CONSTRUCTION VOIDS AND WALL CAVITIES EXCEEDING 10'-0" IN HEIGHT, AS PER 2014 OSSC
15. MINIMUM 3" X 3" X [" PLATE WASHERS ON FULL LENGTH OF BRACED WALL LINES PER 2014 OSSC
16. ALL ROOMS CONTAINING BATHING OR SPA FACILITIES SHALL BE PROVIDED A MECHANICAL VENTILATION SYSTEM CONTROLLED BY A DEHUMIDISTAT, TIMER OR SIMILAR MEANS OF AUTOMATIC CONTROL AS PER 2014 OSSC
17. PROVIDE CARBON MONOXIDE ALARMS PER R326
18. ALL ATTIC ACCESS DOORS/HATCHES TO BE INSULATED PER N1102.2.3

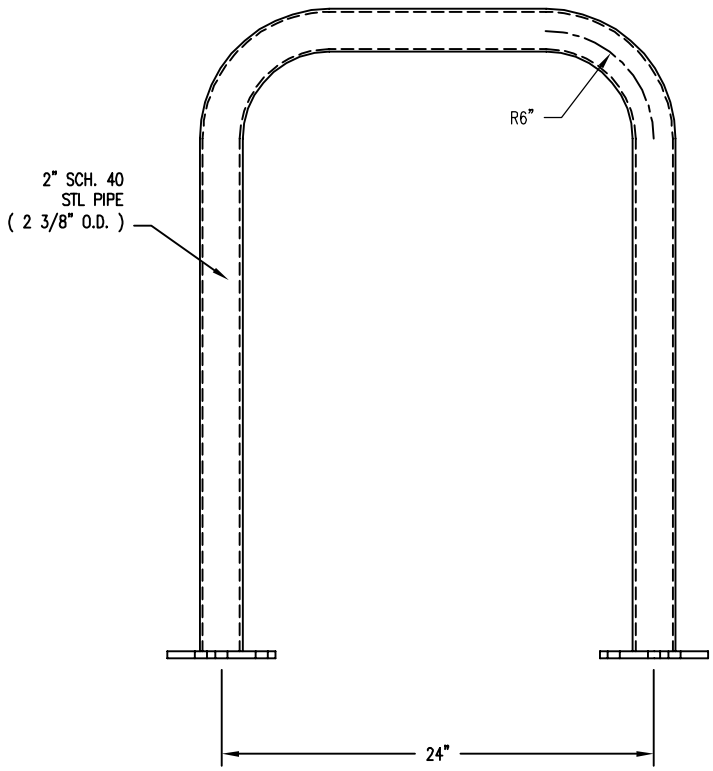
Storage for Solid Waste and Recycling

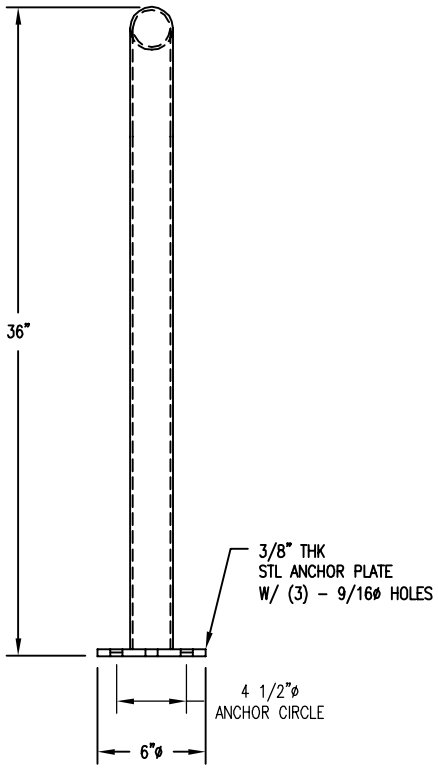


Structure Dimensions:
Approximately 16' wide x 8' deep
Approximate Height: 10'

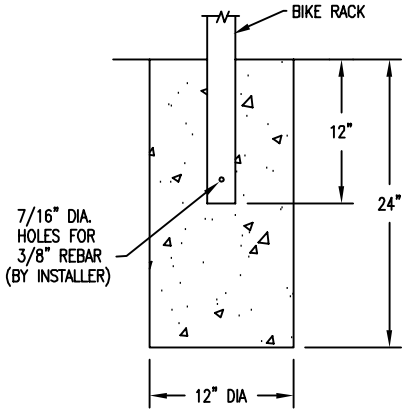
Materials:
Walls: Three-sided masonry construction with concrete blocks
Front gate: reinforced metal, hinged
Roof: Metal frame with corrugated metal panel roof

(Example Photo)

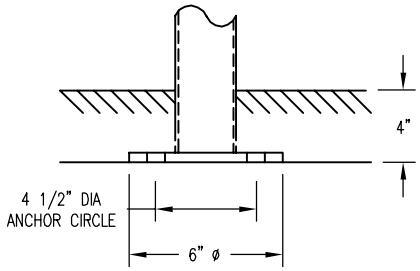




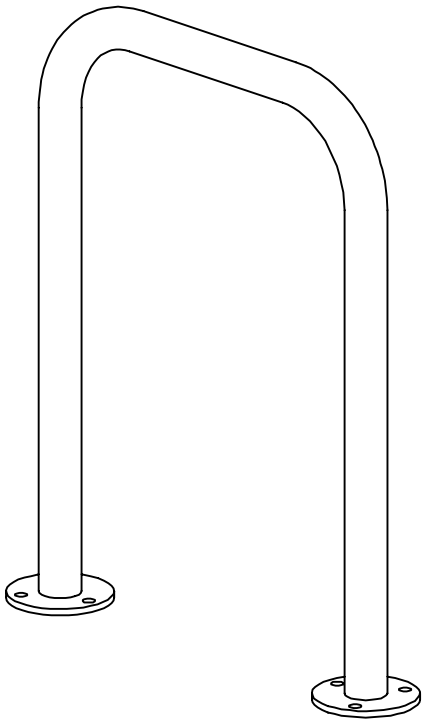
☐ S-2 SURFACE MOUNT



☐ S-1 EMBEDMENT



☐ S-4 SUB FLOOR



NOTE:

1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.

2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED FOR OPTIONS S-2 & S-4.

DuMor, inc.	BIKE RACK	DATE DRAWN : 01/21/15 DRAWN BY : RDH DATE REV. : REV. BY :	REV. A	DRAWING NUMBER 290 SERIES	SHEET 1 OF 2

NOTES:

1.) MOUNT AND ANCHOR AS SPECIFIED.

TOOLS REQ'D

3/4" WRENCH
1/2" MASONRY DRILL BIT
DRILL

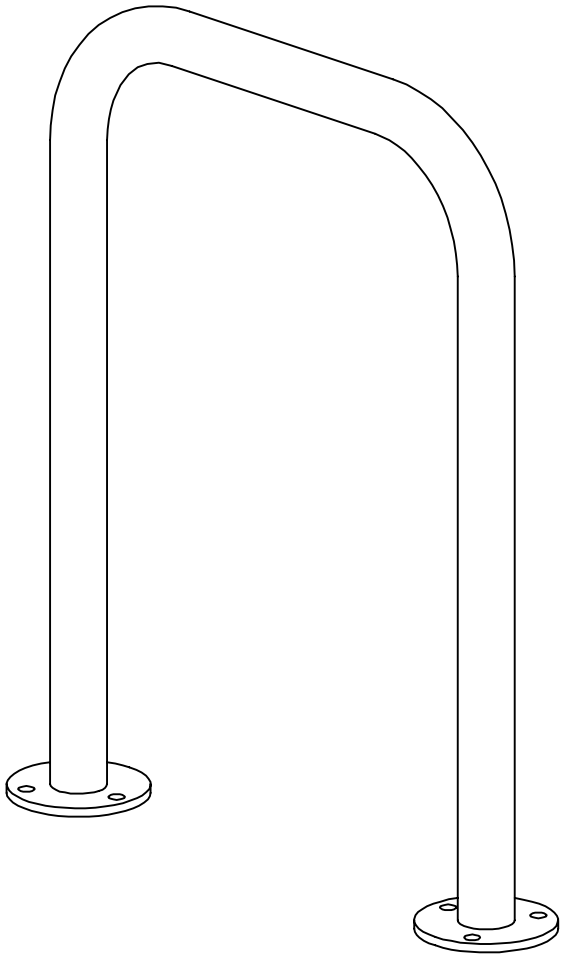
PARTS LIST FOR S-2

ITEM	QTY	PART NO	DESCRIPTION
1	1	0-290-00-01/S-2	36" LOOP BIKE RACK, 26 3/8" WIDE, PLATES

KITS PROVIDED FOR S-2

ITEM	QTY	PART NO	DESCRIPTION
2	2	K-ANC0860-3	1/2" X 3 3/4" SS ANCHOR KIT (3PCS)

(1)



DuMor, inc.	ASSEMBLY INSTRUCTIONS	DATE DRAWN : 01/21/15 DRAWN BY : RDH DATE REV. : REV. BY :	REV. A	DRAWING NUMBER 290 SERIES	SHEET 2 OF 2

FIRE CODE / LAND USE / BUILDING REVIEW APPLICATION

Tualatin Valley Fire & Rescue

North Operating Center
11945 SW 70th Avenue
Tigard, OR 97223
Phone: 503-649-8577

South Operating Center
8445 SW Elligsen Rd
Wilsonville, OR 97070
Phone: 503-649-8577

REV 6-30-20

Project Information

Applicant Name: Ken Sandblast / Westlake Consultants

Address: 15115 SW Sequoia Pkwy, Tigard, OR 97224

Phone: 503-684-0652

Email: ksandblast@westlakeconsultants.com

Site Address: 18825 Willamette Drive

City: West Linn

Map & Tax Lot #: 2-1E-14DD / 6100

Business Name: Matin Real Estate

Land Use/Building Jurisdiction: West Linn

Land Use/ Building Permit #

Choose from: Beaverton, Tigard, Newberg, Tualatin, North Plains, West Linn, Wilsonville, Sherwood, Rivergrove, Durham, King City, Washington County, Clackamas County, Multnomah County, Yamhill County

Project Description
Proposed development includes parking lot with 20 spaces, 20'x25' storage shed. Access provided via existing driveway over adjacent Tax Lot 6200.
See FS-1 for additional information.

Permit/Review Type (check one):

X Land Use / Building Review - Service Provider Permit

☐ Emergency Radio Responder Coverage Install/Test

☐ LPG Tank (Greater than 2,000 gallons)

☐ Flammable or Combustible Liquid Tank Installation (Greater than 1,000 gallons)

* Exception: Underground Storage Tanks (UST) are deferred to DEQ for regulation.

☐ Explosives Blasting (Blasting plan is required)

☐ Exterior Toxic, Pyrophoric or Corrosive Gas Installation (in excess of 810 cu.ft.)

☐ Tents or Temporary Membrane Structures (in excess of 10,000 square feet)

☐ Temporary Haunted House or similar

☐ OLCC Cannabis Extraction License Review

☐ Ceremonial Fire or Bonfire
(For gathering, ceremony or other assembly)

For Fire Marshal's Office Use Only

TVFR Permit # 2026-0007

Permit Type: SPP-West Linn

Submittal Date: 1-14-26

Assigned To: DFM Arm

Due Date: NA

Fees Due: Ø

Fees Paid: Ø

Approval/Inspection Conditions
(For Fire Marshal's Office Use Only)

This section is for application approval only

0430 1-21-26
Fire Marshal or Designee Date

Conditions: See approved fire service plan.

See Attached Conditions: ☐ Yes ☒ No

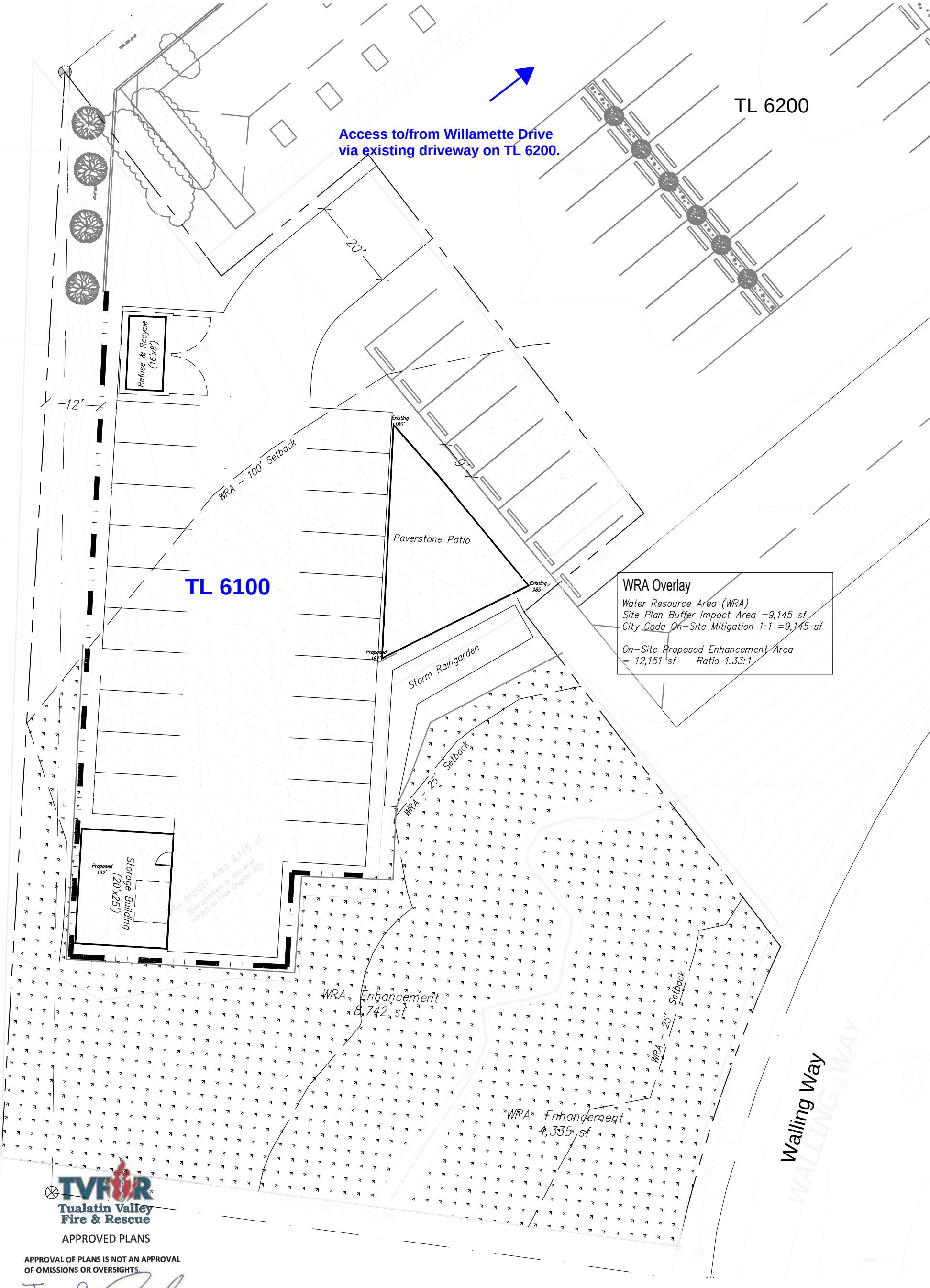
Site Inspection Required: ☐ Yes ☒ No

This section used when site inspection is required

Inspection Comments:

Final TVFR Approval Signature & Emp ID Date

18825 Willamette Drive - Proposed Commercial Parking Lot with Accessory Storage
Tax Lot 6100 / 2-1E-14DD



TVF&R
Tualatin Valley
Fire & Rescue

APPROVED PLANS

APPROVAL OF PLANS IS NOT AN APPROVAL
OF OMISSIONS OR OVERSIGHTS.

Jason Arn
Deputy Fire Marshal II

TVF&R Permit# 2026-0007

FS-1

GEOPACIFIC

Real-World Geotechnical Solutions
Investigation • Design • Construction Support

Geotechnical Engineering Report

18825 Willamette Drive Parking Lot

18825 Willamette Drive
West Linn, Oregon

GeoPacific Engineering, Inc. Job No. 26-6985
July 7, 2026

14835 SW 72nd Avenue
Portland, Oregon 97224

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Real-World Geotechnical Solutions
Investigation • Design • Construction Support

July 7, 2026
Project No. 26-6985

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SUBJECT: **GEOTECHNICAL ENGINEERING REPORT**
18825 WILLAMETTE DRIVE PARKING LOT
18825 WILLAMETTE DRIVE
WEST LINN, OREGON

1.0 PROJECT INFORMATION

This report presents the results of a geotechnical engineering study conducted by GeoPacific Engineering, Inc. (GeoPacific) for the above-referenced project. The purpose of our investigation was to evaluate subsurface conditions at the site, and to provide geotechnical recommendations for site development. This geotechnical study was performed in accordance with GeoPacific Proposal No. P-9322, dated January 23, 2026, and your subsequent authorization of our proposal and *General Conditions for Geotechnical Services*.

Site Location:	18825 Willamette Drive 21E14DD 06100 West Linn, Oregon (see Figure 1)
Developer:	Jordan Matin Matin Real Estate 18825 Willamette Drive West Linn, Oregon 97068 Phone: (971) 285-2180 Email: jmatin@matinrealestate.com
Jurisdictional Agency:	City of West Linn, Oregon
Geotechnical Engineer:	GeoPacific Engineering, Inc 14835 SW 72nd Avenue Portland, Oregon 97224 Tel (503) 598-8445

2.0 SITE AND PROJECT DESCRIPTION

The subject site is an irregularly shaped parcel adjacent to an existing parking lot and commercial buildings located at 18825 Willamette Drive in the City of West Linn, Oregon. The site is approximately 0.7 acres in size. The property is also bordered by S Walling Circle to the southeast, a wooded area to the south, and residential properties to the west. Topography on the site is sloping up towards the southwest, with site elevations ranging from approximately 185 to 195 feet amsl. At the time of writing this report, the site has not been developed.

It is our understanding that the project will involve the construction of a new parking lot with a storage building and trash enclosure, a stormwater management facility, and associated underground utilities. We have not been provided with a grading plan at this time but we anticipate cuts and fills will be on the order of 4 feet or less.

3.0 REGIONAL GEOLOGIC SETTING

Regionally, the subject site lies within the Willamette Valley/Puget Sound lowland, a broad structural depression situated between the Coast Range on the west and the Cascade Range on the east. A series of discontinuous faults subdivide the Willamette Valley into a mosaic of fault-bounded, structural blocks (Yeats et al., 1996). Uplifted structural blocks form bedrock highlands, while down-warped structural blocks form sedimentary basins.

The site is underlain by the Quaternary age (last 1.6 million years) Catastrophic Flood Deposits associated with repeated glacial outburst flooding of the Willamette Valley (Beeson et al., 1989; Madin, 1990). The last of these outburst floods occurred about 10,000 years ago. These flood deposits typically consist of horizontally layered, micaceous, silt to coarse sand forming poorly defined to distinct beds less than 3 feet thick. The silt and sand units may contain inclusions of gravel.

Regional geologic mapping indicates the Catastrophic Flood Deposits are underlain by basalt bedrock belonging to the Columbia River Basalt Formation (Beeson et al., 1989; Madin, 1990). The Miocene aged (about 14.5 to 16.5 million years ago) Columbia River Basalt Formation is a thick sequence of lava flows which form the crystalline basement of the Tualatin Valley (Beeson et al., 1989). The basalts are composed of dense, finely crystalline rock that is commonly fractured along blocky and columnar vertical joints. Individual basalt flow units typically range from 25 to 125 feet thick and interflow zones are typically vesicular, scoriaceous, brecciated, and sometimes include sedimentary rocks. The upper portion of the basalt is typically weathered to a residual soil composed of silt to clay.

The Web Soil Survey (United States Department of Agriculture, Natural Resource Conservation Service (USDA NRCS 2026 Website), indicates that near-surface soils consist of Cascade Silt Loam soils (13C), generally consisting of deep, moderately well drained, silty or clayey loam.

4.0 FIELD EXPLORATION AND SUBSURFACE CONDITIONS

Our site-specific explorations for this report were conducted on May 6, 2026. Explorations consisted of three exploratory test pits excavated with a medium-sized excavator to depths of ranging from 6.5 to 8.5 feet below the ground surface (bgs). The approximate locations of our explorations are presented on Figures 2 and 3. It should be noted that our explorations were located in the field by pacing or taping distances from apparent property corners and other site features shown on the plans provided. As such, the locations of the explorations should be considered approximate.

A GeoPacific engineering staff member continuously monitored the field exploration program and logged the explorations. Soils observed in the explorations were classified in general accordance with the Unified Soil Classification System (USCS). During exploration, we also noted geotechnical conditions such as soil consistency, moisture, and groundwater conditions. After the completion of each exploration, test pits were backfilled loosely with on-site soil. The following report sections are based on the exploration program and summarize subsurface conditions encountered at the site.

4.1 Soil Descriptions

Topsoil: Directly underlying the ground surface in all of our test pits, we encountered a topsoil layer which generally consisted of moderately organic SILT (OL) with fine roots throughout. In our explorations, the topsoil layer generally extended to depths of 4 to 7 inches, with an average depth of approximately 4 inches.

Undocumented Fill: Directly underlying the topsoil in test pit TP-2, we observed undocumented fill material. The fill material generally consisted of rounded cobbles and angular gravel in a matrix of sandy silt and extended to a depth of approximately 6 feet, overlying native clayey silt (Catastrophic Flood Deposits). We observed cobbles up to 6 inches in diameter. The upper 2 feet of fill consisted of poorly-compacted sandy SILT (ML) with some organics and gravel, and the lower 4 feet consisted of well-compacted silty GRAVEL (GM) and sandy SILT (ML) with varying amounts of 4 to 6 inch diameter cobbles.

Catastrophic Flood Deposits: Underlying the topsoil layer in test pits TP-1 and TP-3, and underlying undocumented fill in test pit TP-2, we encountered Catastrophic Flood Deposits. These soils generally consisted of sandy to clayey SILT (ML) and silty SAND (SM). In general, this material was stiff/dense and was light brown in color.

Catastrophic Flood Deposit soils extended beyond the termination depths of all our test pit explorations, 8.5 feet, 6.5 feet, and 8.5 feet bgs, respectively. Groundwater was encountered within this layer in test pits TP-1 and TP-3 at depths of 8 feet bgs and 2 feet bgs, respectively.

Laboratory tests indicated that this material has an in-situ moisture content of approximately 35 percent. Soil samples collected from test pit TP-1 showed between 49 and 62 percent fines contents for the silty sand and sandy silt layers, respectively. Soil samples collected from test pit TP-3 showed approximately 50 percent fines content for the sandy silt layer.

