



29799 SW Town Center Loop E, Wilsonville, OR 97070
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Planning Division Development Permit Application

Final action on development application or zone change is required within 120 days per ORS 227.175 or as otherwise required by state or federal law for specific application types.

A pre application conference may be required.

The City will not accept applications for wireless communication facilities or similar facilities without a completed copy of a Wireless Facility Review Worksheet.

The City will not schedule incomplete applications for public hearing or send administrative public notice until all of the required materials are submitted.

Applicant:

Name: Kris Ammerman
 Company: Wilsonville Parks and Recreation
 Mailing Address: 29600 Park Place
 City, State, Zip: Wilsonville, OR 97070
 Phone: 503-570-1579 Fax: _____
 E-mail: kammerman@ci.wilsonville.or.us

Authorized Representative:

Name: Mercedes Serra
 Company: 3J Consulting, Inc.
 Mailing Address: 3600 SW Nimbus Avenue, Suite 100
 City, State, Zip: Beaverton, OR 97008
 Phone: 503-946-9365 x 211 Fax: _____
 E-mail: mercedes.serra@3j-consulting.com

Property Owner:

Name: Wilsonville Parks and Recreation
 Company: City of Wilsonville
 Mailing Address: 29600 Park Place
 City, State, Zip: Wilsonville, OR, 97070
 Phone: 503-570-1579 Fax: _____
 E-mail: kammerman@ci.wilsonville.or.us

Property Owner's Signature:

Kris Ammerman

Printed Name: Kris Ammerman Date: 4/3/2024

Applicant's Signature: (if different from Property Owner)

Printed Name: _____ Date: _____

Site Location and Description:

Project Address if Available: 7035 SW Boeckman Road. Wilsonville, OR 97077 Suite/Unit _____
 Project Location: 7035 SW Boeckman Road. Wilsonville, OR 97077
 Tax Map #(s): 31W12DD Tax Lot #(s): 00400 County: Washington Clackamas

Request:

Wilsonville Parks and Recreation is proposing a new neighborhood park and seeks approval of a Site Design Review Application, Class III Tree Removal Application, and Class II Sign Permit, to be reviewed by the Development Review Board.

Project Type: **Class I** **Class II** **Class III**

Residential Commercial Industrial Other: Public Park

Application Type(s):

- | | | | |
|--|---|--|--|
| <input type="checkbox"/> Annexation | <input type="checkbox"/> Appeal | <input type="checkbox"/> Comp Plan Map Amend | <input type="checkbox"/> Parks Plan Review |
| <input type="checkbox"/> Final Plat | <input type="checkbox"/> Major Partition | <input type="checkbox"/> Minor Partition | <input type="checkbox"/> Request to Modify Conditions |
| <input type="checkbox"/> Plan Amendment | <input type="checkbox"/> Planned Development | <input type="checkbox"/> Preliminary Plat | <input checked="" type="checkbox"/> Site Design Review |
| <input type="checkbox"/> Request for Special Meeting | <input type="checkbox"/> Request for Time Extension | <input checked="" type="checkbox"/> Signs | <input type="checkbox"/> Stage II Final Plan |
| <input type="checkbox"/> SROZ/SRIR Review | <input type="checkbox"/> Staff Interpretation | <input type="checkbox"/> Stage I Master Plan | <input type="checkbox"/> Variance |
| <input checked="" type="checkbox"/> Type C Tree Removal Plan | <input type="checkbox"/> Tree Permit (B or C) | <input type="checkbox"/> Temporary Use | <input type="checkbox"/> Other (describe) |
| <input type="checkbox"/> Villebois SAP | <input type="checkbox"/> Villebois PDP | <input type="checkbox"/> Villebois FDP | |
| <input type="checkbox"/> Zone Map Amendment | <input type="checkbox"/> Waiver(s) | <input type="checkbox"/> Conditional Use | |



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GENERAL INFORMATION

Property Owner and Applicant: **Wilsonville Parks and Recreation**
29600 Park Place
Wilsonville, OR 97070
Contact: Kris Ammerman
Phone: 503-783-7529
Email: kammerman@ci-wilsonville.or.us

Planning Consultant: **3J Consulting, Inc.**
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Civil Engineer: **3J Consulting, Inc.**
9600 SW Nimbus Avenue, Suite 100
Beaverton, OR 97008
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SITE INFORMATION

Parcel Number: 31W12DD00400
Address: 7035 SW Boeckman Road. Wilsonville, OR 97070
Gross Site Area: 2.93 acres
Zoning Designation: Public Facility (PF)
Existing Use: Vacant
Surrounding Zoning: The property to the west is zoned Public Facility (PF). The properties to the north, south, and east are zoned Residential Neighborhood