4.2 Shrink-Swell Potential

Low plasticity fine-grained soils were encountered throughout our test pit explorations. Based upon our observations and our local experience with the soil layers in the vicinity of the subject site, the shrink-swell potential of the soil types is considered to be low. Special design measures are not considered necessary to minimize the risk of uncontrolled damage of foundations as a result of potential soil expansion at this site.

4.3 Groundwater and Soil Moisture

On May 6, 2026 the soil moisture conditions observed in test pits ranged from moist to wet. Groundwater seepage was encountered in test pits TP-1 and TP-3 at depths of 8 feet and 2 feet, respectively. The shallow groundwater seepage encountered in TP-3 was observed to seep solely from the western side wall of the test pit during excavation, indicative of a perched groundwater layer. Seeps and springs may exist in areas not explored, and may become evident during site grading.

Experience has shown that temporary storm related perched groundwater within the near surface soils often occur over fine-grained native deposits such as those beneath the site during the wet season. It is anticipated that groundwater conditions will vary depending on the season, local subsurface conditions, changes in site utilization, and other factors. According to the Oregon Water Resources Department Well Report Mapping Tool, groundwater has been recorded at approximate depths of 10 to 20 feet below the ground surface, with a moderate level of uncertainty.

4.4 Infiltration Testing

On May 6, 2026, a representative of GeoPacific Engineering, Inc. (GeoPacific) performed one pushed-pipe, falling head infiltration test at a depth of 6.5 feet in test pit TP-2. The test was conducted in native soils at the bottom of the test pit. During the test, water levels were measured over regular intervals until three successive measurements showing a consistent infiltration rate were achieved. Descriptions of the soils encountered in the test location are presented on the following table. Approximate test locations are shown in Figure 2. As shown below in Table 1, an infiltration rate was not measurable in the field.

Table 1 - Results of Infiltration Testing

Location	Depth (ft)	Soil Description	Infiltration Rate (in/hr)
TP-2	6.5	Clayey SILT with Sand (ML) – Catastrophic Flood Deposits	0.0

Our observations indicate that subsurface infiltration of stormwater into the native Catastrophic Flood Deposit soils at the test location and depth is not feasible.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Our site investigation indicates that the proposed construction appears to be geotechnically feasible, provided that the recommendations of this report are incorporated into the design and construction phases of the project. In our opinion, there are three primary geotechnical issues which may affect site development:

1. The presence of poorly-compacted fill near the area of the proposed stormwater facility. In our test pit exploration TP-2, we observed a layer of poorly-compacted fill material. This material is not considered suitable for the support of the proposed parking areas or other settlement-sensitive improvements. Due to the variable thicknesses and distribution of the poorly-compacted fill, total settlement and/or differential settlement across the area could exceed tolerable limits if those layers are not removed and replaced with engineered fill. We recommend that soft/loose soils be removed from the influence zones of proposed structures, parking areas, or areas to receive fill and be replaced with engineered fill.

2. The presence of shallow groundwater seepage across the site. Perched groundwater seepage was encountered within test pits TP-1 and TP-3 at depths of 8 feet bgs and 2 feet bgs, respectively. Site grading and excavations for utility trenches may be impacted or complicated by shallow groundwater. A grading plan was not provided to us at the time of writing this report. It is our understanding that cuts and fills will be less than 4 feet, however perched groundwater seepage may be encountered at shallow depths underlying the proposed parking lot extension. If it is desired to reduce the moisture conditions of this area, it may be advantageous to install a trench drain along the southern and/or western property boundary. If a trench drain is desired, GeoPacific may be consulted to review the proposed grading plan and provide recommendations for drainage.

3. Stormwater infiltration within the native subsurface soils is not feasible at the desired location. The native soil at the location of the planned storm facility exhibited an infiltration rate of 0.0 in/hr.

The following report sections provide recommendations for site development and construction in accordance with the current applicable codes and local standards of practice. GeoPacific should be consulted to review the proposed grading and development plans and to provide specific recommendations for the proposed plans prior to construction.

5.1 Site Preparation Recommendations

Areas of proposed construction and areas to receive fill should be cleared of any organic and inorganic debris, disturbed soil, and loose stockpiled soils. Inorganic debris and organic materials from clearing should be removed from the site or stockpiled only in designated areas. Organic-rich soils and root zones should then be stripped from construction areas of the site or where engineered fill is to be placed. The average depth of stripping of existing organic topsoil is estimated to be approximately 6 inches at the site but may be deeper in the vicinity of trees and bushes. The final depth of soil removal should be determined by the geotechnical engineer or designated representative during site inspection while stripping/excavation is being performed.

In areas of roadways, structures, or where engineered fill material is proposed, undocumented fills, disturbed soils, and any subsurface structures (dry wells, basements, driveway and landscaping fill, old utility lines, septic leach fields, etc.) should be completely removed and the excavations backfilled with engineered fill. During our investigation, we observed a layer of poorly-compacted undocumented fill material in test pit TP-2, extending to a depth of approximately 2 feet bgs. The undocumented fill layer is not suitable to support the proposed parking lot or other settlement-sensitive improvements. In areas where structures, pavement, or engineered fill are planned, this poorly-compacted fill layer should be removed and replaced with engineered fill. There may be more undocumented fill present in areas outside of our explorations.

Site earthwork may be impacted by wet weather conditions. Stabilization of subgrade soils may require aeration and re-compaction. If subgrade soils are found to be difficult to stabilize, over-excavation or placement of granular soils may be feasible options. GeoPacific should be onsite to observe preparation of subgrade soil conditions prior to placement of engineered fill.

5.2 Engineered Fill

All grading for the proposed construction should be performed as engineered grading in accordance with the applicable building code at the time of construction with the exceptions and additions noted herein. Site grading should be conducted in accordance with the requirements outlined in the 2021 International Building Code (IBC), and 2022 Oregon Structural Specialty Code (OSSC), Chapter 18 and Appendix J. Areas proposed for fill placement should be prepared as described in the section of this report titled Site Preparation. Site preparation, soil stripping, and grading activities should be observed and documented by a geotechnical engineer or his representative. Proper test frequency and earthwork documentation usually requires daily observation and testing during stripping, rough grading, and placement of engineered fill.

Onsite fine-grained soils generally appear to be suitable for use as engineered fill, however moisture conditioning and compacting fill comprised of a soil-rock mixture may be difficult. If utilized, the fill should be wet of optimum and large cobbles and boulders culled from the fill. Soils may need to be root picked prior to being placed as engineered fill. Soils containing greater than 5 percent organic content should not be used as structural fill. The soil should be blended to achieve uniform proportions prior to compacting and the compaction effort on each lift should be substantial. Oversize material greater than 6 inches in size should not be used within 3 feet of foundation footings, and material greater than 12 inches in diameter should not be used in engineered fill. Imported fill material must be approved by the geotechnical engineer prior to being imported to the site.

Engineered fill should be compacted in horizontal lifts not exceeding 12 inches using standard compaction equipment. We recommend that engineered fill be compacted to at least 95 percent of the maximum dry density determined by ASTM D698 (Standard Proctor) or equivalent. Soils should be moisture conditioned to within two percent of optimum moisture. Field density testing should conform to ASTM D2922 and D3017, or D1556. All engineered fill should be observed and tested by the project geotechnical engineer or his representative. Typically, one density test is performed for at least every 2 vertical feet of fill placed or every 500 yd^3, whichever requires more

testing. Because testing is performed on an on-call basis, we recommend that the earthwork contractor be held contractually responsible for test scheduling and frequency.

Site earthwork may be impacted by soil moisture and wet weather conditions. Earthwork in wet weather would likely require extensive use of additional crushed aggregate, or other special measures, at considerable additional cost compared to earthwork performed under dry-weather conditions.

5.3 Excavating Conditions and Utility Trench Backfill

We anticipate that on-site soils can be excavated using conventional heavy equipment. Maintenance of safe working conditions, including temporary excavation stability, is the responsibility of the contractor. Actual slope inclinations at the time of construction should be determined based on safety requirements and actual soil and groundwater conditions. All temporary cuts in excess of 4 feet in height should be sloped in accordance with U.S. Occupational Safety and Health Administration (OSHA) regulations (29 CFR Part 1926) or be shored. The existing native soils classify as Type C Soil and temporary excavation side slope inclinations as steep as 1.5H:1V may be assumed for planning purposes. This cut slope inclination is applicable to excavations above the water table only.

Shallow, perched groundwater may be encountered during the dry or wet weather seasons, and should be anticipated in excavations and utility trenches. During our investigation of the site, groundwater seepage was observed in several areas of the site. Standard dewatering of trench excavations, such as sump pumps, should be adequate to address the amount of seepage encountered; however, groundwater conditions should be reviewed during the time of construction. Rates of seepage and presence of perched groundwater is expected to vary depending on the season, local subsurface conditions, changes in site utilization, and other factors.

Vibrations created by traffic and construction equipment may cause some caving and raveling of excavation walls. In such an event, lateral support for the excavation walls should be provided by the contractor to prevent loss of ground support and possible distress to existing or previously constructed structural improvements.

PVC pipe should be installed in accordance with the procedures specified in ASTM D2321 and the City of West Linn standards. We recommend that structural trench backfill be compacted to at least 95 percent of the maximum dry density obtained by Modified Proctor (ASTM D1557) or equivalent. Initial backfill lift thicknesses for a ¾”-0 crushed aggregate base may need to be as great as 4 feet to reduce the risk of flattening underlying flexible pipe. Subsequent lift thickness should not exceed 1 foot. If imported granular fill material is used, then the lifts for large vibrating plate-compaction equipment (e.g. hoe compactor attachments) may be up to 2 feet, provided that proper compaction is being achieved and each lift is tested. Use of large vibrating compaction equipment should be carefully monitored near existing structures and improvements due to the potential for vibration-induced damage.

Adequate density testing should be performed during construction to verify that the recommended relative compaction is achieved. Typically, at least one density test is taken for every 4 vertical feet of backfill on each 200-lineal-foot section of trench.

5.4 Erosion Control Considerations

During our field exploration program, we did not observe soil conditions that may be considered highly susceptible to erosion. In our opinion, the primary concern regarding erosion potential will occur during construction in areas that have been stripped of vegetation, particularly in sloping areas. Erosion at the site during construction can be minimized by implementing the project erosion control plan, which should include judicious use of straw wattles, fiber rolls, and silt fences. If used, these erosion control devices should remain in place throughout site preparation and construction.

Erosion and sedimentation of exposed soils can also be minimized by quickly re-vegetating exposed areas of soil, and by staging construction such that large areas of the project site are not denuded and exposed at the same time. Areas of exposed soil requiring immediate and/or temporary protection against exposure should be covered with either mulch or erosion control netting/blankets. Areas of exposed soil requiring permanent stabilization should be seeded with an approved grass seed mixture, or hydroseeded with an approved seed-mulch-fertilizer mixture.

5.5 Wet Weather Earthwork

Soils underlying the site are likely to be moisture sensitive and will be difficult to handle or traverse with construction equipment during periods of wet weather. Earthwork is typically most economical when performed under dry weather conditions. Earthwork performed during the wet-weather season will require expensive measures such as cement treatment or imported granular material to compact areas where fill may be proposed to the recommended engineering specifications. If earthwork is to be performed or fill is to be placed in wet weather or under wet conditions when soil moisture content is difficult to control, the following recommendations should be incorporated into the contract specifications.

- Earthwork should be performed in small areas to minimize exposure to wet weather. Excavation or the removal of unsuitable soils should be followed promptly by the placement and compaction of clean engineered fill. The size and type of construction equipment used may have to be limited to prevent soil disturbance. Under some circumstances, it may be necessary to excavate soils with a backhoe to minimize subgrade disturbance caused by equipment traffic;
- The ground surface within the construction area should be graded to promote run-off of surface water and to prevent the ponding of water;
- Material used as engineered fill should consist of clean, granular soil containing less than 5 percent passing the No. 200 sieve. The fines should be non-plastic. Alternatively, cement treatment of on-site soils may be performed to facilitate wet weather placement;
- The ground surface within the construction area should be sealed by a smooth drum vibratory roller, or equivalent, and under no circumstances should be left uncompacted and exposed to moisture. Soils which become too wet for compaction should be removed and replaced with clean granular materials;

- Excavation and placement of fill should be observed by the geotechnical engineer to verify that all unsuitable materials are removed and suitable compaction and site drainage is achieved; and
- Geotextile silt fences, straw wattles, and fiber rolls should be strategically located to control erosion.

If cement or lime treatment is used to facilitate wet weather construction, GeoPacific should be contacted to provide additional recommendations and field monitoring.

5.6 Stormwater Management

It is our understanding that subsurface disposal of stormwater is being considered at the site. However, due to the presence of poorly-draining fine-grained native soil, it is our opinion that subsurface disposal of stormwater is not feasible at the site in the proposed location of the stormwater facility. Additionally, existing undocumented fill material, such as encountered in test pit TP-3, should not be relied upon for infiltration. It is our opinion that the native soil present at the location and depth of our testing should not be relied upon for stormwater infiltration.

Stormwater management systems should be constructed as specified by the designer and/or in accordance with the applicable stormwater design codes. All systems should include an adequate factor of safety. Stormwater exceeding storage capacities will need to be directed to a suitable surface discharge location, away from structures. Stormwater management systems may need to include overflow outlets, surface water control measures and/or be connected to the street storm drain system, if available. In no case should stormwater be allowed to flow uncontrolled over the ground surface. Evaluating environmental implications of stormwater disposal at this site is beyond the scope of this study.

5.7 Spread Foundations

Any proposed structures may be supported on shallow foundations bearing on the native, stiff soils and/or engineered fill, appropriately designed and constructed as recommended in this report. During our investigation, we observed a layer of undocumented fill soil extending to approximately 2 feet bgs in the area of the proposed storm water facility. This layer of fill is not suitable for construction activities. In areas where structures or engineered fill are planned, this disturbed layer should be completely removed and replaced with engineered fill. Foundation design, construction, and setback requirements should conform to the applicable building code at the time of construction. For maximization of bearing strength and protection against frost heave, spread footings should be founded on bedrock with slight embedment and embedded at a minimum depth of 12 inches below exterior grade. If soft soil conditions are encountered at footing subgrade elevation, they should be removed and replaced with compacted crushed aggregate or the footing should extend through the soil and be embedded within the bedrock.

The anticipated allowable soil bearing pressure is 1,500 lbs/ft^2 for footings bearing on competent native soil. For footings bearing on approved engineered fill placed and compacted over competent, native soils, the anticipated allowable soil bearing pressure is 2,000 lbs/ft^2. The

recommended maximum allowable bearing pressure may be increased by 1/3 for short-term transient conditions such as wind and seismic loading. The coefficient of friction between on-site soil and poured-in-place concrete may be taken as 0.42, which includes no factor of safety. The maximum anticipated total and differential footing movements (generally from soil expansion and/or settlement) are 1 inch and ¾ inch over a span of 20 feet, respectively. We anticipate that the majority of the estimated settlement will occur during construction, as loads are applied. Excavations near structural footings should not extend within a 1H:1V plane projected downward from the bottom edge of footings.

Footing excavations should penetrate through topsoil and disturbed soil to competent subgrade that is suitable for bearing support. During our investigation, we observed a layer of poorly-compacted, undocumented fill soil extending to depths of approximately 2 feet bgs. In areas where structures or engineered fill are planned, this disturbed layer should be removed and replaced with engineered fill. All footing excavations should be trimmed neat, and all loose or softened soil should be removed from the excavation bottom prior to placing reinforcing steel bars. Due to the moisture sensitivity of on-site native soils, foundations constructed during the wet weather season may require over-excavation of footings.

5.8 Concrete Slabs-on-Grade

Preparation of areas beneath concrete slab-on-grade floors should be performed as described in Section 6.1, *Site Preparation Recommendations* and Section 6.6, *Spread Foundations*. Care should be taken during excavation for foundations and floor slabs, to avoid disturbing subgrade soils. If subgrade soils have been adversely impacted by wet weather or otherwise disturbed, the surficial soils should be scarified to a minimum depth of 8 inches, moisture conditioned to within about 3 percent of optimum moisture content, and compacted to engineered fill specifications. Alternatively, disturbed soils may be removed and the removal zone backfilled with additional crushed rock.

For evaluation of the concrete slab-on-grade floors using the beam on elastic foundation method, a modulus of subgrade reaction of 150 kcf (87 pci) should be assumed for the medium dense, fine to coarse-grained soils anticipated to be present at foundation subgrade elevation following adequate site preparation as described above. This value assumes the concrete slab system is designed and constructed as recommended herein, with a minimum thickness of 8 inches of 1½"-0 crushed aggregate beneath the slab. The total thickness of crushed aggregate will be dependent on the subgrade conditions at the time of construction, and should be verified visually by proof-rolling. Under-slab aggregate should be compacted to at least 90 percent of its maximum dry density as determined by ASTM D1557 (Modified Proctor) or equivalent.

In areas where moisture will be detrimental to floor coverings or equipment inside the proposed structure, appropriate vapor barrier and damp-proofing measures should be implemented. Appropriate design professionals should be consulted regarding vapor barrier and damp proofing systems, ventilation, building material selection and mold prevention issues, which are outside GeoPacific's area of expertise.

5.9 Pavement Section Design

We understand that plans for development include construction of a new parking lot. We have made assumptions based on our experience with office buildings and parking spaces regarding the amount and size of vehicles in our estimate of anticipated traffic loading. We designed for an anticipated ESAL count of 20,863 over 20 years for the private parking lot. We assume that traffic for the parking lot will primarily consist of passenger vehicles, garbage trucks, and occasional fire trucks, weighing up to 75,000 pounds and point loads of up to 12,500 pounds. For design purposes, we used a resilient modulus of 4,450 for competent, native soils or engineered fill. Table 2 presents our pavement section design input factors.

Table 2: Flexible Pavement Section Design Input Parameters for Private Drive Lanes

Input Parameter	Design Value
18-kip ESAL Initial Performance Period (20 Years)	20,863
Initial Serviceability	4.2
Terminal Serviceability	2.5
Reliability Level	85 Percent
Overall Standard Deviation	0.5
Roadbed Soil Resilient Modulus (PSI)	4,450
Required Structural Number	**2.18**

Table 3 presents our minimum dry-weather pavement section for the private parking lot with estimated structural coefficients calculated into a structural number. For the areas where road subgrade consists of bedrock, the thickness of the 1 ½”-0 crushed aggregate base layer can be reduced. If bedrock is encountered at subgrade elevation during construction, GeoPacific can be consulted to provide a reduced base rock thickness. Design calculations are attached to this report.

Table 3: Minimum Dry-Weather Flexible Pavement Section for Private Roadways

Material Layer	Section Thickness (in.)	Structural Coefficient	Compaction Standard
Asphaltic Concrete Pavement (ACP)	3	0.42	91% / 92% of Rice Density AASHTO T-209
¾"-0 Crushed Aggregate	2	0.10	95% of Modified Proctor AASHTO T-180
1½"-0 Crushed Aggregate Base	8	0.10	95% of Modified Proctor AASHTO T-180
Subgrade	12	4,450	95% of Standard Proctor AASHTO T-99, approved engineered fill or equivalent
Calculated Structural Number 2.26 > 2.18			

Any pockets of organic debris or loose fill encountered during subgrade preparation should be removed and replaced with engineered fill (see *Site Preparation* Section). As discussed previously, we observed a layer of poorly-compacted undocumented fill extending to approximately 2 feet bgs. The poorly-compacted layer of soil should be removed and replaced with engineered fill in any areas where the aggregate base is not directly founded on the native subgrade. GeoPacific should be consulted to evaluate the subgrade in roadway areas during construction by proof rolling, probing, and/or potholing. In order to evaluate subgrade strength, we recommend proof-rolling directly on subgrade with a loaded dump truck during dry weather and on top of base course in wet weather. Soft areas that pump, rut, or weave should be stabilized prior to paving. If pavement areas are to be constructed during wet weather, the subgrade and construction plan should be reviewed by the project geotechnical engineer at the time of construction so that condition specific recommendations can be provided. The moisture sensitive subgrade soils make the site a difficult wet weather construction project. General recommendations for wet weather pavement sections are provided below.

During placement of pavement section materials, density testing should be performed to verify compliance with project specifications. Generally, one subgrade and one base course test is performed for every 100 to 200 linear feet of roadway.

5.10 Wet Weather Pavement Construction

This section presents our recommendations for wet weather pavement section and construction for new pavement sections at the project. These wet weather pavement section recommendations are intended for use in situations where it is not feasible to compact the subgrade soils to Clackamas County requirements, due to wet subgrade soil conditions, and/or construction during wet weather. Based on our site review, we recommend a wet weather section with a minimum subgrade deepening of 6 inches to accommodate a working subbase of additional 1½"-0 crushed rock. Geotextile fabric, Mirafi 500x or equivalent, should be placed on subgrade soils prior to placement of base rock.

In some instances, it may be preferable to use biaxial geogrid or granular subbase materials. GeoPacific should be consulted for additional recommendations if it is desired to pursue alternatives.

With implementation of the above recommendations, it is our opinion that the resulting pavement section will provide equivalent or greater structural strength than the dry weather pavement section currently planned. However, it should be noted that construction in wet weather is risky and the performance of pavement subgrades depend on a number of factors including the weather conditions, the contractor's methods, and the amount of traffic the road is subjected to. There is a potential that soft spots may develop even with implementation of the wet weather provisions recommended in this letter. If soft spots in the subgrade are identified during roadway excavation, or develop prior to paving, the soft spots should be overexcavated and backfilled with additional crushed rock.

During subgrade excavation, care should be taken to avoid disturbing the subgrade soils. Removals should be performed using an excavator with a smooth-bladed bucket. Truck traffic should be limited until an adequate working surface has been established. We suggest that the crushed rock be spread using bulldozer equipment rather than dump trucks, to reduce the amount of traffic and potential disturbance of subgrade soils.

Care should be taken to avoid overcompaction of the base course materials, which could create pumping, unstable subgrade soil conditions. Heavy and/or vibratory compaction efforts should be applied with caution. Following placement and compaction of the crushed rock to project specifications (95 percent of Modified Proctor), a finish proof-roll should be performed before paving.

The above recommendations are subject to field verification. GeoPacific should be on-site during construction to verify subgrade strength and to take density tests on the engineered fill and base rock materials.

6.0 UNCERTAINTIES AND LIMITATIONS

We have prepared this report for the owner and their consultants for use in design of this project only. This report should be provided in its entirety to prospective contractors for bidding and estimating purposes; however, the conclusions and interpretations presented in this report should not be construed as a warranty of the subsurface conditions. Experience has shown that soil and groundwater conditions can vary significantly over small distances. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, GeoPacific should be notified for review of the recommendations of this report, and revision of such if necessary.

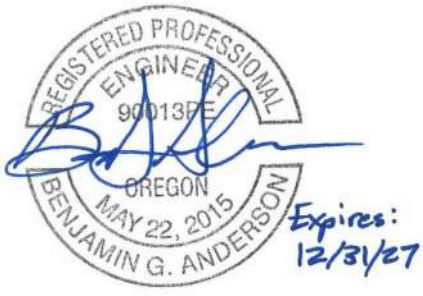
Sufficient geotechnical monitoring, testing and consultation should be provided during construction to confirm that the conditions encountered are consistent with those indicated by explorations. The checklist attached to this report outlines recommended geotechnical observations and testing for the project. Recommendations for design changes will be provided should conditions revealed during construction differ from those anticipated, and to verify that the geotechnical aspects of construction comply with the contract plans and specifications.

Within the limitations of scope, schedule and budget, GeoPacific attempted to execute these services in accordance with generally accepted professional principles and practices in the fields of geotechnical engineering and engineering geology at the time the report was prepared. No warranty, expressed or implied, is made. The scope of our work did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous or toxic substances in the soil, surface water, or groundwater at this site.

We appreciate this opportunity to be of service.

Sincerely,

GEOPACIFIC ENGINEERING, INC.



Andrew Earl Parrott, E.I.T.
Engineering Staff

Benjamin G. Anderson, P.E., G.E.
Associate Geotechnical Engineer

REFERENCES

Beeson, M.H., Tolan, T.L., and Madin, I.P., 1989, Geologic map of the Lake Oswego Quadrangle, Clackamas, Multnomah, and Washington Counties, Oregon: Oregon Department of Geology and Mineral Industries Geological Map Series GMS-59, scale 1:24,000.

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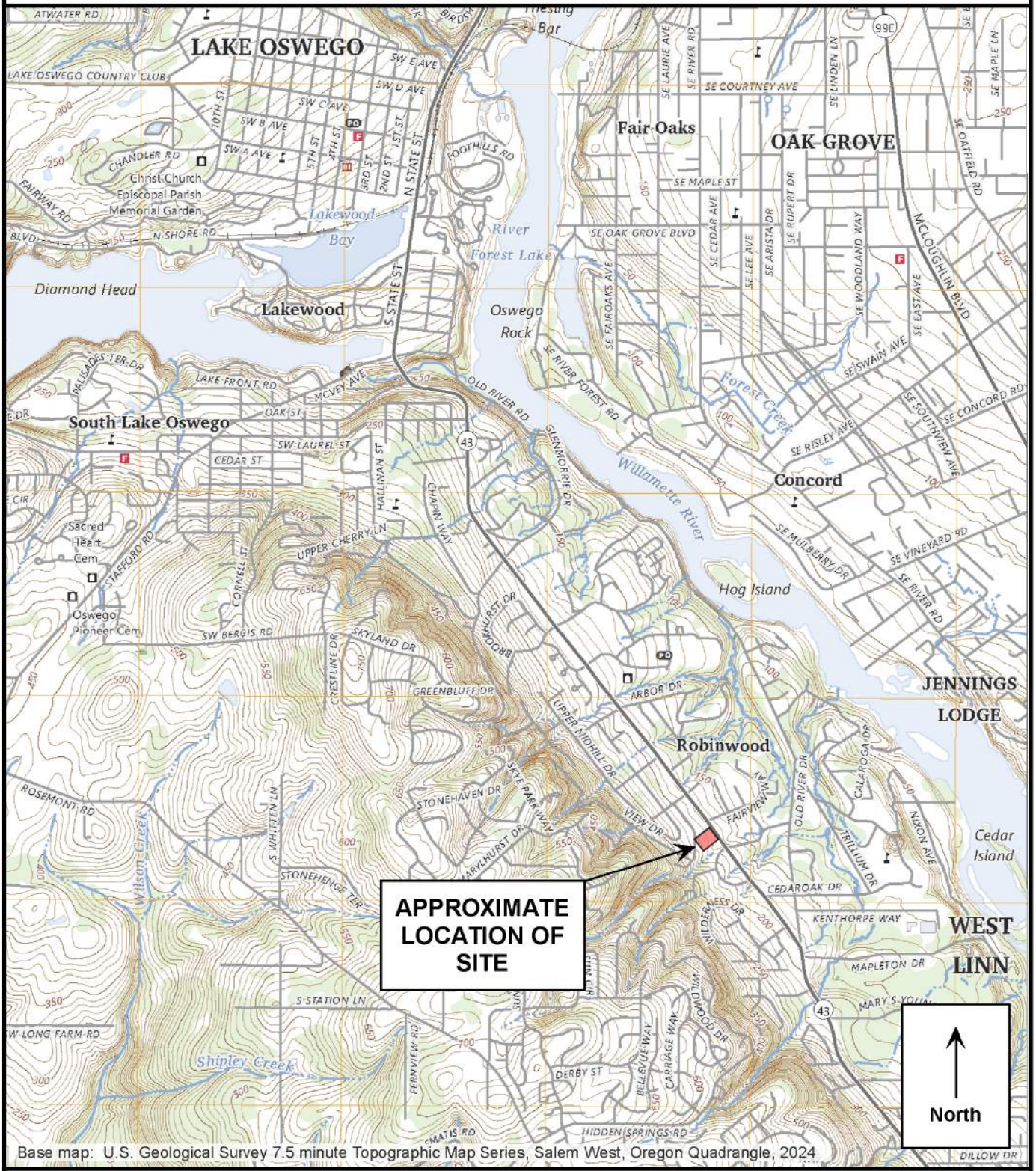
CHECKLIST OF RECOMMENDED GEOTECHNICAL TESTING AND OBSERVATION

Item No.	Procedure	Timing	By Whom	Done
1	Preconstruction meeting	Prior to beginning site work	Contractor, Developer, Civil and Geotechnical Engineers	
2	Fill removal from site or sorting and stockpiling	Prior to mass stripping	Soil Technician/ Geotechnical Engineer	
3	Stripping, aeration, and root-picking operations	During stripping	Soil Technician	
4	Compaction testing of engineered fill (95% of Standard Proctor)	During filling, tested every 2 vertical feet	Soil Technician	
5	Foundation Subgrade Compaction (95% of Standard Proctor)	During Foundation Preparation, Prior to Placement of Reinforcing Steel	Soil Technician/ Geotechnical Engineer	
7	Parking Lot Subgrade Inspection (95% of Standard Proctor)	Prior to placing base course	Soil Technician	
8	Base course compaction (95% of Modified Proctor)	Prior to paving, tested every 200 linear feet	Soil Technician	
9	Asphalt Compaction (92% Rice Value)	During paving, tested every 100 linear feet	Soil Technician	
10	Final Geotechnical Engineer's Report	Completion of project	Geotechnical Engineer	

FIGURES

GEOPACIFIC
14835 SW 72nd Avenue
Portland, Oregon 97224
Tel: (503) 598-8445

SITE VICINITY MAP



Legend

0 2,000

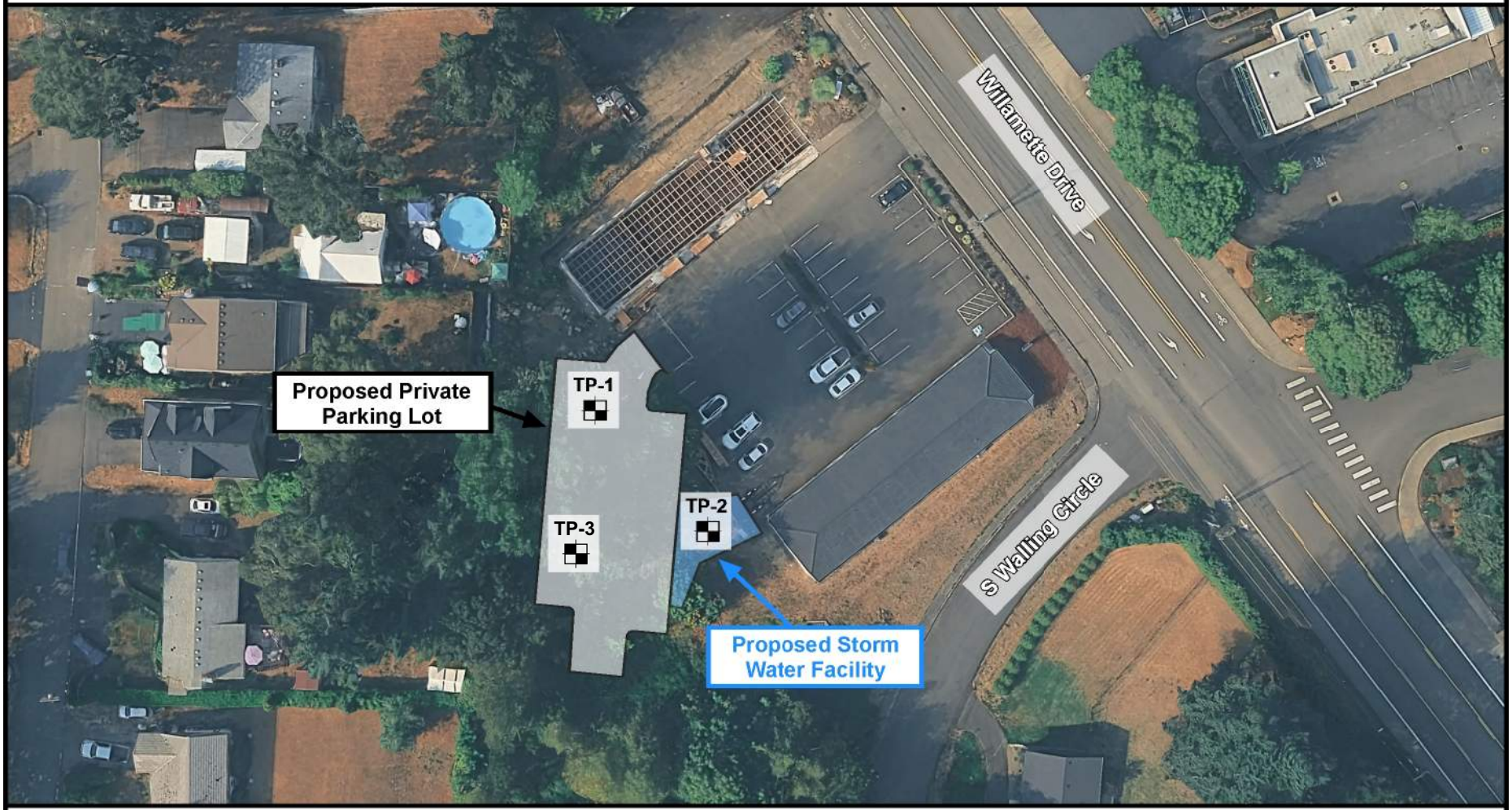
Approximate Scale: 1" = 2,000'

Date: 4/23/26
Drawn by: AEP

Project: 18825 Willamette Drive Parking Lot West Linn, Oregon	Project No. 26-6985	FIGURE 1

GEOPACIFIC
14835 SW 72nd Avenue
Portland, Oregon 97224
Tel: (503) 598-8445 Fax: (503) 941-9281

SITE AERIAL AND EXPLORATION LOCATIONS



Legend: TP-1 Test Pit Designation and Approximate Location

0 60'
APPROXIMATE SCALE 1"=60'

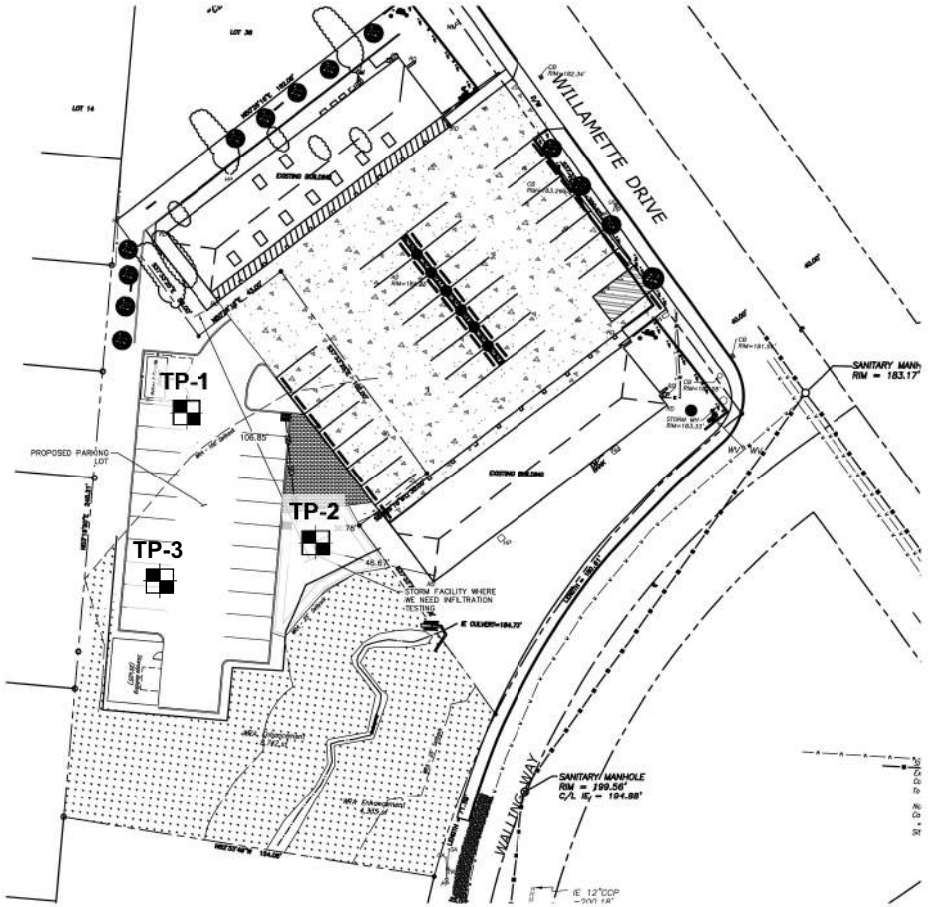
North

Date: 5/6/26
Drawn by: AEP

Project: 18825 Willamette Drive Parking Lot West Linn, Oregon	Project No. 26-6985	FIGURE 2

GEOPACIFIC
14835 SW 72nd Avenue
Portland, Oregon 97224
Tel: (503) 598-8445 Fax: (503) 941-9281

SITE PLAN AND EXPLORATION LOCATIONS



Legend: **TP-1** Test Pit Designation and Approximate Location

0 80'
APPROXIMATE SCALE 1"=80'

North

Base Map Provided by West Lake Consultants

Date: 5/6/26
Drawn by: AEP

Project: 18825 Willamette Drive Parking Lot West Linn, Oregon	Project No. 26-6985	FIGURE 3

EXPLORATION LOGS

GEOPACIFIC
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Portland, Oregon 97224
Tel: (503) 598-8445 Fax: (503) 941-9281

TEST PIT LOG

Project: 18825 Willamette Dr Parking Lot West Linn, Oregon	Project No. 26-6985	Test Pit No. **TP-1**

Depth (ft)	Pocket Penetrometer (tons/ft²)	Sample Type	Moisture Content (%)	Water Bearing Zone	Material Description
					Moderately Organic SILT (OL), brown, fine roots to 4 in., moist (Topsoil)
					Sandy SILT (ML) with some organics, light brown, medium stiff, large roots, moist (Catastrophic Flood Deposits)
1	0.75				Sandy SILT (ML), light brown, medium stiff, moist (Catastrophic Flood Deposits)
2	1.0				
3	1.5				Sandy SILT (ML) with clay, light brown, stiff, moist (Catastrophic Flood Deposits)
4	2.5	100 to 1,000 g	34.5		Percent Passing #200 = 62.4%
5					
6					Silty SAND (SM) with some clay, brown/orange/gray, dense, moist (Catastrophic Flood Deposits)
					Clayey SILT (ML) with sand, light brown, stiff, moist (Catastrophic Flood Deposits)
7					Silty SAND (SM), light brown, medium dense, moist to wet (Catastrophic Flood Deposits)
8		100 to 1,000 g	34.3		Percent Passing #200 = 49.7%
					Test pit terminated at 8.5 feet Groundwater seepage encountered at 96 to 102 inches bgs No caving observed

LEGEND

100 to 1,000 g — Bag Sample
5 Gal. Bucket — Bucket Sample
Shelby Tube Sample
Seepage
Water Bearing Zone
Static Water Level

Bucket Type: Rock Teeth
Bucket Size: 2 Feet
Excavator: Hitachi ZX26U-5N
Contractor: Dan Fischer Excavating

Date Excavated: 5.6.2026
Logged By: AEP
Surface Elevation: ~190'
Surface Conditions: Grass

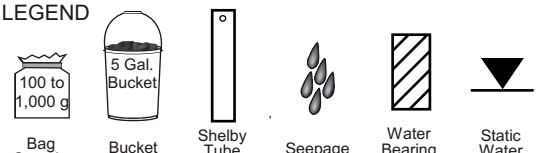
GEOPACIFIC
14835 SW 72nd Avenue
Portland, Oregon 97224
Tel: (503) 598-8445 Fax: (503) 941-9281

TEST PIT LOG

Project: 18825 Willamette Dr Parking Lot West Linn, Oregon	Project No. 26-6985	Test Pit No. **TP-2**

Depth (ft)	Pocket Penetrometer (tons/ft²)	Sample Type	Moisture Content (%)	Water Bearing Zone	Material Description
0					Moderately Organic SILT (OL), brown, fine roots to 4 in., moist (Topsoil)
1					Sandy SILT (ML) with gravel and some organics, light brown, medium stiff, angular gravel up to 6 inches in diameter, large roots, moist (Poorly-Compacted Fill)
2	2.0				Silty GRAVEL (GM) with cobbles, dark brown, medium dense, up to 6 inch diameter rounded cobbles, moist (Well-Compacted Fill)
3	4.0				
4	4.0				Sandy SILT (ML) with gravel, brown, medium stiff, angular gravel up to 4 inches in diameter, moist (Well-Compacted Fill)
5					
6		100 to 1,000 g			Clayey SILT (ML) with sand, light brown, stiff, moist (Catastrophic Flood Deposits)
7					Test pit terminated at 6.5 feet Groundwater not encountered No caving observed
8					

LEGEND



Bucket Type: Rock Teeth
Bucket Size: 2 Feet
Excavator: Hitachi ZX26U-5N
Contractor: Dan Fischer Excavating

Date Excavated: 5.6.2026
Logged By: AEP
Surface Elevation: ~191'
Surface Conditions: Grass

GEOPACIFIC
14835 SW 72nd Avenue
Portland, Oregon 97224
Tel: (503) 598-8445 Fax: (503) 941-9281

TEST PIT LOG

Project: 18825 Willamette Dr Parking Lot
West Linn, Oregon

Project No. 26-6985

Test Pit No. **TP-3**

Depth (ft)	Pocket Penetrometer (tons/ft²)	Sample Type	Moisture Content (%)	Water Bearing Zone	Material Description
0					Moderately Organic SILT (OL), dark brown/gray, fine roots to 4 in., large roots to 7 in., moist (Topsoil)
1					Sandy SILT (ML) with clay and some organics, light brown/orange, medium stiff, large roots to 24 inches bgs, moist (Catastrophic Flood Deposits)
2	1.5				Sandy SILT (ML), light brown, stiff, moist (Catastrophic Flood Deposits)
3	2.0				
4	2.5				
5					
6					Sandy SILT (ML) with some clay, brown/orange/gray, stiff, moist (Catastrophic Flood Deposits)
7					
8		100 to 1,000 g	35.0		Percent Passing #200 = 50.1%
					Test pit terminated at 8.5 feet Groundwater seepage encountered at 24 to 102 inches bgs on west side of test pit No caving observed

LEGEND

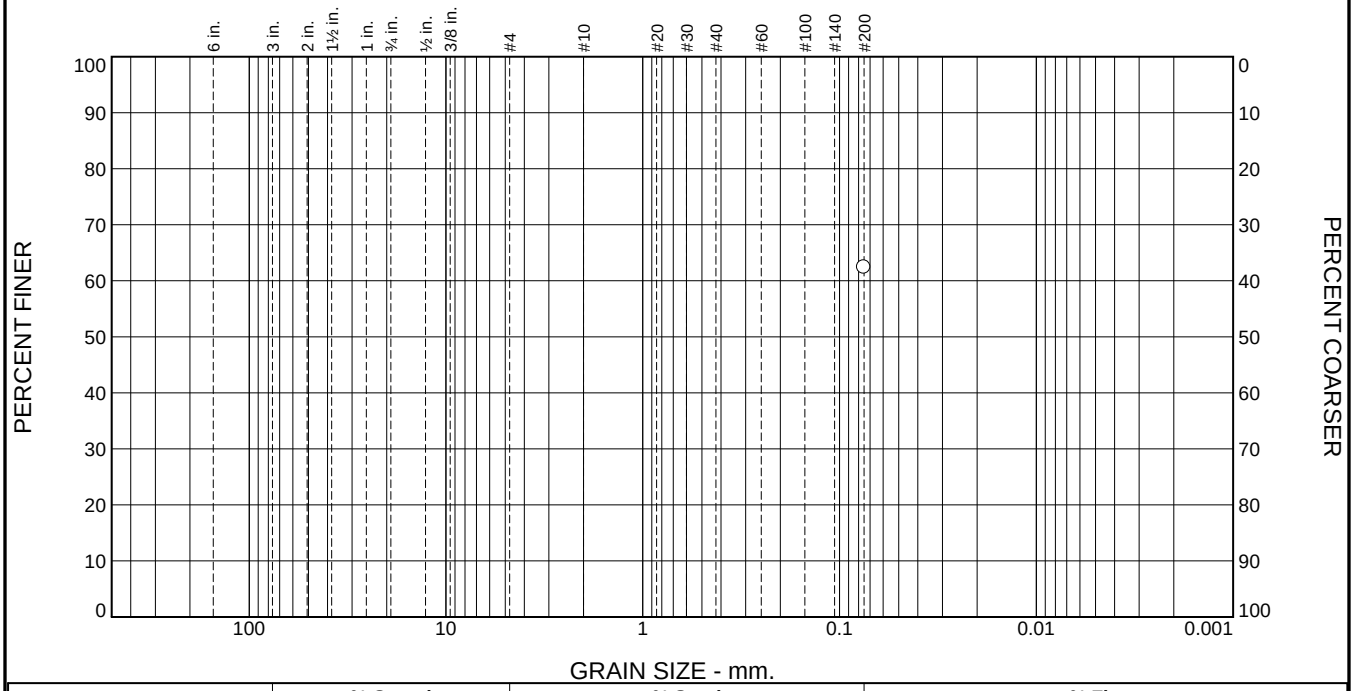
100 to 1,000 g — Bag Sample
5 Gal. Bucket — Bucket Sample
Shelby Tube Sample
Seepage
Water Bearing Zone
Static Water Level

Bucket Type: Rock Teeth
Bucket Size: 2 Feet
Excavator: Hitachi ZX26U-5N
Contractor: Dan Fischer Excavating

Date Excavated: 5.6.2026
Logged By: AEP
Surface Elevation: ~193'
Surface Conditions: Grass

LABORATORY RESULTS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
						62.4	

TEST RESULTS			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#200	62.4		

* (no specification provided)

Material Description

Sandy Silt

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Moisture Content = 34.5 Percent

Date Received: _____ **Date Tested:** 5.13.226

Tested By: ALL

Checked By: MTB

Title: PM:BGA

Location: TP-1
Sample Number: S26-063 **Depth:** 4ft

Date Sampled: 5.6.26 AEP

GEOPACIFIC ENGINEERING, INC.

Client: Matin Real Estate
Project: 18825 Willamette Drive Parking Lot

Project No: 26-6985 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

5/18/2026

Client: Matin Real Estate
Project: 18825 Willamette Drive Parking Lot
Project Number: 26-6985
Location: TP-1
Depth: 8ft
Sample Number: S26-064
Material Description: Silty Sand
Sample Date: 5.2.26 AEP
#200 Wash Method: AASHTO T 11
Testing Remarks: Moisture Content = 34.3 Percent
Tested By: ALL
Test Date: 5.13.26
Checked By: MTB
Title: PM:BGA

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 1220.30
Tare Wt. = 537.20
Minus #200 from wash = 49.7%

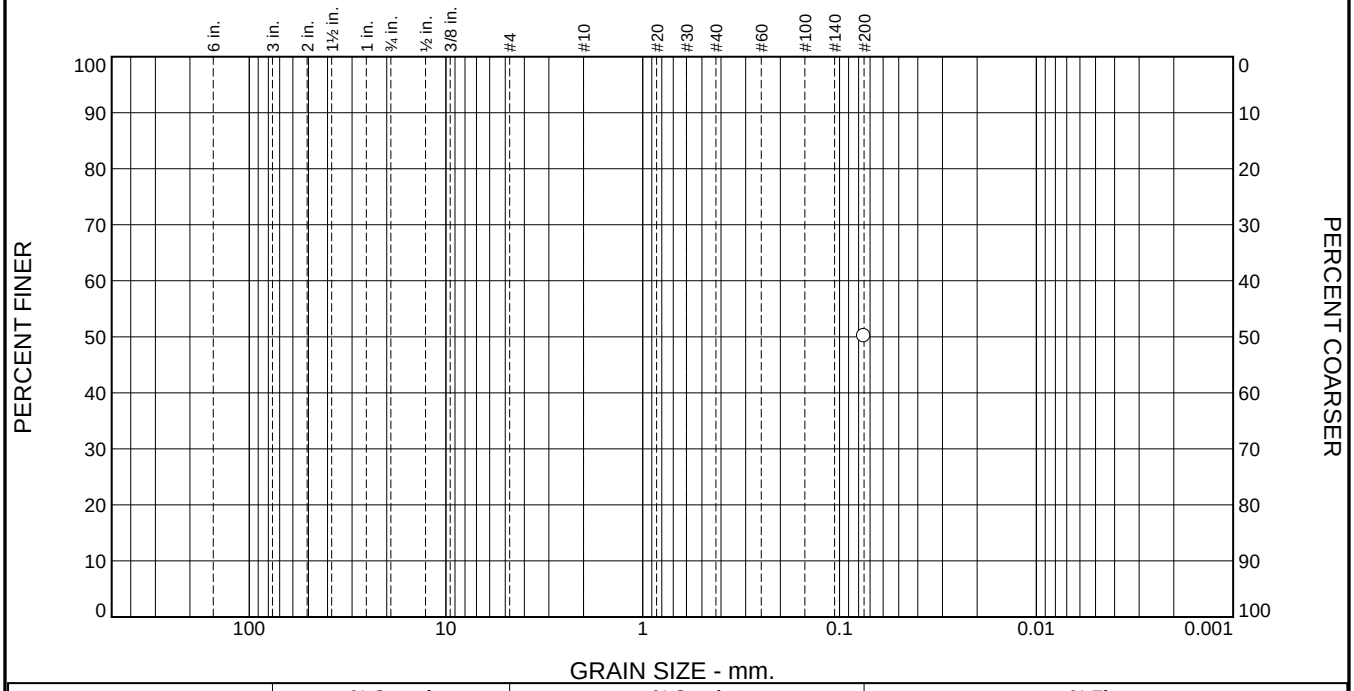
Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
1895.40	537.20	537.20	#200		49.7	50.3

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
										49.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
						50.1	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#200	50.1		

* (no specification provided)

Material Description

Silty Sand

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Moisture Content = 35.0 Percent

Date Received: _____ **Date Tested:** 5.13.26

Tested By: ALL

Checked By: MTB

Title: PM:BGA

Location: TP-3
Sample Number: S26-065 **Depth:** 8ft

Date Sampled: 5.6.26 AEP

GEOPACIFIC ENGINEERING, INC.

Client: Matin Real Estate
Project: 18825 Willamette Drive Parking Lot

Project No: 26-6985 **Figure**

Real-World Geotechnical Solutions
Investigation • Design • Construction Support

PAVEMENT DESIGN

==========

DARWin(tm) - Pavement Design

A Proprietary AASHTOWARE(tm)
Computer Software Product

Flexible Structural Design Module

Project Description
26-6985 - 18825 Willamette Drive Parking Lot - Private Parking Areas - New Pavement Section

Flexible Structural Design Module Data
18-kip ESALs Over Initial Performance Period: 20,863
Initial Serviceability: 4.2
Terminal Serviceability: 2.5
Reliability Level (%): 85
Overall Standard Deviation: .5
Roadbed Soil Resilient Modulus (PSI): 4,450
Stage Construction: 1

Calculated Structural Number: 2.18

Specified Layer Design

Layer: 1
Material Description: New A/C
Structural Coefficient (Ai): .42
Drainage Coefficient (Mi): 1
Layer Thickness (Di) (in): 3.00
Calculated Layer SN: 1.26

Layer: 2
Material Description: 3/4" Aggregate Levelling
Structural Coefficient (Ai): .1
Drainage Coefficient (Mi): 1
Layer Thickness (Di) (in): 2.00
Calculated Layer SN: .20

Layer: 3
Material Description: 1.5" Aggregate Base
Structural Coefficient (Ai): .1
Drainage Coefficient (Mi): 1
Layer Thickness (Di) (in): 8.00
Calculated Layer SN: .80

Total Thickness (in): 13.00
Total Calculated SN: 2.26

Simple ESAL Calculation
Initial Performance Period (years): 20
Initial Two-Way Daily Traffic (ADT): 200
% Heavy Trucks (of ADT) FHWA Class 5 or Greater: 2
Number of Lanes In Design Direction: 1
Percent of All Trucks In Design Lane (%): 100
Percent Trucks In Design Direction (%): 50
Average Initial Truck Factor (ESALs/truck): 1.2
Annual Truck Factor Growth Rate (%): 0
Annual Truck Volume Growth Rate (%): 2
Growth: Simple

Total Calculated Cumulative Esals: 20,863

Real-World Geotechnical Solutions
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PHOTOGRAPHIC LOG

Real-World Geotechnical Solutions
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Test Pit TP-1

Real-World Geotechnical Solutions
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Test Pit TP-2

Real-World Geotechnical Solutions
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Test Pit TP-3

-IMAGE-TITLE-

Luminaire Schedule										
Symbol	Qty	Arrangement	Label	Description	Watts	Lumens	Voltage	CCT	Manufacturer	LLF
+	9	Single	B1	BOL-42-S-C-C-MCTP	21.7	2610	120~277	3000	WESTGATE	0.900

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Drive Aisles and Parking Areas	Illuminance	Fc	0.39	7.8	0.0	N.A.	N.A.

LPD Area Summary			
Label	Area	Total Watts	LPD
Drive Aisles and Parking Areas	10526	108.5	0.010

PHOTOMETRIC NOTES:

1. This photometric report adheres to industry-recommended practices, utilizing IES/ANSI photometric data supplied by the product manufacturer.
2. Lighting fixture options outlined in this report are projections of product output and may differ from on-site performance due to tolerances in calculation methods, testing procedures, component performance, measurement techniques and or undefined parameters.
3. Input data used to generate the attached calculations such as room dimensions, reflectance and architectural elements, may significantly affect the lighting calculations. If the real environment conditions do not match the input data, differences will occur between measured values and calculated values.
4. Reflectance is set to Recommended values of 80-50-20, unless otherwise required.
5. Luminaire Schedule provides a summary of selected lighting fixture types.
6. Luminaire Location Summary details the specified luminaire locations, luminaire Channels, listing groups as single entities with the insertion point indicated as the location. The Z-axis is adjusted to 'Mounting Height', labeled as MH
7. Furnishings, HVAC, stairs, slopes, some structural elements, and or other obstructions can be omitted in these calculation results.
8. Calculation Summary outlines the metrics for calculation points. These points are positioned at work plane PER IES definition.
9. Emergency egress lighting configurations feature a 90-minute runtime in full compliance with NEC codes. Maintaining at a 1.0 footcandles along the path of egress, a minimum of 0.1 fc. and a 40:1 max-min ratio.

WESTGATE
THE FUTURE IS HERE... AND IT'S QUITE BRIGHT!

Westgate MFG Inc
2462 E.28th St.
Vernon, CA 90058
www.westgatemfg.com

REVISIONS

#	Date	Comments:

Drawn by: Rosander
Checked by: WESTGATE
Date: 7/9/2026

Filename: 25586 Matin Parking Lot V1.AGI

PROJECT TITLE:
25586 Matin Parking Lot

Date:7/9/2026

BOL SERIES

Outdoor Lighting

BOL-42-S-C-C-MCTP-BK

42” Square Bollard

MCTP Multi Color Temperature & Multi Power/Wattage (Selectable)

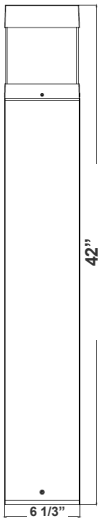
Customer Name:

Project Name:

Note: | Type:

Avail Finish:

Bollards are designed for walkways, entrance ways, drives and other small-area lighting applications where low mounting heights are desirable



42”(H) x 6 1/3”(W)

Features

- Corrosion Resistant Aluminum for Exterior
- Samsung 2835 LED Chips
- Wattage & CCT Selectable Switches inside fixture
- 7-Year Warranty

Technical Specifications

Electrical:

- Voltage: 120-277VAC
- Wattage: 14W/19W/24W
- Power Factor: >0.9
- Efficacy: 130 LPW

Lighting:

- Wattage & CCT Selectable Switches inside fixture
- Lumens: 3120LM Max.
- Color Temperatures: 3000K/4000K/5000K
- Color Rendering Index: CRI ≥ 70
- Beam Angle : 360°
- Lifespan: 70000 Hours

Mechanical:

- Flat Top with Cone Reflector & Frosted Lens
- Corrosion Resistant Aluminum for Exterior
- Mounting Accessories & Anchor Bolts Included (7-1/2” long)
- Operating Temperature: -40°F to 113°F
- 7 Years Warranty
- IP Rating: IP65, Wet Locations

Applications:

- Bollards are designed for walkways, entrance ways, drives and other small-area lighting applications where low mounting heights are desirable

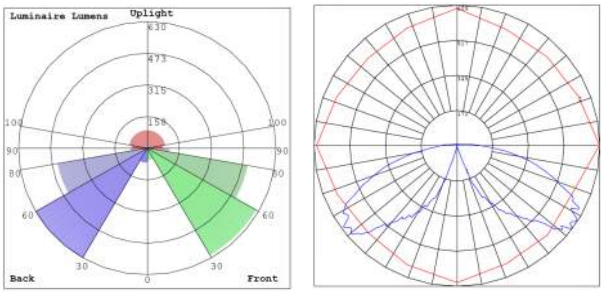
Other Models:

- 22W | 2860LM | BOL-42-S-C-C-MCTP-BR

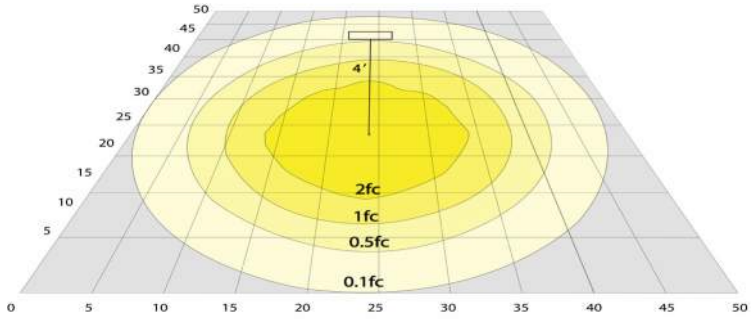
Phone: (877) 805-2252 | Fax: (877) 805-2252
www.westgatemfg.com |

WG-ZY-Z9-2Z

Photometrics: BOL-42-S-C-C-MCTP-BK



BUD Rating: B1-U3-G2

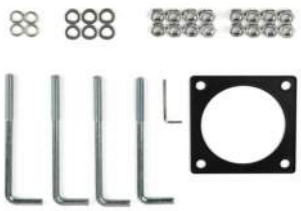


Area 75'x 65' Mounting Height: 4'

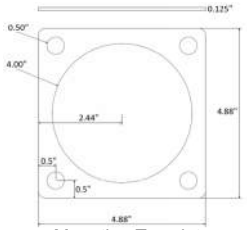
Other Views:

Lens View

Bottom View



Mounting accessories Included



Mounting Template
4.88"H x 4.88"W x 0.125"D

Performance Table: BOL-42-S-C-C-MCTP-BK

MODEL NO.	Wattage	Voltage	Lumens	Color Temp.	BUG Rating	LPW
BOL-42-S-C-C-MCTP-BK	14W 19W 24W	120~277V	1820LM 2470LM 3120LM	3000K 4000K 5000K	B1-U3-G2	130

Sample Ordering

Model	Height	Top Shape	Reflector	Lens Type	Watt/Color Temp.	Housing
BOL	42	S	C	C	MCTP	BK

Factory-Installed Options:

Blank = No Option For Accessories
OPT-EM-OD1INT=EMERGENCY BACKUP INTERNAL BATTERY, BACK BOX
OPT-BOL-SH1=SHIELD
OPT-PC-B=BUTTON PHOTOCELL
OPT-CRL-95(BK/GR/SR/WH)=PAINT
OPT-SEN-WMC=MICROWAVE BI-LEVEL SENSOR

FACTORY-INSTALLED OPTION:

OPT-EM-OD1INT
INTERNAL BATTERY

OPT-SEN-WMC
MICROWAVE BI-LEVEL SENSOR

OPT-PC-B
FOR 120V-277V PHOTOCELL

COLOR CHART: * Choose from one of our Premium Colors with no set-up fee.

Gloss:

SILVER METALLIC
70 GLOSS
T357-GR105

SILVER METALLIC
30 GLOSS
T353-GR06

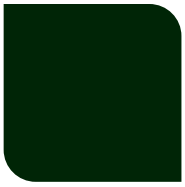
DARK RED 90
GLOSS
P009-RD02

INTERNATIONAL
ORANGE 90
GLOSS
T009-OG26

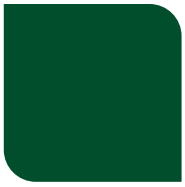
SAFETY ORANGE
90 GLOSS
T009-OG01

YELLOW 90
GLOSS
T009-YL14

YELLOW 90
GLOSS
T009-YL01



TRAFFIC GREEN
70 GLOSS
T007-GN16



GREEN 70 GLOSS
T007-GN13

GREEN 60 GLOSS
C006-GN03

BLUE 90 GLOSS
T009-BL01

DARK BLUE 80
GLOSS
T008-BL20

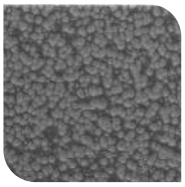
RAL 8028 TERRA
BROWN 90 GLOSS
C209-BR358

Hammer:

WHITE HAMMER
T013-WH09

BEIGE HAMMER
T013-BG38

GREY HAMMER
C013-GR08



SILVER
HAMMERTONE
T064-GR05

BLACK HAMMER
T013-BK62

RED HAMMER
T013-RD15

GREEN HAMMER
T013-GN220

BLUE HAMMER
T013-BL468

BRONZE HAMMER
T012-BR161

Texture:

WHITE TEXTURE
C031-WH120

FLINT GRAY
TEXTURE
T243-GR522

BLACK TEXTURE
C241-BK109

RED TEXTURE
T241-RD129

BLUE TEXTURE
C241-BL544

OIL RUBBED
BRONZE TEXTURE
T291-BR251

Vein:

BLACK/WHITE
VEIN
T075-WH34

SILVER VEIN
T375-BK26

COPPER VEIN
EXTERIOR
T075-BK211

GOLD VEIN
T375-BK10

COPPER VEIN
T375-BK07

Parking Facility

Tax Map 21E14DD / Tax Lot 6100
Adjacent to 18825 Willamette Drive
West Linn, OR

Prepared For:

Jordan Matin
18825 Willamette Drive
West Linn, OR 97068

Prepared By:

Westlake Consultants, Inc.
15115 SW Sequoia Parkway, Suite 150
Tigard, OR 97224

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APPLICATION AND SUBJECT PROPERTY SUMMARY

SUBJECT PROPERTY:	Tax Map 21E14DD, Tax Lot 6100
PROPERTY LOCATION:	Adjacent to 18825 Willamette Drive West Linn, OR 97068
PROPOSAL:	Design Review and WRA Permit for a parking facility with 20 spaces and an accessory structure.
TAX LOT SIZE:	0.72 Acres
ZONING DESIGNATION:	General Commercial (GC)
APPLICANT / PROPERTY OWNER:	Jordan Matin 18825 Willamette Drive West Linn, OR 97068 Phone: 971-285-2180 Email: jmatin@matinrealestate.com
APPLICANT'S REPRESENTATIVE:	Ken Sandblast, AICP Westlake Consultants, Inc. 15115 SW Sequoia Parkway, Suite 150 Tigard, OR 97224 Phone: 503-684-0652 Email: ksandblast@westlakeconsultants.com

PROJECT OVERVIEW

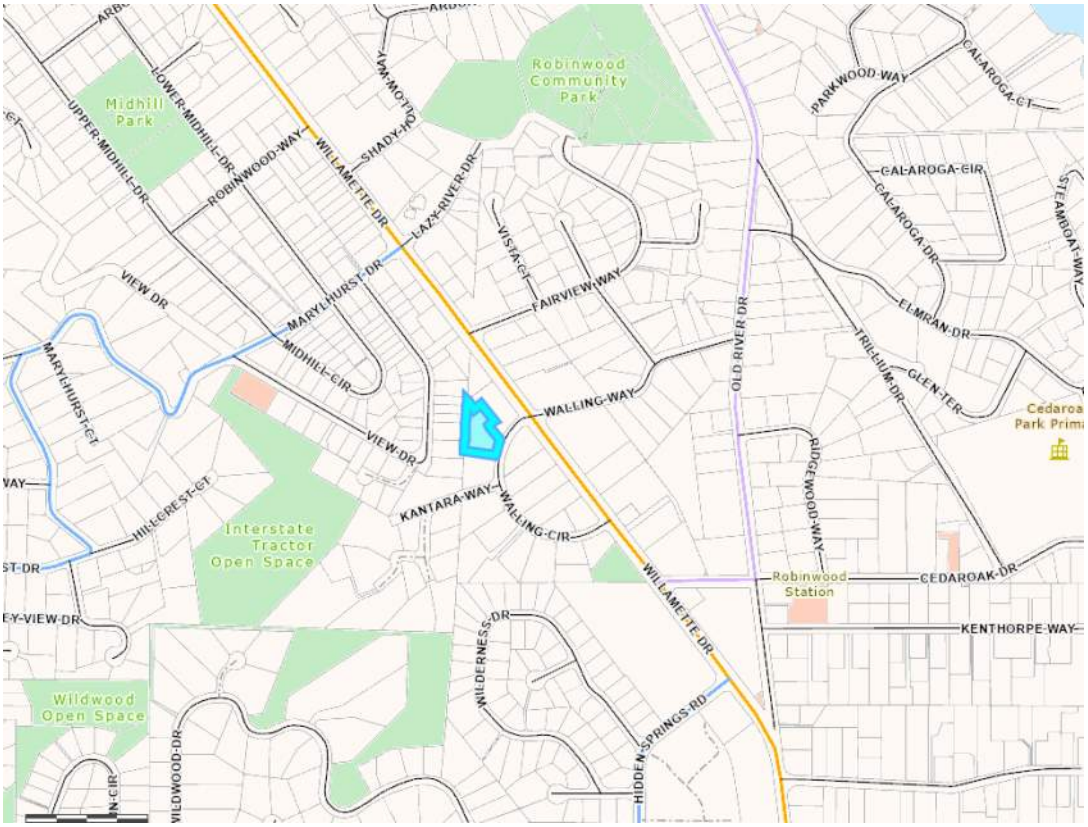
The subject site is located near the intersection of Willamette Drive and Walling Circle (adjacent to 18825 Willamette Drive) as shown in the Vicinity Map, Figure 1., below. The site is identified as Tax Lot 6100 of Tax Map 2-1E-14DD. The site is zoned General Commercial (GC) and is approximately 0.72 acres in size.

This application proposes a 20-space parking facility as allowed in the General Commercial zone and listed in *Section 19.030 Permitted Uses*. In addition, an accessory storage structure for parking facility maintenance supplies and equipment is proposed.

Access is proposed to be provided via an existing driveway from Willamette Drive, through the adjacent commercial business property located on Tax Lot 6200. The proposed 24'-wide access drive will extend into the subject property and allow for 2-way circulation on the site.

A designated Water Resource Area (WRA) associated with Fern Creek exists on the site as shown in the Site Plan, attached as Sheet P400 of Exhibit D. As such, the Applicant proposes a site design that limits the size and configuration of the parking facility, thus minimizing impact to the resource area. The Applicant proposes the Alternate Review for the WRA permit request, as the existing condition of the WRA has been determined to be degraded. Through invasive plant removal and native plant replanting, the Applicant proposes to enhance and improve the functions of the WRA as detailed in the submitted site assessment and mitigation plan, included in the attached report completed by Schott & Associates, attached as Exhibit E.

FIGURE 1. VICINITY MAP



LAND USE PERMIT REQUEST

The Applicant requests a Class II Design Review for a 20-space private parking facility and accessory storage structure on the 0.72-acre site. In addition, the Applicant requests an Alternate Review, per *Section 32.070*, for a Water Resource Area Permit for the proposed development on the site.

APPLICABLE CODE PROVISIONS

The Applicant has found the following provisions of the West Linn *Community Development Code* to be applicable to this application for Design Review and Water Resource Area Permit.

The Applicant's responses are provided below. In addition, this application includes a Natural Resource Assessment and Mitigation Report prepared by Schott & Associates, and an Arborist Report prepared by Todd Prager & Associates, which address applicable criteria.

19.020 PROCEDURES AND APPROVAL PROCESS
19.030 PERMITTED USES

A. *A use permitted outright, CDC 19.030, is a use which requires no approval under the provisions of this code, except that some uses require design review pursuant to CDC 19.090(B). If a use is not listed as a use permitted outright, it may be held to be a similar unlisted use under the provisions of Chapter 80 CDC.*

RESPONSE:
Per *Section 19.030*, a parking facility is an outright permitted use in the General Commercial zone. Consistent with the definition of Parking Facilities in Chapter 2 of the West Linn CDC, the Applicant proposes a stand-alone 20-space surface parking lot on the subject site.

19.070 DIMENSIONAL REQUIREMENTS, USES PERMITTED OUTRIGHT AND USES PERMITTED UNDER PRESCRIBED CONDITIONS

A. *Except as may be otherwise provided by the provisions of this code, the following are the requirements for uses within this zone:*
1. *The minimum front lot line length or the minimum lot width at the front lot line shall be 35 feet.*
2. *The average minimum lot width shall be 50 feet.*
3. *The average minimum lot depth shall not be less than 90 feet.*
4. *Where the use abuts a residential district, except as provided in CDC 58.090(C)(1), the setback distance of the residential zone shall apply.*

RESPONSE: As shown on the submitted Site Plan, Sheet P300 of the attached Preliminary Plan Set, Exhibit D, the subject property has over 71 feet of frontage on Walling Circle and the property meets all other dimensional requirements of this provision. The site abuts R-10 zoned properties to the west and south, and is bordered on the north and east by General Commercial zoning. As indicated on the Site Plan, the proposed site development meets applicable setbacks.

CHAPTER 32
WATER RESOURCE AREA PROTECTION

32.050 APPLICATION

A. An application requesting approval for a use or activity regulated by this chapter shall be initiated by the property owner, or the owner's authorized agent, and shall include an application form and the appropriate deposit or fee as indicated on the master fee schedule.
RESPONSE: The submitted application has been initiated by the Applicant and the appropriate fee has been paid.

B. A pre-application conference shall be a prerequisite to the filing of the application.
RESPONSE: A pre-application conference was held February 6, 2025. Meeting notes are attached as Exhibit C.

C. The applicant shall submit maps and diagrams at 11 by 17 inches and a written narrative addressing the approval criteria and requirements of this chapter, and any additional copies required by the Planning Director.
RESPONSE: The submitted application package was submitted electronically, as required, and includes maps and diagrams at an appropriate scale to be printed at 11x17 inches. The submitted narrative and attached exhibits and studies together address applicable approval criteria for this proposal.

D. Where review of soil maps, Department of Geology and Mineral Industries (DOGAMI) maps, or on-site inspection by the City Engineer reveals evidence of slope failures or that WRA slopes are potentially unstable or prone to failure, geotechnical studies may be required to demonstrate that the proposed development will not cause, or contribute to, slope failure or increased erosion or sedimentation in the WRA or adversely impact surface or modify groundwater flow or hydrologic conditions. These geotechnical studies shall include all necessary measures to avoid or correct the potential hazard.
RESPONSE: A geotechnical report has been prepared by GeoPacific and is attached as Exhibit J. The report concludes that development of the proposed parking facility on the subject site is feasible.

E. Applications proposing that streets or utilities cross water resources, or any other development that modifies the water resource, shall present evidence in the form of adopted utility master plans or transportation master plans, or findings from a registered Oregon civil

engineer, certified engineering geologist or similarly qualified professional to demonstrate that the development or improvements are consistent with accepted engineering practices.

RESPONSE:

A portion of the proposed development lies within the water resource buffer. No modification of the water resource is proposed. As shown in the attached Preliminary Engineering Plans, Exhibit D, and the Natural Resource Assessment/Mitigation Plan prepared by Schott & Associates, Exhibit E, the proposed development is designed to be consistent with accepted engineering practices.

F. Site plan. The applicant shall submit a site plan which contains the following information, as applicable:

1. The name, address, and telephone number of the applicant, the scale (lineal) of the plan, and a north arrow.

2. Property lines, rights-of-way, easements, etc.

3. A storm detention and treatment plan and narrative statement pursuant to CDC 92.010(E).

4. Tables and maps identifying acreage, location and type of development constraints due to site characteristics such as slope, drainage and geologic hazards. For Type I, II, and III lands (refer to definitions in Chapter 02 CDC), the applicant must provide a geologic report, with text, figures and attachments as needed to meet the industry standard of practice, prepared by a certified engineering geologist and/or a geotechnical professional engineer, that includes:

a. Site characteristics, geologic descriptions and a summary of the site investigation conducted;

b. Assessment of engineering geological conditions and factors;

c. Review of the City of West Linn's Natural Hazard Mitigation Plan and applicability to the site; and

d. Conclusions and recommendations focused on geologic constraints for the proposed land use or development activity, limitations and potential risks of development, recommendations for mitigation approaches and additional work needed at future development stages including further testing and monitoring.

RESPONSE:

The submitted application contains a site plan included in attached Exhibit D, Preliminary Engineering Plans, that provides the applicable information listed above. In addition, a geologic report prepared by GeoPacific is attached as Exhibit J.

5. Boundaries of the WRA, specifically delineating the water resource, and any riparian corridor boundary. If the proposal includes development of a wetland, a wetlands delineation prepared by a professional wetland specialist will be required. The wetland delineation may be required to be accepted or waived through the Department of State Lands (DSL) delineation review process.

RESPONSE: The Applicant has submitted a Natural Resources Assessment prepared by Schott & Associates, attached as Exhibit E, providing details of the WRA determination.

6. Location of existing and proposed development, including all existing and proposed structures, accessory structures, any areas of fill or excavation, water resource crossings, alterations to vegetation, or other alterations to the site's natural state.
RESPONSE: This information is provided in the Preliminary Engineering Plans, attached as Exhibit D. No water resource crossings are proposed through this application. The submitted Natural Resources Assessment and Mitigation Plan, attached as Exhibit E, provide additional information regarding site vegetation.

7. Identify the location and square footage of previously disturbed areas, areas that are to be temporarily disturbed, and area to be permanently disturbed or developed.
RESPONSE: The Schott & Associates report (Exhibit E) includes a site plan that identifies temporary and permanent impacts within the WRA.

8. When an application proposes development within the WRA, an inventory of vegetation within the WRA, sufficient to categorize the existing condition of the WRA, including:
a. The type and general quality of ground cover, including the identification of dominant species and any occurrence of non-native, invasive species;
b. Square footage of ground cover; and
c. Square footage of tree canopy as measured either through aerial photographs or by determining the tree drip lines. Where only a portion of a WRA is to be disturbed, the tree inventory need only apply to the impacted area. The remaining treed area shall be depicted by outlining the canopy cover.
RESPONSE: A Natural Resources Assessment report prepared by Schott & Associates is attached as Exhibit E. Within the report, Figure 3 illustrates the WRA existing conditions, including tree canopy cover and tree inventory within the WRA. The report provides additional information on WRA existing conditions, including the presence of native and non-native shrubs and ground covers.

9. Locations of all significant trees as defined by the City Arborist.
RESPONSE: An Arborist Report prepared by Todd Prager & Associates, attached as Exhibit G, provides tree inventory and assessment details.

10. Identify adopted transportation, utility and other plan documents applicable to this proposal.
RESPONSE: No projects are identified in City adopted plans for the subject site.

11. For cases processed under CDC 32.110 (hardship), provide the maximum disturbed area (MDA) calculations.
RESPONSE: The Applicant is not proposing review through *CDC 32.110.*

G. Construction management plan. The applicant shall submit a construction management plan which includes the following:

1. The location of proposed TDAs (site ingress/egress for construction equipment, areas for storage of material, construction activity areas, grading and trenching, etc.) that will subsequently be restored to original grade and replanted with native vegetation, shall be identified, mapped and enclosed with fencing per subsection (G)(3) of this section.

2. Appropriate erosion control measures consistent with Clackamas County Erosion Prevention and Sediment Control Planning and Design Manual, rev. 2008, and a tentative schedule of work.

3. The WRA shall be protected, prior to construction, with an anchored chain link fence (or equivalent approved by the City) at its perimeter that shall remain undisturbed, except as specifically authorized by the approval authority. Additional fencing to delineate approved TDAs may be required. Fencing shall be mapped and identified in the construction management plan and maintained until construction is complete.

RESPONSE: A construction management plan has been included as Sheet P600 in the submitted Preliminary Engineering Plans, attached as Exhibit D.

H. Mitigation plan prepared in accordance with the requirements in CDC 32.090.

RESPONSE: A mitigation plan is included in the submitted report by Schott & Associates, attached as Exhibit E.

I. Re-vegetation plan prepared in accordance with the requirements in CDC 32.100.

RESPONSE: Revegetation of the site is detailed in the Schott & Associates report, attached as Exhibit E.

J. The Planning Director may modify the submittal requirements per CDC 99.035.

RESPONSE: The Applicant has submitted application materials in response to all applicable approval criteria.

K. The following additional requirements apply to applications being submitted under the alternative review process pursuant to CDC 32.070 and 32.080.

1. Identify the affected WRA and describe the functions it performs (see Table 32-4).

2. Provide a scaled map that delineates the proposed WRA boundaries determined to be sufficient to sustain the functions occurring at the site and a narrative that justifies the proposal, consistent with CDC 32.080.

3. Identify the recommended WRA boundary at the site with colored tape, survey markers or other easily identified means for field inspection by staff.

4. Consultant required for alternate review process.

a. The narrative and analysis required by CDC 32.070 and 32.080 shall be prepared and signed by a qualified natural resource professional, such as a wildlife biologist, botanist, or hydrologist. The Planning Director shall determine the scope of work and specific products required from the consultant. The Planning Director may require a mitigation plan pursuant to CDC 32.090 and/or a re-vegetation plan pursuant to CDC 32.100.

b. The Planning Director may waive the consultant requirement for simple or minor projects if they determine that it is not necessary in order to satisfy the requirements of this chapter.

RESPONSE: The Applicant proposes the Alternate Review Process for the proposed parking facility development on the subject site. The submitted Natural Resources Assessment and Mitigation Plan were prepared and signed by a qualified natural resource specialist employed by Schott & Associates. The report, attached as Exhibit E, provides details in response to the applicable criteria of this provision.

32.060 APPROVAL CRITERIA (STANDARD PROCESS)

RESPONSE: The Applicant proposes the Alternate Review Process for the proposed parking facility development on the subject site. As required by *Section 32.080 Alternate Review,* the applicable sections of *Section 32.060* are addressed below. These criteria are further addressed in the attached Natural Resource Assessment and Mitigation Plan, prepared by Schott & Associates and attached as Exhibit E.

A. WRA protection/minimizing impacts.

1. Development shall be conducted in a manner that will avoid or, if avoidance is not possible, minimize adverse impact on WRAs.

RESPONSE: This application includes preliminary plans, attached as Exhibit D, demonstrating the placement of the proposed parking facility outside of the proposed WRA. Access to the subject site will be provided across an adjacent property, eliminating the need for access to the site from Walling Circle, across the water resource. The appropriate protections will be put in place during the construction of the proposed facility. The Natural Resource Assessment Report, attached as Exhibit E, provides additional information.

2. Mitigation and re-vegetation of disturbed WRAs shall be completed per CDC 32.090 and 32.100, respectively.

RESPONSE: A Natural Resource Assessment and Mitigation Plan, attached as Exhibit E, details the conditions of the WRA and the enhancement proposed through mitigation, as required by *Sections 32.090 and 32.100.*

B. Storm water and storm water facilities.

1. *Proposed developments shall be designed to maintain the existing WRAs and utilize them as the primary method of storm water conveyance through the project site unless:*
   a. *The surface water management plan calls for alternate configurations (culverts, piping, etc.); or*
   b. *Under CDC 32.070, the applicant demonstrates that the relocation of the water resource will not adversely impact the function of the WRA including, but not limited to, circumstances where the WRA is poorly defined or not clearly channelized.*
   Re-vegetation, enhancement and/or mitigation of the re-aligned water resource shall be required as applicable.

RESPONSE:
This application proposes a surface parking facility with an accessory storage shed and a solid waste/recycling receptacle. Stormwater generated by the proposed improvements will be detained and treated in an underground system located beneath the parking lot, as shown on the Composite Utility Plan, attached as Sheet P500 of Exhibit D, and described in the Preliminary Stormwater Memo, attached as Exhibit F. The stormwater will be conveyed to an outfall with an energy dissipator located in the WRA, as shown in the submitted plans.

2. *Public and private storm water detention, storm water treatment facilities and storm water outfall or energy dissipaters (e.g., rip rap) may encroach into the WRA if:*
   a. *Accepted engineering practice requires it;*
   b. *Encroachment on significant trees shall be avoided when possible, and any tree loss shall be consistent with the City's Tree Technical Manual and mitigated per CDC 32.090;*
   c. *There shall be no direct outfall into the water resource, and any resulting outfall shall not have an erosive effect on the WRA or diminish the stability of slopes; and*
   d. *There are no reasonable alternatives available.*
   A geotechnical report may be required to make the determination regarding slope stability.

RESPONSE:
This application proposes stormwater detention and filtration using an underground system that will be located beneath the parking lot. Stormwater will be conveyed to an outfall located in the WRA, as described above and demonstrated in the attached Stormwater Memo (Exhibit F) and Composite Utility Plan, Sheet P500 of Exhibit D. The proposed stormwater facilities reflect accepted engineering practices and West Linn utility design standards, minimize disturbance to the WRA and significant trees, and provide for

an outfall that is outside of the water resource. As such, this proposed design meets the provisions above.

3. *Roadside storm water conveyance swales and ditches may be extended within rights-of-way located in a WRA. When possible, they shall be located along the side of the road furthest from the water resource. If the conveyance facility must be located along the side of the road closest to the water resource, it shall be located as close to the road/sidewalk as possible and include habitat friendly design features (treatment train, rain gardens, etc.).*

RESPONSE:
No roadside stormwater conveyance is proposed through this application.

4. *Storm water detention and/or treatment facilities in the WRA shall be designed without permanent perimeter fencing and shall be landscaped with native vegetation.*

RESPONSE:
This application proposes an underground detention and treatment facility located beneath the proposed parking lot. Stormwater will be conveyed to an outfall located in the WRA. No permanent perimeter fencing is proposed, and the area of temporary disturbance for the installation of the conveyance pipe in the WRA will be landscaped with native vegetation per the proposed mitigation plan included in Exhibit E. For details, refer to the Composite Utility Plan, Sheet P500 of Exhibit D, and the Schott & Associates report mitigation plan, included in Exhibit E.

5. *Access to public storm water detention and/or treatment facilities shall be provided for maintenance purposes. Maintenance driveways shall be constructed to minimum width and use water permeable paving materials. Significant trees, including roots, shall not be disturbed to the degree possible. The encroachment and any tree loss shall be mitigated per CDC 32.090. There shall also be no adverse impacts upon the hydrologic conditions of the site.*

RESPONSE:
The proposed stormwater system is a proprietary system and will be maintained by the property owner.

6. *Storm detention and treatment and geologic hazards. Per the submittals required by CDC 32.050(F)(3) and 92.010(E), all proposed storm detention and treatment facilities must comply with the standards for the improvement of public and private drainage systems located in the West Linn Public Works Design Standards, there will be no adverse off-site impacts caused by the development (including impacts from increased intensity of runoff downstream or constrictions causing ponding upstream), and the applicant must provide sufficient factual data to support the conclusions of the submitted plan.*

RESPONSE: As shown in the submitted plans, Exhibit D, and detailed in the Preliminary Storm Memo, Exhibit F, the Applicant proposes stormwater detention and filtration using an underground system located beneath the parking lot. Stormwater will be conveyed to an outfall location outside of the water resource Ordinary High Water Line, as described above and depicted in the attached Stormwater Memo (Exhibit F) and Composite Utility Plan, Sheet P500 of Exhibit D. The facility is designed to West Linn Public Works Standards.

D. WRA width. Except for the exemptions in CDC 32.040, applications that are using the alternate review process of CDC 32.070, or as authorized by the approval authority consistent with the provisions of this chapter, all development is prohibited in the WRA as established in Table 32-2 below:

RESPONSE: Per *Table 32-2*, the existing resource on the subject site, Fern Creek, requires a 100-foot WRA buffer on each side, measured from the Ordinary High Water line. As noted above, the Applicant is requesting Alternate Review and has submitted a Natural Resources Assessment and Mitigation Plan, attached as Exhibit E, addressing the applicable criteria of *32.070*.

E. Per the submittals required by CDC 32.050(F)(4), the applicant must demonstrate that the proposed methods of rendering known or potential hazard sites safe for development, including proposed geotechnical remediation, are feasible and adequate to prevent landslides or other damage to property and safety. The review authority may impose conditions, including limits on type or intensity of land use, which it determines are necessary to mitigate known risks of landslides or property damage.

RESPONSE: The Applicant has submitted a geotechnical engineering report for the site, prepared by GeoPacific and attached as Exhibit J. The report concludes that with appropriate site preparation, construction of the proposed parking lot is feasible. See Exhibit J for details.

F. Roads, driveways and utilities.

1. New roads, driveways, or utilities shall avoid WRAs unless the applicant demonstrates that no other practical alternative exists. In that case, road design and construction techniques shall minimize impacts and disturbance to the WRA by the following methods: …

RESPONSE:

As demonstrated in the submitted plans, Exhibit D, no new roads or driveways are proposed. The Applicant proposes a private storm water line that will outfall to an energy dissipator located within the WRA. Installation of the pipe will result in temporary impact (138 sf) to the WRA. Permanent impact will include a small area (20 sf) where the outfall and energy dissipator are located, as depicted in the submitted plans.

G. Passive recreation. Low impact or passive outdoor recreation facilities for public use including, but not limited to, multi-use paths and trails, not exempted per CDC 32.040(B)(2), viewing platforms, historical or natural interpretive markers, and benches in the WRA, are subject to the following standards:

RESPONSE: No trails, bridges, viewing platforms or the like are proposed for public use within the WRA.

H. Daylighting Piped Streams.

1. As part of any application, covered or piped stream sections shown on the WRA Map are encouraged to be "daylighted" or opened. Once it is daylighted, the WRA will be limited to 15 feet on either side of the stream. Within that WRA, water quality measures are required which may include a storm water treatment system (e.g., vegetated bioswales), continuous vegetative ground cover (e.g., native grasses) at least 15 feet in width that provides year round efficacy, or a combination thereof.

...

RESPONSE: The water resource, Fern Creek, is not enclosed on the site.

I. The following habitat friendly development practices shall be incorporated into the design of any improvements or projects in the WRA to the degree possible:

1. Restore disturbed soils to original or higher level of porosity to regain infiltration and storm water storage capacity.

RESPONSE: Any soils temporarily disturbed will be restored to original condition.

...

11. Use shared driveways.

RESPONSE: The proposed access to the parking facility will be provided over the adjacent lot, which has access to Willamette Drive. No separate access from Walling Circle is proposed.

32.070 ALTERNATE REVIEW PROCESS

This section establishes a review and approval process that applicants can use when there is reason to believe that the width of the WRA prescribed under the standard process (CDC 32.060(D)) is larger than necessary to protect the functions of the water resource at a particular site. It allows a qualified professional to determine what water resources and associated functions (see Table 32-4 below) exist at a site and the WRA width that is needed to maintain those functions.

RESPONSE:

Schott & Associates, a natural resources consulting firm, conducted a wetland delineation and natural resource assessment for the subject site. Based on the results of the analysis of the site and proposed development, it was determined that the functions of the reduced WRA could be improved through mitigation to a significantly higher level than that of

existing functions. As such, the Applicant requests that this proposal be reviewed through the Alternate Review process of *Section 32.080*. Responses to the applicable provisions of that section are provided below and in the submitted Schott & Associates report, attached as Exhibit E.

32.080 APPROVAL CRITERIA (ALTERNATE REVIEW PROCESS)
Applications reviewed under the alternate review process shall meet the following approval criteria:

A. *The proposed WRA shall be, at minimum, qualitatively equal, in terms of maintaining the level of functions allowed by the WRA standards of CDC 32.060(D).*

RESPONSE: As described in the attached Natural Resources Assessment report prepared by Schott & Associates and attached as Exhibit E, with the proposed enhancement through the removal of invasives and planting of native plants, the proposed WRA will be, at minimum, qualitatively equal in terms of maintaining the level of functions allowed by the WRA standards of *Section 32.060(D)*.

B. *If a WRA is already significantly degraded (e.g., native forest and ground cover have been removed or the site dominated by invasive plants, debris, or development), the approval authority may allow a reduced WRA in exchange for mitigation, if:*

1. *The proposed reduction in WRA width, coupled with the proposed mitigation, would result in better performance of functions than the standard WRA without such mitigation. The approval authority shall make this determination based on the applicant's proposed mitigation plan and a comparative analysis of ecological functions under existing and enhanced conditions (see Table 32-4).*

RESPONSE: The attached Natural Resources Assessment report, attached as Exhibit E, provides a comparison of the WRA existing conditions and enhanced conditions and concludes that the proposed reduced WRA, along with mitigation, will result in significantly higher functions than the existing (standard) WRA without mitigation. See Exhibit E for details.

2. *The mitigation project shall include all of the following components as applicable. It may also include other forms of enhancement (mitigation) deemed appropriate by the approval authority.*

a. *Removal of invasive vegetation.*
b. *Planting native, non-invasive plants (at minimum, consistent with CDC 32.100) that provide improved filtration of sediment, excess nutrients, and pollutants. The amount of enhancement (mitigation) shall meet or exceed the standards of CDC 32.090(C).*
c. *Providing permanent improvements to the site hydrology that would improve water resource functions.*
d. *Substantial improvements to the aquatic and/or terrestrial habitat of the WRA.*

RESPONSE: A Natural Resources Assessment prepared by Schott & Associates is attached as Exhibit E. The report details enhancement measures proposed in the mitigation plan.

C. Identify and discuss site design and methods of development as they relate to WRA functions.

RESPONSE:
In response to the applicable provisions of *Section 32.080*, the Applicant has submitted a Natural Resource Assessment Report prepared by Schott & Associates, attached as Exhibit E. The report includes a wetland delineation and natural resource assessment of the subject site, documenting existing and proposed conditions within the Water Resource Area (WRA), as well as a mitigation plan that meets the requirements of *Sections 32.090 and 32.100.*

D. Address the approval criteria of CDC 32.060, with the exception of CDC 32.060(D).

RESPONSE: The narrative responses to the applicable provisions of *Section 32.060* are addressed above and in the attached Natural Resource Assessment prepared by Schott & Associates, attached as Exhibit E.

32.090 MITIGATION PLAN

A. A mitigation plan shall only be required if development is proposed within a WRA (including development of a PDA). (Exempted activities of CDC 32.040 do not require mitigation unless specifically stated. Temporarily disturbed areas, including TDAs associated with exempted activities, do not require mitigation, just grade and soil restoration and re-vegetation.) The mitigation plan shall satisfy all applicable provisions of CDC 32.100, Re-Vegetation Plan Requirements.

RESPONSE: A mitigation plan addressing the applicable provisions of *Section 32.100* is provided in the submitted Natural Resources Assessment and Mitigation Plan, attached as Exhibit E.

B. Mitigation shall take place in the following locations, according to the following priorities (subsections (B)(1) through (4) of this section):

1. On-site mitigation by restoring, creating or enhancing WRAs.

RESPONSE: As noted in the Mitigation Plan, included in Exhibit E, mitigation is proposed by enhancing onsite WRA.

...

C. Amount of mitigation.

1. The amount of mitigation shall be based on the square footage of the permanent disturbance area by the application. For every one square foot of non-PDA disturbed area, on-site mitigation shall require one square foot of WRA to be created, enhanced or restored.

2. For every one square foot of PDA that is disturbed, on-site mitigation shall require one half a square foot of WRA vegetation to be created, enhanced or restored.

RESPONSE: The Applicant has submitted a Mitigation Plan prepared by Schott & Associates, included in Exhibit E, that provides details and calculations of the proposed mitigation area based on the calculation method above.

...

E. A mitigation plan shall contain the following information:

1. A list of all responsible parties including, but not limited to, the owner, applicant, contractor, or other persons responsible for work on the development site.

RESPONSE: Refer to the attached mitigation plan, included in Exhibit E, for this information.

2. A map showing where the specific adverse impacts will occur and where the mitigation activities will occur.

RESPONSE: The submitted Preliminary Plans, attached as Exhibit D, illustrate the areas of impact and proposed mitigation. In addition, the submitted mitigation plan, included in Exhibit E, provides additional details regarding impacts and mitigation activities.

3. A re-vegetation plan for the area(s) to be mitigated that meets the standards of CDC 32.100.

RESPONSE: A re-vegetation plan is included in the Mitigation Plan, attached as Exhibit E.

4. An implementation schedule, including timeline for construction, mitigation, mitigation maintenance, monitoring, and reporting. All in-stream work in fish bearing streams shall be done in accordance with the Oregon Department of Fish and Wildlife.

RESPONSE: See the submitted Mitigation Plan, included in Exhibit E, for details on the implementation schedule in response to this provision.

5. Assurances shall be established to rectify any mitigation actions that are not successful within the first three years. This may include bonding or other surety.

RESPONSE: Refer to the Mitigation Plan, included in Exhibit E, for Schott & Associates' response to this provision.

32.100 RE-VEGETATION PLAN REQUIREMENTS

A. In order to achieve the goal of re-establishing forested canopy, native shrub and ground cover and to meet the mitigation requirements of CDC 32.090 and vegetative enhancement of CDC 32.080, tree and vegetation plantings are required according to the following standards:

1. All trees, shrubs and ground cover to be planted must be native plants selected from the Portland Plant List.

2. Plant size. Replacement trees must be at least one-half inch in caliper, measured at six inches above the ground level for field grown trees or above the soil line for container grown trees (the one-half inch minimum size may be an average caliper measure, recognizing that trees are not uniformly round), unless they are oak or madrone which may be one gallon size. Shrubs must be in at least a one-gallon container or the equivalent in ball and burlap and must be at least 12 inches in height.

3. Plant coverage.

a. Native trees and shrubs are required to be planted at a rate of five trees and 25 shrubs per every 500 square feet of disturbance area (calculated by dividing the number of square feet of disturbance area by 500, and then multiplying that result times five trees and 25 shrubs, and rounding all fractions to the nearest whole number of trees and shrubs; for example, if there will be 330 square feet of disturbance area, then 330 divided by 500 equals 0.66, and 0.66 times five equals 3.3, so three trees must be planted, and 0.66 times 25 equals 16.5, so 17 shrubs must be planted). Bare ground must be planted or seeded with native grasses or herbs. Non-native sterile wheat grass may also be planted or seeded, in equal or lesser proportion to the native grasses or herbs.

b. Trees shall be planted between eight and 12 feet on center and shrubs shall be planted between four and five feet on center, or clustered in single species groups of no more than four plants, with each cluster planted between eight and 10 feet on center. When planting near existing trees, the dripline of the existing tree shall be the starting point for plant spacing measurements.

4. Plant diversity. Shrubs must consist of at least two different species. If 10 trees or more are planted, then no more than 50 percent of the trees may be of the same genus.

5. Invasive vegetation. Invasive non-native or noxious vegetation must be removed within the mitigation area prior to planting.

6. Tree and shrub survival. A minimum survival rate of 80 percent of the trees and shrubs planted is expected by the third anniversary of the date that the mitigation planting is completed.

7. Monitoring and reporting. Monitoring of the mitigation site is the ongoing responsibility of the property owner. Plants that die must be replaced in kind.

8. To enhance survival of tree replacement and plantings, the following practices are required:

a. Mulching. Mulch new plantings a minimum of three inches in depth and 18 inches in diameter to retain moisture and discourage weed growth.

b. Irrigation. Water new plantings one inch per week between June 15th to October 15th, for the three years following planting.

c. Weed control. Remove, or control, non-native or noxious vegetation throughout maintenance period.

d. Planting season. Plant bare root trees between December 1st and February 28th, and potted plants between October 15th and April 30th.

e. Wildlife protection. Use plant sleeves or fencing to protect trees and shrubs against wildlife browsing and resulting damage to plants.

RESPONSE:
The Applicant acknowledges the above planting, monitoring and maintenance standards, which are addressed through the proposed WRA enhancement plan, detailed in the Schott & Associates report, attached as Exhibit E.

B. When weather or other conditions prohibit planting according to schedule, the applicant shall ensure that disturbed areas are correctly protected with erosion control measures and shall provide the City with funds in the amount of 125 percent of a bid from a recognized landscaper or nursery which will cover the cost of the plant materials, installation and any follow up maintenance. Once the planting conditions are favorable the applicant shall proceed with the plantings and receive the funds back from the City upon completion, or the City will complete the plantings using those funds.

RESPONSE:
The Applicant acknowledges this provision. A planting schedule is included in the submitted Mitigation Plan, included in Exhibit E.

34.060 SETBACK PROVISIONS FOR ACCESSORY STRUCTURES (NON-DWELLING)

A. Accessory structures shall comply with all requirements for the principal use except as provided in CDC 34.040 and where specifically modified by this code as follows.

B. A side yard or rear yard requirement may be reduced to three feet for an accessory structure except for a side or rear yard abutting a street, with the exception of alleys platted and dedicated prior to September 30, 1984, as defined in this code; provided, that:

1. The structure is erected more than 60 feet from the front lot line;
2. The structure does not exceed one story or 15 feet in height;
3. The structure does not exceed an area of 500 square feet; and
4. The structure does not violate any existing utility easements.

RESPONSE:
The Applicant proposes to include an accessory structure on the parking facility site for storage of maintenance equipment and supplies. As shown on the Site Plan in Exhibit D, the proposed storage structure is located approximately 125 feet from the site's front lot line at Walling Circle, and approximately 11.5 feet from the west property line. The height of the structure is planned to be approximately 10' feet, and the structure area will not exceed the 500 sq.ft. limit. No utility easements are located within the area proposed for the accessory structure.

C. Attached accessory structures. When an accessory structure is attached to the main structure (wall to wall or by any permanent attachment), including via a covered walkway, such accessory structure shall be considered as part of the main structure. (Ord. 1604 § 38, 2011; Ord. 1742 § 1 (Exh. A), 2023)

RESPONSE:
The proposed accessory structure is not attached to any other structure.

CHAPTER 46 OFF-STREET PARKING, LOADING AND RESERVOIR AREAS
46.020 APPLICABILITY AND GENERAL PROVISIONS

46.030 SUBMITTAL REQUIREMENTS

For any application requiring design review approval, which includes parking areas, the applicant shall submit, within the design review package, a plan drawn to scale showing all the elements necessary to indicate that the requirements of Chapter 55 CDC are met and it shall include but not be limited to:

A. The delineation of individual parking and loading spaces and their dimensions;
B. The identification of compact parking spaces;
C. The location of the circulation area necessary to serve spaces;
D. The access point(s) to streets, alleys, and properties to be served;
E. The location of curb cuts;

RESPONSE:
In response to *46.030.A* through *E*, above, the Applicant has submitted a Site Plan, included in Exhibit D, that identifies parking spaces and dimensions, access points, and circulation areas. All parking spaces will be of standard size and no new curb cuts are planned, as access will be provided over an adjacent developed property and not directly from the public right-of-way.

F. The location and dimensions of all landscaping, including the type and size of plant material to be used, as well as any other landscape material incorporated into the overall plan;

RESPONSE:

Refer to the Applicant's responses to Chapter 54, below. In addition, a Landscape Plan is attached as Exhibit P700.

G. The proposed grading and drainage plans and the slope (percentage) of parking lot;

RESPONSE:

Refer to the attached Grading Plan, Sheet P400 of Exhibit D.

H. Specifications as to signs and bumper guards;

RESPONSE:

A sign meeting ADA requirements will be provided for the proposed ADA parking space.

I. Identification of disabled parking spaces;

RESPONSE:

The proposed site plan indicates the location of the accessible parking space; see Exhibit D, Sheet P300.

J. Location of pedestrian walkways and crossings;

RESPONSE:

As demonstrated in the submitted Site Plan included in Exhibit D, pedestrian access is provided over the patio to the surrounding area. Due to the presence of the WRA, no direct pedestrian access to Walling Circle is proposed.

K. Location of bicycle racks;

RESPONSE:

A bike rack is provided on the proposed patio, as shown on the attached Site Plan, Sheet P300 of Exhibit D.

L. A tree canopy plan developed in coordination with the local electric utility, including pre-design, design, and building and maintenance phases that includes:

1. *Confirmation, such as a signature or email, from electric utility showing they reviewed and support the plan.*
2. *Site plan depicting canopy coverage at maturity to meet CDC 46.150(F).*
3. *Planting specifications to meet CDC 46.150(F).*
4. *Narrative responses to show compliance with CDC 46.150(F); and*

RESPONSE:

Figure 3 included in the Natural Resource Assessment Report, attached as Exhibit E, provides information on canopy coverage of the site. The proposed parking area, including parking spaces, maneuvering areas and drive aisle, does not exceed one-half acre, therefore, the requirements of *46.150(F)* are not applicable to this application.

M. Narrative responses and site plan depicting location of required electric vehicle charging conduit per CDC 46.150(G).

RESPONSE:

As this proposal does not include construction of new commercial, multi-family or mixed-use buildings, this provision is not applicable.

46.070 MAXIMUM DISTANCE ALLOWED BETWEEN PARKING AREA AND USE

...

B. Parking areas must provide the following, wherever applicable:

...

3. All disabled parking shall be placed closest to building entrances than all other parking. Appropriate ADA curb cuts and ramps to go from the parking lot to the ADA-accessible entrance shall be provided unless exempted by ADA code.

RESPONSE:

As shown on the submitted Site Plan, included in Exhibit D, one ADA parking space is provided adjacent to the proposed patio which provides a connection to the adjacent pedestrian circulation system on the adjacent property and the surrounding area.

46.150 DESIGN AND IMPROVEMENT STANDARDS

A. Design standards.

1. "One standard parking space" means a minimum for a parking stall of eight feet in width and 16 feet in length. These stalls shall be identified as "compact." To accommodate larger cars, 50 percent of the parking spaces shall have a minimum dimension of nine feet in width and 18 feet in length (nine feet by 18 feet). When multifamily parking stalls back onto a driveway, as opposed to a drive aisle within a parking lot, the stalls shall be nine feet by 20 feet. Parking for development in water resource areas may have 100 percent compact spaces.

RESPONSE:

This application proposes 19 standard and one ADA parking spaces within the parking facility, as shown on the submitted Site Plan, included in Exhibit D.

2. Disabled parking and maneuvering spaces shall be consistent with current federal dimensional standards and subsection B of this section and placed nearest to accessible building entryways and ramps.

RESPONSE:

As shown on the submitted Site Plan, included in Exhibit D, one ADA parking space is provided adjacent to the proposed patio which provides a connection to the pedestrian circulation system on the adjacent property and the surrounding area.

...

4. *Service drives for non-residential development shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site.*

RESPONSE:
As shown on the Site Plan in Exhibit D, the access drive and 24'-wide parking facility circulation aisle are designed to meet all requirements and facilitate safe access and egress for pedestrians and vehicular traffic.

5. *Each parking and/or loading space shall have clear access, whereby the relocation of other vehicles to utilize the parking space is not required, except where stacked parking is permitted pursuant to CDC 46.070(B)(4) or 46.090(A).*

RESPONSE:
All parking spaces will have clear access, as demonstrated in the submitted plans.

6. *Except for single-family attached and detached residences, any area intended to be used for off-street parking as contained in this chapter shall have all parking spaces clearly marked using a permanent paint. All interior drives and access aisles shall be clearly marked and signed to show direction of flow and maintain vehicular and pedestrian safety. Permeable parking surface spaces may have an alternative delineation for parking spaces.*

RESPONSE:
Parking spaces will be marked with permanent paint; the access aisle will be marked as needed to indicate the two-way flow of circulation. This provision is satisfied.

7. *Except for residential parking, and parking for public parks and trailheads, at least 50 percent of all areas used for the parking and/or storage and/or maneuvering of any vehicle, boat and/or trailer shall be improved with asphalt or concrete surfaces according to the same standards required for the construction and acceptance of City streets. The remainder of the areas used for parking may use a permeable paving surface designed to reduce surface runoff. Parking for public parks or trailheads may use a permeable paving surface designed to reduce surface runoff for all parking areas. Where a parking lot contains both paved and unpaved areas, the paved areas shall be located closest to the use which they serve.*

RESPONSE:
The proposed parking areas and access aisle will be improved with an asphalt surface, per the applicable construction standards.

...

9. *Access drives from the street to off-street parking or loading areas for non-residential development shall be designed and constructed to facilitate the flow of traffic and provide maximum safety for pedestrian and vehicular traffic on the site. The number of*

access drives shall be limited to the minimum that will allow the property to accommodate and service the anticipated traffic. Access drives for all development shall be clearly and permanently marked and defined through use of rails, fences, walls, or other barriers or markers on frontage not occupied by service drives.

RESPONSE:

The proposed parking facility will be accessed via an existing access drive through an adjacent commercial property that has frontage on Willamette Drive. No other street access is proposed.

10. *Access drives shall have a minimum vision clearance as provided in Chapter 42 CDC, Clear Vision Areas.*

RESPONSE:

The proposed parking facility will be accessed via an existing access drive on an adjacent property with frontage on Willamette Drive.

11. *Parking spaces along the boundaries of a parking lot or adjacent to interior landscaped areas or sidewalks shall be provided with a wheel stop at least four inches high located two feet back from the front of the parking stall. Such parking spaces may be provided without wheel stops if the sidewalks or landscaped areas adjacent the parking stalls are two feet wider than the minimum width.*

RESPONSE:

The proposed parking spaces will be provided with appropriate wheel stops. This provision is met.

12. *Off-street parking and loading areas shall be drained in accordance with City of West Linn Public Works Design Standards. Storm drainage at commercial sites may also have to be collected to treat oils and other residue.*

RESPONSE:

As shown in the submitted Composite Utility Plan, the Applicant proposes on-site stormwater detention and filtration using an underground system located beneath the parking lot. Stormwater will be conveyed to an outfall location in the reduced WRA, as described in the attached Stormwater Memo (Exhibit F) and depicted in the Composite Utility Plan, Sheet P500 of Exhibit D. The facility is designed to West Linn Public Works Standards.

13. *Artificial lighting on all off-street parking facilities shall be concealed or shielded with an Illuminating Engineering Society of North America (IESNA) full cut-off style fixture with an angle not exceeding 90 degrees to minimize the potential for glare and unnecessary diffusion on adjacent property and so as not to create a hazard to the public use of any road or street. Examples of shielded light fixtures are shown below....*

RESPONSE:
Lighting provided in the proposed parking facility will be shielded to minimize potential for glare. A lighting plan and fixture specifications are attached as Exhibit K.

14. *Directional arrows and traffic control devices which are placed on parking lots shall be identified.*

RESPONSE:
The circulation aisle is proposed to be 24' wide to accommodate two-way traffic on the site. Directional arrows will be provided to guide circulation.

15. *The maximum driveway grade for single-family housing shall be 15 percent. The 15 percent shall be measured along the centerline of the driveway only. Grades elsewhere along the driveway shall not apply. Variations require approval of a Class II variance by the Planning Commission pursuant to Chapter 75 CDC. Regardless, the last 18 feet in front of the garage must maintain a maximum grade of 12 percent as measured along the centerline of the driveway only. Grades elsewhere along the driveway shall not apply.*

RESPONSE:
This application does not propose a single-family home. This provision is not applicable to this application.

16. *Visitor or guest parking must be identified by painted "GUEST" or "VISITOR."*

RESPONSE:
This provision is not applicable to this application for private parking.

17. *Parking spaces shall have less than a five percent grade. No drainage across adjacent sidewalks or walkways is allowed.*

RESPONSE:
As demonstrated in the submitted Grading Plan, Sheet P400 of Exhibit D, the proposed parking spaces will not exceed the allowed grade. No drainage across adjacent sidewalks or walkways is proposed. The attached Composite Utility Plan, Sheet P500 of Exhibit D, demonstrates the proposed stormwater management.

18. *Commercial, office, industrial, and public parking lots may not occupy more than 50 percent of the main lot frontage of a development site. The remaining frontage shall comprise buildings or landscaping. If over 50 percent of the lineal frontage comprises parking lot, the landscape strip between the right-of-way and parking lot shall be increased to 15 feet wide and shall include terrain variations (e.g., one-foot-high berm) plus landscaping. The defensible space of the parking lot should not be compromised.*

RESPONSE:
As demonstrated on the submitted Site Plan included in Exhibit D, the proposed parking facility has no frontage on Willamette Drive and will be accessed via a drive aisle through

an existing commercial development on an adjacent lot with Willamette Drive frontage. The proposed parking facility is located a minimum of 90 feet from the site's Walling Circle frontage. The area between the parking facility and Walling Circle is within the WRA and will be enhanced through the proposed mitigation, as outlined in the Schott & Associates report, attached as Exhibit E.

19. *Areas of the parking lot improved with asphalt or concrete surfaces shall be designed into areas of 12 or less spaces through the use of defined landscaped area. ...Groups of 12 or less spaces are defined as:*

a. *Twelve spaces in a row, provided there are no abutting parking spaces, as in the case when the spaces are abutting the perimeter of the lot; or*

RESPONSE:
The proposed configuration of parking spaces includes two rows of ten parking spaces each abutting the perimeter of the lot.

b. *Twelve spaces in a group with six spaces abutting together; or*
c. *Two groups of 12 spaces abutting each other, but separated by a 15-foot-wide landscape area including a six-foot-wide walkway.*
d. *Parking areas improved with a permeable parking surface may be designed using the configurations shown in subsections (A)(19)(a), (b) and (c) of this section except that groups of up to 18 spaces are allowed.*

RESPONSE:
As demonstrated in the submitted site plan, the proposed parking does not represent the configurations in subsections (b) and (c), above. No permeable parking is proposed through this application.

e. *The requirements of this chapter relating to total parking lot landscaping, landscaping buffers, perimeter landscaping, and landscaping the parking lot islands and interior may be waived or reduced pursuant to CDC 32.110(F) in a WRA application without a variance being required.*

RESPONSE:
This provision is not applicable to this application.

20. *Pedestrian connections through parking areas.*

a. *Pedestrian walkways shall be provided in parking areas that are larger than one-half acre. The pedestrian walkways or sidewalks should provide access to building entrances, existing or planned pedestrian facilities in the public right-of-way, and to accessible parking spaces.*
b. *Walkways or sidewalks shall be constructed through parking lots where such parking lots lie between major buildings/activity areas (an example in multifamily housing: between recreation center, swimming pool, manager's office, park or open space areas, parking lots, etc.) within a development and adjacent streets or adjacent transit stops.*

The walkways or sidewalks should also provide access to building entrances, existing or planned pedestrian facilities in the public rights-of-way, and to accessible parking spaces.

RESPONSE:
In response to *46.150(A)(20)(a)* and *(b),* as demonstrated in the submitted plans attached as Exhibit D, the proposed parking facility is less than one-half acre in size and the proposed facility does not lie between activity areas and accessible streets or adjacent transit stops. As such, the proposed project is not required to provide a walkway through the parking lot. As shown on the submitted Site Plan, included in Exhibit D, access to the surrounding area is provided over the patio.

c. Walkways through parking lots shall be constructed using a material that visually contrasts with the parking lot and driveway surface and that may have a contrasting surface texture (surface texture shall not interfere with safe use of wheelchairs, baby carriages, shopping carts, etc.). Walkways shall be physically separated from adjacent vehicle parking and parallel vehicle traffic through the use of grade separation, walls, curbs, and/or landscaping.
d. Walkways shall be a minimum of six feet wide.
RESPONSE:
As shown on the submitted Site Plan, included in Exhibit D, pedestrian access is provided over the patio to connect with the surrounding area. The patio will be constructed using a material that provides contrast from the asphalt paving in the parking lot.

21. Parking and circulation patterns shall be easily comprehended and defined. The patterns shall be clear to minimize traffic hazards and congestion and to facilitate emergency vehicles. Residential developments which are exempt from design review or subject to only clear and objective design review are not required to comply with this design standard.

RESPONSE:
As demonstrated in the submitted plans, the proposed 20-space parking facility is designed to be easily navigated via a 24'-wide drive aisle providing ingress and egress to the parking facility.

22. Parking spaces for residential development subject to clear and objective review shall be provided on the same lot. Parking spaces for non-residential development or for residential development subject to discretionary review shall be close to the related use.

RESPONSE:
This application proposes a parking facility which is a permitted use in the GC zone. As such, the facility is not directly associated with another use.

23. Permeable parking spaces shall be designed and built in compliance with the West Linn Public Works Design Standards.

RESPONSE:
No permeable paving is proposed through this application.

B. Accessible parking standards for persons with disabilities. If any parking is provided for the public or visitors, or both, the needs of the people with disabilities shall be based upon the following standards or current applicable federal standards, whichever are more stringent:

1. Minimum number of accessible parking space requirements (see following table):

RESPONSE:
The proposed parking lot will include one accessible parking space per the requirements of *46.150(B)(1)*, as shown on the submitted site plan included in Exhibit D.

2. Location of parking spaces. Parking spaces for the individual with a disability that serve a particular building shall be located on the shortest possible accessible circulation route to an accessible entrance to a building. In separate parking structures or lots that do not serve a particular building, parking spaces for the persons with disabilities shall be located on the shortest possible circulation route to an accessible pedestrian entrance of the parking facility.

3. Accessible parking space and aisle shall meet ADA vertical and horizontal slope standards.

4. Where any differences exist between this section and current Federal standards, those Federal standards shall prevail over this code section.

5. One in every eight accessible spaces, but not less than one, shall be served by an access aisle 96 inches wide.

6. Van-accessible parking spaces shall have an additional sign marked "Van Accessible" mounted below the accessible parking sign. A van-accessible parking space reserved for wheelchair users shall have a sign that includes the words "Wheelchair Use Only." Van-accessible parking shall have an adjacent eight-foot-wide aisle. All other accessible stalls shall have a six-foot-wide aisle. Two vehicles may share the same aisle if it is between them. The vertical clearance of the van space shall be 96 inches.

RESPONSE:
As demonstrated on the submitted Site Plan, Sheet P300 of Exhibit D, the proposed parking lot includes one accessible parking space. The space is located and designed to meet all ADA standards and the criteria of this provision.

C. Landscaping in parking areas. Reference Chapter 54 CDC, Landscaping.

RESPONSE:
Refer to the Applicant's responses to applicable standards of Chapter 54.

D. Bicycle facilities and parking.

1. Provisions shall be made for pedestrian and bicycle ways if such facilities are identified on pages 24-26 of the West Linn Transportation System Plan or in the 2013 West Linn Trails Plan.

....

RESPONSE:
No bicycle or pedestrian facilities are identified for the subject site on the City's TSP or Trails Plan.

E. Minimum Standards For Parking Lot Layout

RESPONSE: As demonstrated in the Site Plan, included in Exhibit D, the parking facility layout conforms to the standards of this provision. Standard parking spaces 9' by 18' in size will be arranged at 90 degree angles in two rows.

CHAPTER 48 ACCESS, EGRESS AND CIRCULATION
48.010 PURPOSE
48.020 APPLICABILITY AND GENERAL PROVISIONS

48.025 ACCESS CONTROL

1. Traffic impact analysis requirements. A traffic analysis prepared by a qualified professional may be required to determine access, circulation and other transportation requirements. The purpose, applicability and standards of this analysis are found in CDC 85.170(B)(2).

RESPONSE:
Per the Applicant's response to *55.125*, below, the threshold for requirement of a traffic impact analysis is not met for this application.

2. In order to comply with the access standards in this chapter, the City or other agency with access permit jurisdiction may require the closing or consolidation of existing curb cuts or other vehicle access points, recording of reciprocal access easements (i.e., for shared driveways), development of a frontage street, installation of traffic control devices, and/or other mitigation as a condition of granting an access permit. Access to and from off-street parking areas shall not permit backing onto a public street.

RESPONSE:
As the project site is located off-street and will be accessed via an existing driveway through an adjacent existing development, the Applicant does not propose to add or remove any existing curb cuts or driveway access points. The Applicant acknowledges that provisions of this section may be determined to be applicable.

3. *Access options. When vehicle access is required for development (i.e., for off-street parking, delivery, service, drive-through facilities, etc.), access shall be provided from a public street adjacent to the development lot or parcel. Street accesses shall comply with access spacing standards in subsection (B)(6) of this section, the West Linn Public Works Design Standards, and TSP. As an alternative, the applicant may request alternative access provisions listed below as Option 1 and Option 2, subject to approval by the City Engineer through a discretionary process.*

a) *Option 1. Access is from an existing or proposed alley or mid-block lane. If a property has access to an alley or lane, direct access to a public street is not permitted. For the purpose of this subsection, a mid-block lane is a narrow private drive providing lot frontage and access for rear lot development.*

b) *Option 2. Access is from a private street or driveway connected to an adjoining property that has direct access to a public street (i.e., "shared driveway"). A public access easement covering the driveway shall be recorded in this case to ensure access to the closest public street for all users of the private street/drive.*

RESPONSE:
As the project site is located off-street and will be accessed via an existing driveway through the adjacent property, the Applicant does not propose to add or remove any existing curb cuts or driveway access points. The Applicant acknowledges that provisions of this section may be determined to be applicable.

4. *Subdivisions fronting onto an arterial street.*

RESPONSE:
The proposed project is not a subdivision. This provision is not applicable.

5. *Double-frontage lots. When a lot or parcel has frontage onto two or more streets, access shall be provided first from the street with the lowest classification. For example, access shall be provided from a local street before a collector or arterial street.*

RESPONSE:
The subject property is not a double-frontage lot. This provision is not applicable.

6. *Access spacing.*

a. *The access spacing standards found in Tables 14 and 15 of the TSP and in CDC 48.060 shall be applicable to all newly established public street intersections, non-traversable medians, and curb cuts. Deviation from the access spacing standards may be granted by the City Engineer as part of a discretionary review if the applicant demonstrates that the deviation will not compromise the safe and efficient operation of the street and highway system.*

b. *Private drives and other access ways are subject to the requirements of CDC 48.060.*

RESPONSE: No new curb cuts or access points are proposed through this application. The proposed parking facility will be accessed via an existing driveway on an adjacent commercial property.

7. *Number of access points. For single-family (detached and attached) housing types, one street access point is permitted per lot or parcel when alley access cannot otherwise be provided; except that two access points may be permitted corner lots (i.e., no more than one access per street), subject to the access spacing standards in CDC 48.060. The number of street access points for multiple family development is subject to the access spacing standards in CDC 48.060. The number of street access points for commercial, industrial, and public/institutional developments shall be minimized to protect the function, safety and operation of the street(s) and sidewalk(s) for all users. Shared access may be required, in conformance with subsection (C)(8) of this section, in order to maintain the required access spacing, and minimize the number of access points.*

RESPONSE: No new curb cuts or access points are proposed through this application. The proposed parking facility will be accessed via an existing driveway on an adjacent commercial property.

8. *Shared driveways. For residential development, shared driveways may be required in order to meet the access spacing standards in subsection (C)(6) of this section. For non-residential development, the number of driveway and private street intersections with public streets shall be minimized by the use of shared driveways with adjoining lots where feasible. The City shall require shared driveways as a condition of land division or site design review, as applicable, for traffic safety and access management purposes in accordance with the following standards:*

a. *When necessary pursuant to this subsection (C)(8), shared driveways and/or frontage streets shall be required to consolidate access onto a collector or arterial street. When shared driveways or frontage streets are required, they shall be stubbed to adjacent developable parcels to indicate future extension. "Stub" means that a driveway or street temporarily ends at the property line, but may be extended in the future as the adjacent lot or parcel develops. "Developable" means that a lot or parcel is either vacant or it is likely to receive additional development (i.e., due to infill or redevelopment potential).*
b. *Access easements (i.e., for the benefit of affected properties) shall be recorded for all shared driveways, including pathways, at the time of final plat approval or as a condition of site development approval.*

RESPONSE:
The proposed parking facility will be located off-street and will be accessed via an existing driveway through the adjacent commercial property. The Applicant acknowledges that provisions of this section may be determined to be applicable.

...

48.040 MINIMUM VEHICLE REQUIREMENTS FOR NON-RESIDENTIAL USES

Access, egress, and circulation system for all non-residential uses shall not be less than the following:

A. Service drives for non-residential uses shall be fully improved with hard surface pavement:

1. With a minimum of 24-foot width when accommodating two-way traffic; or

2. With a minimum of 15-foot width when accommodating one-way traffic. Horizontal clearance shall be two and one-half feet wide on either side of the driveway.

3. Meet the requirements of CDC 48.030(E)(3) through (6):

3. Minimum vertical clearance of 13 feet, six inches.

4. Turnaround facilities as required by TVF&R standards for emergency vehicles when the drive is over 150 feet long. Fire Department turnaround areas shall not exceed seven percent grade unless waived by TVF&R.

5. The grade shall not exceed 10 percent on average, with a maximum of 15 percent.

6. A minimum centerline turning radius of 45 feet for the curve.

4. Pickup window driveways may be 12 feet wide unless the Fire Chief determines additional width is required.

RESPONSE:

As demonstrated on the submitted plans, Exhibit D, circulation within the parking facility will be provided by a 24' drive aisle and the proposed parking facility meets the requirements of this section. A Service Provider Letter from Tualatin Valley Fire & Rescue is attached as Exhibit I. The applicable provisions of this subsection are met.

B. All non-residential uses shall be served by one or more service drives as determined necessary to provide convenient and safe access to the property and designed according to CDC 48.030(A). In no case shall the design of the service drive or drives require or facilitate the backward movement or other maneuvering of a vehicle within a street, other than an alley.

RESPONSE: As shown on the submitted plans, attached as Exhibit D, backward movement or other maneuvering into a street will not be required for vehicle use of the proposed parking facility.

C. All on-site maneuvering and/or access drives shall be maintained pursuant to CDC 46.130.

RESPONSE:

This application proposes a private parking facility for standard vehicles. No delivery truck loading or maneuvering will be required. This provision is not applicable.

D. Gated accessways to non-residential uses are prohibited unless required for public safety or security.

RESPONSE:

The application does not propose a gated accessway. This provision is not applicable.

CHAPTER 54 LANDSCAPING

54.020 APPROVAL CRITERIA

A. *Tree preservation.*

1. *Intent and guidance. In designing the new project, every reasonable attempt should be made to preserve and protect existing trees and to incorporate them into the new landscape plan. Similarly, significant landscaping (e.g., bushes, shrubs) should be integrated. The rationale is that saving a 30-foot-tall mature tree helps maintain the continuity of the site, they are qualitatively superior to two or three two-inch caliper street trees, they provide immediate microclimate benefits (e.g., shade), they soften views of the street, and they can increase the attractiveness, marketability, and value of the development.*

2. *Inventory required. Every development proposal shall submit an inventory of existing site conditions, which includes significant trees and heritage trees.*

RESPONSE:
This application includes a Tree Inventory and Assessment Report prepared by Todd Prager & Associates and attached as Exhibit G. No heritage trees were identified on the site. The Tree Inventory Table and Map in the report identify trees to be retained and trees to be removed.

…

4. *Developers must also comply with the municipal code chapter on tree protection and, if applicable, with CDC 55.100(B) or 55.105(B).*

RESPONSE: This application complies with the applicable provisions of *Section 55.100,* as discussed in this narrative, below.

5. *Heritage trees. Heritage trees are trees which, because of their age, type, notability, or historical association, are of special importance. Heritage trees are trees designated by the City Council following review of a nomination. A heritage tree may not be removed without a public hearing at least 30 days prior to the proposed date of removal. Development proposals involving land with heritage tree(s) shall be required to protect and save the tree(s). Further discussion of heritage trees is found in the municipal code.*

RESPONSE: No heritage trees were identified on the site by the Arborist.

B. *Landscaping – By type, location and amount.*

…

2. *Non-residential uses. A minimum of 20 percent of the gross site area shall be landscaped. Parking lot landscaping may be counted in the percentage.*

RESPONSE:
As demonstrated on the submitted Landscape Plan, Sheet P700 of Exhibit D, the Applicant has designed the proposed improvements to have minimal impact to the WRA.

- **The portion of the site that represents the reduced WRA (see Exhibit E) accounts for 12,092 sq.ft., or 47.4 percent of the development site. The reduced WRA will be enhanced through invasive removal and native plantings, as described in the Natural Resource Assessment and Mitigation Plan, attached as Exhibit E.**

- **On the remaining approximately 13,400 sq.ft. of the development site outside of the WRA, the Applicant proposes landscaping for all areas that are not improved. Landscaped area of approximately 3,490 sq.ft. accounts for 26 percent the area outside of the reduced WRA.**

- **Taken together, landscaping and enhanced WRA account for 61 percent of the gross site area.**

Therefore, this provision is met.

3. Parking area landscaping – All uses (residential uses (non-single-family) and non-residential uses):

a. There shall be one shade tree planted for every eight parking spaces, except as required under subsection (B)(3)(d) of this section. Shade trees are defined as medium to large trees with a canopy, at maturity, at least 40 feet in diameter. These trees shall be evenly distributed throughout the parking lot to provide shade.

RESPONSE:
The Landscape Plan proposes trees located along the west perimeter of the site and in the area south of the patio that is outside of the proposed WRA, as shown in attached Exhibit D. A total of five new Pacific Dogwood trees are proposed for the site, exceeding the requirement of three trees for a 20-space parking lot.

b. Parking lots with over 20 spaces shall have a minimum 10 percent of the interior of the parking lot devoted to landscaping. Pedestrian walkways in the landscaped areas are not to be counted in the percentage. The perimeter landscaping, as provided in subsection (B)(3)(h) of this section, shall not be included in the 10 percent figure.

RESPONSE: The proposed facility will provide 20 parking spaces. This provision is not applicable.

c. Parking lots with 10 to 20 spaces shall have a minimum five percent of the interior of the parking lot devoted to landscaping. The perimeter landscaping, as provided in subsection (B)(3)(h) of this section, shall not be included in the five percent.

RESPONSE: The proposed improvements have been designed to minimize impacts on the WRA. As such, interior landscaping includes planted areas inside of the 5' perimeter landscaping along the western edge of the parking lot, the northwest corner, south of the patio, and within the island near the driveway entrance, accounting for 16.6 percent of the development area outside of the WRA.

d. Parking lots with fewer than 10 spaces shall have perimeter landscaping, if required under subsection (B)(3)(h) of this section, and at least two shade trees.

RESPONSE: The proposed parking includes 20 spaces. This provision is not applicable.

e. Non-residential parking areas paved with a permeable parking surface may reduce the required minimum interior landscaping by one-third for the area with the permeable parking surface only.

RESPONSE: No permeable parking is proposed through this application. This provision is not applicable.

f. The landscaped areas shall not have a width of less than five feet and shall be uniformly distributed throughout the parking or loading area.

RESPONSE:
As shown on the submitted Landscape Plan, Sheet P700 of Exhibit D, the width of landscaped areas meets or exceeds the 5-ft. minimum.

g. The soils, site, proposed soil amendments, and proposed irrigation system shall be appropriate for the healthy and long-term maintenance of the proposed plant species.

RESPONSE:
Applicant acknowledges these provisions.

h. A parking, loading, or service area which abuts a street shall be set back from the right-of-way line by perimeter landscaping in the form of a landscaped strip at least 10 feet in width. When a parking, loading, or service area or driveway is contiguous to an adjoining lot or parcel, there shall be an intervening five-foot-wide landscape strip. The landscaped area shall contain:

1) Trees spaced as appropriate to the species, not to exceed 30 feet apart on center, on the average;

2) Shrubs, not to reach a height greater than three feet, six inches, spaced no more than five feet apart on the average; and

3) Vegetative ground cover such as grass, wildflowers, or other landscape material to cover 100 percent of the exposed ground within two growing seasons. No bark mulch shall be allowed except under the canopy of low level shrubs.

RESPONSE:
The proposed parking facility is located a minimum distance of approximately 89 feet from Walling Circle. As shown on the attached Landscaped Plan, Sheet P700 of Exhibit D, the majority of the northeast property line shared with the adjacent lot is proposed to have 5'

of perimeter landscaping or is within the WRA, which will be enhanced with native plants. The landscaped perimeter is proposed to be planted with shrubs and ground cover, with one tree planted south of the patio. Along the west property line, perimeter landscaping and other landscaped areas will be planted with four trees, shrubs and groundcover. The parking facility is located over 45' from the adjacent property to the south, with that portion of the site to be enhanced WRA. This provision is met.

i. If over 50 percent of the lineal frontage of the main street or arterial adjacent to the development site comprises parking lot, the landscape strip between the right-of-way and parking lot shall be increased to 15 feet in width and shall include terrain variations (e.g., one-foot-high berm) plus landscaping. This extra requirement only applies to one street frontage.

RESPONSE:
This provision is not applicable to the proposal—the parking area is not adjacent to the street.

j. All areas in a parking lot not used for parking, maneuvering, or circulation shall be landscaped.

RESPONSE:
As shown on the Site Plan included in Exhibit D, areas outside of the parking and circulation area, including the northwest corner of the site, the area along the western property line between parking and adjacent properties, a landscape island north of the east row of parking adjacent to the parking entrance, and the area south of the patio, will be landscaped.

k. The landscaping in parking areas shall maintain minimum vision clearance as provided in Chapter 42 CDC, Clear Vision Areas.

RESPONSE:
Vision clearance will be maintained per the requirements of *Chapter 42.*

...

D. Landscaping requirements in water resource areas (WRAs). Pursuant to CDC 32.110(E)(3) the requirements of this chapter relating to total site landscaping, landscaping buffers, landscaping around parking lots, and landscaping the parking lot interior may be waived or reduced in a WRA application without a variance being required.

RESPONSE:
This application is not requesting review under the hardship provisions of *CDC 32.110.*

CHAPTER 55 DESIGN REVIEW
55.070 SUBMITTAL REQUIREMENTS

RESPONSE:
The Applicant has submitted an application that includes applicable required components for the requested Class II Design Review and WRA Permit, including: application form, pre-application conference notes, preliminary plan set, Natural Resource Assessment and Mitigation Plan, Arborist Tree Assessment and Inventory Report, Stormwater Memo, Lighting Plan, and Tualatin Valley Fire & Rescue SPL, accessory building plans and materials samples, the required fee, and this narrative which addresses applicable approval criteria.

55.100 APPROVAL STANDARDS – CLASS II DESIGN REVIEW – GENERAL/DISCRETIONARY

A. *The provisions of the following chapters shall be met…*

RESPONSE:
All applicable chapters of the West Linn *Community Development Code* have been addressed herein and in the attached plans, reports and exhibits. This provision has been met.

B. *Relationship to the natural and physical environment.*

1. *The buildings and other site elements shall be designed and located so that all heritage trees, as defined in the municipal code, shall be saved. Diseased heritage trees, as determined by the City Arborist, may be removed at their direction.*

RESPONSE:
A tree inventory and assessment completed by Todd Prager & Associates is attached as Exhibit G. No heritage trees were identified on the site.

2. *All heritage trees, as defined in the municipal code, all trees and clusters of trees ("cluster" is defined as three or more trees with overlapping driplines; however, native oaks need not have an overlapping dripline) that are considered significant by the City Arborist, either individually or in consultation with certified arborists or similarly qualified professionals, based on accepted arboricultural standards including consideration of their size, type, location, health, long term survivability, and/or numbers, shall be protected pursuant to the criteria of subsections (B)(2)(a) through (f) of this section. In cases where there is a difference of opinion on the significance of a tree or tree cluster, the City Arborist's findings shall prevail. It is important to acknowledge that all trees are not significant and, further, that this code section will not necessarily protect all trees deemed significant.*

…

RESPONSE: No heritage trees were identified on the site. The submitted Arborist Report, attached as Exhibit G, addresses the proposed significant tree retention and preservation on the site.

3. *The topography and natural drainage shall be preserved to the greatest degree possible.*

RESPONSE:
As demonstrated in the Preliminary Engineering Plans, attached as Exhibit D, the proposed parking facility has been designed and located to minimize impact to the site and the WRA to the extent possible. Access into the site will be provided by an existing driveway located on an adjacent property, avoiding access from Walling Circle through the WRA to the facility. Stormwater from the improvements is proposed to be detained and treated in an underground facility located beneath the parking lot and conveyed to an outfall located within the WRA. The WRA is proposed to be enhanced through mitigation and replanting which will improve water quality function of the WRA, as detailed in the Natural Resource Assessment, attached as Exhibit E.

4. *The structures shall not be located in areas subject to slumping and sliding. The Comprehensive Plan Background Report's Hazard Map, or updated material as available and as deemed acceptable by the Planning Director, shall be the basis for preliminary determination.*

RESPONSE: A geotechnical report has been prepared by GeoPacific and is attached as Exhibit J. The report concludes that development of the proposed parking facility on the subject site is feasible.

5. *There shall be adequate distance between on-site buildings and on-site and off-site buildings on adjoining properties to provide for adequate light and air circulation and for fire protection.*

RESPONSE:
This application proposes a surface parking facility with a 10' tall accessory structure. As such, the proposed development will not obstruct light or air circulation on adjoining properties.

6. *Architecture.*
   a. *The proposed structure(s) scale shall be compatible with the existing structure(s) on site and on adjoining sites.*
   ...

RESPONSE:
This application proposes a surface parking facility with a 10' tall accessory storage structure. No other buildings are proposed on the site. As such, provisions (b) through (i) of this subsection are not applicable to this application.

7. Transportation.

a. Commercial and office development shall be oriented to the street.

RESPONSE:
No commercial or office buildings are proposed through this application. This provision is not applicable to this application.

b. Multifamily projects shall be required to keep the parking at the side or rear of the buildings or behind the building line of the structure as it would appear from the right-of-way inside the multifamily project.

RESPONSE:
The proposed project is not a multifamily project. This provision is not applicable to this application.

c. Commercial, office, and multifamily projects shall be built as close to the adjacent main right-of-way as practical to facilitate safe pedestrian and transit access.

RESPONSE:
The proposed project does not include any commercial, office or residential buildings. This provision is not applicable to this application.

d. Accessways, parking lots, and internal driveways shall accommodate pedestrian circulation and access by specially textured, colored, or clearly defined footpaths at least six feet wide. Paths shall be eight feet wide when abutting parking areas or travel lanes. Paths shall be separated from parking or travel lanes by either landscaping, planters, curbs, bollards, or raised surfaces. Sidewalks in front of storefronts on the arterials and main store entrances on the arterials identified in CDC 85.200(A)(3) shall be 12 feet wide to accommodate pedestrians, sidewalk sales, sidewalk cafes, etc. Sidewalks in front of storefronts and main store entrances in commercial/OBC zone development on local streets and collectors shall be eight feet wide.

RESPONSE: As shown on the submitted plans, adequate pedestrian circulation will occur across the onsite patio which connects to the adjacent sidewalks and the surrounding area.

e. Paths shall provide direct routes that pedestrians will use between buildings, adjacent rights-of-way, and adjacent commercial developments. They shall be clearly identified. They shall be laid out to attract use and to discourage people from cutting through parking lots and impacting environmentally sensitive areas.

RESPONSE: The proposed project includes a surface parking facility. Pedestrian connection to the adjacent lot and area circulation system is provided by access across the patio.

f. – i.

RESPONSE: These provisions are architectural standards that do not apply to a surface parking facility.

j. Parking spaces at trailheads shall be located so as to preserve the view of, and access to, the trailhead entrance from the roadway. The entrance apron to the trailhead shall be marked: "No Parking," and include design features to foster trail recognition.

RESPONSE: The proposed site does not have a trailhead. This provision is not applicable to this application.

C. Compatibility between adjoining uses, buffering, and screening.

1. In addition to the compatibility requirements contained in Chapter 24 CDC, buffering shall be provided between different types of land uses; for example, buffering between single-family homes and apartment blocks. However, no buffering is required between single-family homes and duplexes or single-family attached units. The following factors shall be considered in determining the adequacy of the type and extent of the buffer:

a. The purpose of the buffer, for example to decrease noise levels, absorb air pollution, filter dust, or to provide a visual barrier.

b. The size of the buffer required to achieve the purpose in terms of width and height.

c. The direction(s) from which buffering is needed.

d. The required density of the buffering.

e. Whether the viewer is stationary or mobile.

RESPONSE:

As shown in the submitted plans and discussed above, this application proposes a 20-space parking facility, an accessory structure approximately 10' in height, and a refuse/recycling structure. The proposed refuse/recycling structure is proposed to have three sides of masonry construction, a roof and a front metal gate oriented to the parking area. Materials samples for the proposed structures are included in attached Exhibit H.

The proposed structures are located outside of required setbacks, with the accessory storage structure located approximately 11.5 feet from the west property line, and the recycling/refuse structure located approximately 14 feet from the west property line. Existing vegetation and the enhanced WRA, as well as landscaping with trees and shrubs along the western property line outside of the WRA, will provide buffering between the proposed parking lot and adjacent differing uses. In addition, the proposed parking facility sits downslope from adjacent residential properties, with elevation changes ranging from 9 to 11 feet from the property line to parking lot surface (within a distance of 11.5 to 14 feet), providing minimal view of the site development by adjacent neighboring properties to the west. Therefore, with the grade change and the landscaping buffer proposed between the property line and site improvements, this provision is met.

2. On-site screening from view from adjoining properties of such things as service areas, storage areas, and parking lots shall be provided and the following factors will be considered in determining the adequacy of the type and extent of the screening:

a. What needs to be screened?
b. The direction from which it is needed.
c. How dense the screen needs to be.
d. Whether the viewer is stationary or mobile.
e. Whether the screening needs to be year-round.

RESPONSE:
As shown in the submitted plans and discussed above, this application proposes a 20-space parking facility, an accessory structure approximately 10' in height, and a refuse/recycling structure. The proposed refuse/recycling structure is proposed to have three sides of masonry construction, a roof and a front metal gate oriented to the parking area. Materials samples for the proposed structures are included in attached Exhibit H.

The proposed structures are located outside of required setbacks, with the accessory storage structure located approximately 11.5 feet from the west property line, and the recycling/refuse structure located approximately 14 feet from the west property line. Existing vegetation and the enhanced WRA, as well as landscaping with trees and shrubs along the western property line outside of the WRA, will provide buffering between the proposed parking lot and adjacent differing uses In addition, the proposed parking facility sits downslope from adjacent residential properties, with elevation changes ranging from 9 to 11 feet from the property line to parking lot surface (within a distance of 11.5 to 14 feet), providing minimal view of the site development by adjacent neighboring properties to the west. Therefore, with the grade change and the landscaping buffer proposed between the property line and site improvements, this provision is met.

3. Rooftop air cooling and heating systems and other mechanical equipment shall be screened from view from adjoining properties.

RESPONSE:
This application does not propose rooftop mechanical equipment.

D. Privacy and noise.

1. Structures which include residential dwelling units shall provide private outdoor areas for each ground floor unit which is screened from view from adjoining units.
2. Residential dwelling units shall be placed on the site in areas having minimal noise exposure to the extent possible. Natural-appearing sound barriers shall be used to lessen noise impacts where noise levels exceed the noise standards contained in West Linn Municipal Code Section 5.487.

RESPONSE:
This application does not propose residential dwelling units. Provisions (1) and (2) above are not applicable to this application.

3. Structures or on-site activity areas which generate noise, lights, or glare shall be buffered from adjoining residential uses in accordance with the standards in subsection C of this section where applicable.

RESPONSE:
This application proposes buffering in accordance with the standards of *Subsection 55.100.C*, above.

4. Businesses or activities that can reasonably be expected to generate noise in excess of the noise standards contained in West Linn Municipal Code Section 5.487 shall undertake and submit appropriate noise studies and mitigate as necessary to comply with the code. (See CDC 55.110(B)(11) and 55.120(M).)

RESPONSE:
The proposed parking facility is not anticipated to generate noise in excess of the City's noise standards.

E. Private outdoor area. This section only applies to multifamily projects.

RESPONSE:
The proposed project is not a multifamily project.

F. Shared outdoor recreation areas. This section only applies to multifamily projects and projects with 10 or more duplexes or single-family attached dwellings on lots under 4,000 square feet.

RESPONSE:
The proposed project is not a residential project.

G. Demarcation of public, semi-public, and private spaces. The structures and site improvements shall be designed so that public areas such as streets or public gathering places, semi-public areas, and private outdoor areas are clearly defined in order to establish persons having a right to be in the space, to provide for crime prevention, and to establish maintenance responsibility. These areas may be defined by:

1. *A deck, patio, fence, low wall, hedge, or draping vine;*
2. *A trellis or arbor;*
3. *A change in level;*
4. *A change in the texture of the path material;*
5. *Sign; or*
6. *Landscaping.*

RESPONSE:
As demonstrated in the attached Site Plan included in Exhibit D, the proposed parking facility is defined by landscaping and enhanced WRA for the majority of the facility's

perimeter. The parking facility vehicle entrance and the patio/pedestrian connection provide access and demarcation from the adjacent property.

H. Public transit.

1. Provisions for public transit may be required where the site abuts an existing or planned public transit route. The required facilities shall be based on the following:

a. The location of other transit facilities in the area.

b. The size and type of the proposed development.

c. The rough proportionality between the impacts from the development and the required facility.

RESPONSE:
The proposed parking facility does not abut a transit route.

I. Public facilities.

1. In situations where the level-of-service or volume-to-capacity performance standard for an affected City or State roadway is currently failing or projected to fail to meet the standard at a date determined within a traffic impact analysis, and an improvement project is not programmed, the development shall avoid further degradation of the affected transportation facility. Mitigation must be provided to bring the facility performance standard to existing conditions at the time of occupancy.

RESPONSE:
The proposed 20-space parking facility is not expected to impact roadway performance standards.

2. Streets

RESPONSE:
The proposed parking facility will be accessed via an existing driveway located on an adjacent property. The existing driveway access will provide ingress and egress from Willamette Drive. The site also has frontage along Walling Circle, however, access to that right-of-way is not proposed through this application.

3. Storm detention and treatment and geologic hazards.

RESPONSE:
As noted in the submitted plans, attached as Exhibit D, and the Stormwater Memo, attached as Exhibit F, this application proposes the use of an underground stormwater detention and treatment system which will outfall within the WRA. The system is designed to the West Linn Public Works Design Standards.

4. Municipal water.

RESPONSE:
The proposed parking facility will not require municipal water service.

5. Sanitary sewers.

RESPONSE:
The proposed parking facility will not require sanitary sewer service.

6. Solid waste and recycling storage areas.

RESPONSE:
A refuse/recycling storage structure meeting standards is proposed for the site.

J. Crime prevention and safety/defensible space.

1. Windows shall be located so that areas vulnerable to crime can be surveyed by the occupants.

2. Interior laundry and service areas shall be located in a way that they can be observed by others.

RESPONSE:
The proposed project does not include the features listed in provisions (1) and (2), above.

3. Mailboxes, recycling, and solid waste facilities shall be located in lighted areas having vehicular or pedestrian traffic.

RESPONSE:
The proposed refuse/recycling facility will be in a lighted location with vehicular and pedestrian traffic.

4. The exterior lighting levels shall be selected and the angles shall be oriented towards areas vulnerable to crime.

5. Light fixtures shall be provided in areas having heavy pedestrian or vehicular traffic and in potentially dangerous areas such as parking lots, stairs, ramps, and abrupt grade changes.

6. Fixtures shall be placed at a height so that light patterns overlap at a height of seven feet which is sufficient to illuminate a person. All commercial, industrial, residential, and public facility projects undergoing design review shall use low or high pressure sodium bulbs and be able to demonstrate effective shielding so that the light is directed downwards rather than omni-directional. Omni-directional lights of an ornamental nature may be used in general commercial districts only.

RESPONSE:
A lighting plan and fixture specifications are provided as attached Exhibit K.

7. Lines of sight shall be reasonably established so that the development site is visible to police and residents.

RESPONSE:

None of the proposed improvements will cause obstruction to lines of sight to the proposed parking facility.

8. Security fences for utilities (e.g., power transformers, pump stations, pipeline control equipment, etc.) or wireless communication facilities may be up to eight feet tall in order to protect public safety. No variances are required regardless of location.

RESPONSE:

This application does not propose utilities that require security fences.

K. Provisions for persons with disabilities.

1. The needs of a person with a disability shall be provided for. Accessible routes shall be provided between all buildings and accessible site facilities. The accessible route shall be the most practical direct route between accessible building entries, accessible site facilities, and the accessible entry to the site. An accessible route shall connect to the public right-of-way and to at least one on-site or adjacent transit stop (if the area is served by transit). All facilities shall conform to, or exceed, the Americans with Disabilities Act (ADA) standards, including those included in the Uniform Building Code.

RESPONSE:

The proposed project does not include any building entries and, due to the presence of the WRA, does not have an access route to the right-of-way. Accessible routes are provided to the on-site refuse/recycling facility and storage structure.

L. Signs.

1. Based on considerations of crime prevention and the needs of emergency vehicles, a system of signs for identifying the location of each residential unit, store, or industry shall be established.

2. The signs, graphics, and letter styles shall be designed to be compatible with surrounding development, to contribute to a sense of project identity, or, when appropriate, to reflect a sense of the history of the area and the architectural style.

3. The sign graphics and letter styles shall announce, inform, and designate particular areas or uses as simply and clearly as possible.

4. The signs shall not obscure vehicle driver's sight distance.

5. Signs indicating future use shall be installed on land dedicated for public facilities (e.g., parks, water reservoir, fire halls, etc.).

6. Signs and appropriate traffic control devices and markings shall be installed or painted in the driveway and parking lot areas to identify bicycle and pedestrian routes.

RESPONSE:
Signage on the site includes the sign designating the ADA parking space and will meet ADA signage standards.

M. Utilities. The developer shall make necessary arrangements with utility companies or other persons or corporations affected for the installation of underground lines and facilities. Electrical lines and other wires, including but not limited to communication, street lighting, and cable television, shall be placed underground, as practical. The design standards of Tables 1 and 2 above, and of subsection 5.487 of the West Linn Municipal Code relative to existing high ambient noise levels shall apply to this section.

RESPONSE:
The Applicant will coordinate with PGE on electrical lines needed for on-site lighting. Utility lines will be placed underground.

N. Wireless communication facilities (WCFs). (This section only applicable to WCFs.)

RESPONSE:
This provision is not applicable to the proposed parking lot.

O. Refuse and recycling standards

1. *All commercial, industrial and multifamily developments over five units requiring Class II design review shall comply with the standards set forth in these provisions. Modifications to these provisions may be permitted if the Planning Commission determines that the changes are consistent with the purpose of these provisions and the City receives written evidence from the local franchised solid waste and recycling firm that they are in agreement with the proposed modifications.*

RESPONSE:
The Applicant acknowledges applicable provisions of this subsection.

2. *Compactors, containers, and drop boxes shall be located on a level Portland cement concrete pad, a minimum of four inches thick, at ground elevation or other location compatible with the local franchise collection firm's equipment at the time of construction. The pad shall be designed to discharge surface water runoff to avoid ponding.*

RESPONSE:
The Applicant acknowledges this provision. Final design of the proposed refuse/recycling structure will comply with these standards.

3. *Recycling and solid waste service areas.*
   a. *Recycling receptacles shall be designed and located to serve the collection requirements for the specific type of material.*

b. The recycling area shall be located in close proximity to the garbage container areas and be accessible to the local franchised collection firm's equipment.
c. Recycling receptacles or shelters located outside a structure shall have lids and be covered by a roof constructed of water and insect-resistive material. The maintenance of enclosures, receptacles and shelters is the responsibility of the property owner.
d. The location of the recycling area and method of storage shall be approved by the local fire marshal.
e. Recycling and solid waste service areas shall be at ground level and/or otherwise accessible to the franchised solid waste and recycling collection firm.
f. Recycling and solid waste service areas shall be used only for purposes of storing solid waste and recyclable materials and shall not be a general storage area to store personal belongings of tenants, lessees, property management or owners of the development or premises.
g. Recyclable material service areas shall be maintained in a clean and safe condition.

RESPONSE:
The Applicant acknowledges the applicable provisions of this subsection. As shown on the submitted site plan, the proposed refuse/recycling facility is located to provide adequate access to the service provider. The facility will have a roof, be located on level ground, and will be maintained in a clean and safe condition. A materials sample is included in Exhibit H.

4. Special wastes or recyclable materials.
a. Environmentally hazardous wastes defined in ORS 466.005 shall be located, prepared, stored, maintained, collected, transported, and disposed in a manner acceptable to the Oregon Department of Environmental Quality.
b. Containers used to store cooking oils, grease or animal renderings for recycling or disposal shall not be located in the principal recyclable materials or solid waste storage areas. These materials shall be stored in a separate storage area designed for such purpose.

RESPONSE:
No special or hazardous waste or recyclables will be stored in the proposed facility.

5. Screening and buffering.
a. Enclosures shall include a curbed landscape area at least three feet in width on the sides and rear. Landscaping shall include, at a minimum, a continuous hedge maintained at a height of 36 inches.
b. Placement of enclosures adjacent to residentially zoned property and along street frontages is strongly discouraged. They shall be located so as to conceal them from public view to the maximum extent possible.
c. All dumpsters and other trash containers shall be completely screened on all four sides with an enclosure that is comprised of a durable material such as masonry with

a finish that is architecturally compatible with the project. Chain link fencing, with or without slats, will not be allowed.

RESPONSE: As demonstrated by the materials information provided in Exhibit H, a 3-sided masonry structure with metal roof and gate is planned. Landscaping with shrubs and trees is planned for the rear and side of the facility. The facility will sit downslope from adjacent residential property, providing minimal if any view of the facility by neighboring properties to the west.

6. Litter receptacles.

a. Location. Litter receptacles may not encroach upon the minimum required walkway widths.

b. Litter receptacles may not be located within public rights-of-way except as permitted through an agreement with the City in a manner acceptable to the City Attorney or their designee.

c. Number. The number and location of proposed litter receptacles shall be based on the type and size of the proposed uses. However, at a minimum, for non-residential uses, at least one external litter receptacle shall be provided for every 25 parking spaces for first 100 spaces, plus one receptacle for every additional 100 spaces.

RESPONSE:
The Applicant acknowledges applicable provisions above. Per *subsection 6.(c)*, one receptacle will be provided and will be located on the patio.

55.110 SITE ANALYSIS

The site analysis shall include:
A. A vicinity map showing the location of the property in relation to adjacent properties, roads, pedestrian and bike ways, transit stops and utility access.
B. A site analysis on a drawing at a suitable scale (in order of preference, one inch equals 10 feet to one inch equals 30 feet) which shows:

1. The property boundaries, dimensions, and gross area.
2. Contour lines at the following minimum intervals:
a. Two-foot intervals for slopes from zero to 25 percent; and
b. Five- or 10-foot intervals for slopes in excess of 25 percent.
3. Tables and maps identifying acreage, location and type of development constraints due to site characteristics such as slope, drainage and geologic hazards, including a slope analysis which identifies portions of the site according to the land types (I, II, III and IV) defined in Chapter 02 CDC.
4. The location and width of adjoining streets.
5. The drainage patterns and drainage courses on the site and on adjacent lands.
6. Potential natural hazard areas including:
a. Floodplain areas pursuant to the site's applicable FEMA Flood Map panel;

b. Water resource areas as defined by Chapter 32 CDC;
c. Landslide areas designated by the Natural Hazard Mitigation Plan, Map 16; and
d. Landslide vulnerable analysis areas, designated by the Natural Hazard Mitigation Plan, Map 17.

7. Resource areas including:
a. Wetlands;
b. Riparian corridors;
c. Streams, including intermittent and ephemeral streams;
d. Habitat conservation areas; and
e. Large rock outcroppings.

RESPONSE:
In response to subsections *A.* and *B.*, above, the Applicant has provided an existing conditions analysis and Neighborhood Site Plan, attached as Sheets P200, P300 and P301 of Exhibit D. As indicated, a Water Resource Area and buffer associated with Fern Creek are present on the site. A Natural Resource Site Assessment, attached as Exhibit E, further details site and WRA conditions. A Geotechnical Report, included as Exhibit J, addresses site conditions.

55.120 SITE PLAN

The site plan shall be at the same scale as the site analysis (CDC 55.110) and shall show:
A. The applicant's entire property and the surrounding property to a distance sufficient to determine the relationship between the applicant's property and proposed development and adjacent property and development.
B. Boundary lines and dimensions for the perimeter of the property and the dimensions for all proposed lot or parcel lines.
C. Streams and stream corridors.
D. Identification information, including the name and address of the owner, developer, project designer, lineal scale and north arrow.
E. The location, dimensions, and names of all existing and proposed streets, public pathways, easements on adjacent properties and on the site, and all associated rights-of-way.
F. The location, dimensions and setback distances of all:
1. Existing and proposed structures, improvements, and utility facilities on site; and
2. Existing structures and driveways on adjoining properties.
G. The location and dimensions of:
1. The entrances and exits to the site;
2. The parking and circulation areas;
3. Areas for waste disposal, recycling, loading, and delivery;
4. Pedestrian and bicycle routes, including designated routes, through parking lots and to adjacent rights-of-way;
5. On-site outdoor recreation spaces and common areas;
6. All utilities, including stormwater detention and treatment; and

7. Sign locations.

H. The location of areas to be landscaped.

RESPONSE:

The attached Preliminary Engineering Plan set, Sheets P200, P300, and P301 of Exhibit D, depict all applicable elements required by this section.

55.125 TRANSPORTATION ANALYSIS

Certain development proposals required that a traffic impact analysis (TIA) be provided which may result in modifications to the site plan or conditions of approval to address or minimize any adverse impacts created by the proposal. The purpose, applicability and standards of this analysis are found in CDC 85.170(B)(2).

RESPONSE:

The proposed parking facility does not require a traffic impact analysis, as the proposal does not meet the thresholds of *Section 85.170.B.2.(c)(1).*

55.130 GRADING AND DRAINAGE PLANS

The following requirements apply to Type I, II and III lands (refer to definitions in Chapter 02 CDC). A registered civil engineer must prepare a grading plan and a storm detention and treatment plan pursuant to CDC 92.010(E), at a scale sufficient to evaluate all aspects of the proposal, and a statement that demonstrates:

A. The location and extent to which grading will take place indicating general contour lines consistent with CDC 55.110(B)(2), slope ratios, slope stabilization proposals, and location and height of retaining walls, if proposed.

B. All proposed storm detention and treatment facilities comply with the standards for the improvement of public and private drainage systems located in the West Linn Public Works Design Standards.

C. There is sufficient factual data to support the conclusions of the plan.

D. Per CDC 99.035, the Planning Director may require the information in subsections A, B and C of this section for Type IV lands if the information is needed to properly evaluate the proposed site plan.

E. For Type I, II and III lands (refer to definitions in Chapter 02 CDC), the applicant must provide a geologic report, with text, figures and attachments as needed to meet the industry standard of practice, prepared by a certified engineering geologist and/or a geotechnical professional engineer, that includes:

1. Site characteristics, geologic descriptions and a summary of the site investigation conducted;

2. Assessment of engineering geological conditions and factors;

3. Review of the City of West Linn's Natural Hazard Mitigation Plan and applicability to the site; and

4. Conclusions and recommendations focused on geologic constraints for the proposed land use or development activity, limitations and potential risks of development, recommendations for mitigation approaches and additional work needed at future development stages including further testing and monitoring.

F. Identification information, including the name and address of the owner, developer, project designer, and the project engineer.

RESPONSE:

Grading and drainage plans prepared by a registered civil engineer are provided in the preliminary plan set, attached as Sheets P400 and P500 of Exhibit D. In addition, stormwater calculations are provided in the Preliminary Stormwater Memo, attached as Exhibit F. A geologic report is attached as Exhibit J.

55.140 ARCHITECTURAL DRAWINGS

RESPONSE:

The proposed development includes a 20-space parking facility, a 500-sq.ft. accessory storage structure and a refuse/recycling facility. Exhibit H, attached, provides preliminary plans and elevations of the proposed storage shed, and material descriptions for the accessory structure and refuse/recycling structure.

55.150 LANDSCAPE PLAN

A. The landscape plan shall be prepared and shall show the following:

1. Preliminary underground irrigation system, if proposed;

2. The location and height of fences and other buffering of screening materials, if proposed;

3. The location of terraces, decks, patios, shelters, and play areas, if proposed;

4. The location, size, and species of the existing and proposed plant materials, if proposed; and

5. Building and pavement outlines.

B. The landscape plan shall be accompanied by:

1. The erosion controls that will be used, if necessary;

2. Planting list; and

3. Supplemental information as required by the Planning Director or City Arborist.

RESPONSE:

A landscape plan is provided as Sheet P700 of attached Exhibit D. As demonstrated in the plan, landscaping with trees and shrubs is proposed along the western property line. Additional landscaped areas flanking the entrance to the parking facility, and south of the patio are also proposed. In addition to the proposed landscaping outside of the WRA, this application proposes extensive mitigation of the WRA, including removing invasives and replanting with native plants over a large portion of the site. The Natural Resources Assessment and Mitigation Plan, attached as Exhibit E, details the proposed mitigation and planting plan.

...

55.180 MAINTENANCE

All on-site improvements shall be the ongoing responsibility of the property owner or occupant.

RESPONSE: The Applicant acknowledges responsibility for ongoing maintenance to the proposed improvements.

Conclusion

This application provides substantial evidence demonstrating that the proposed parking facility, accessory storage structure and refuse/recycling facility are designed in compliance with all applicable standards of the of the West Linn *Community Development Code*. The Applicant respectfully requests approval of this Design Review and Water Resource Area Permit application.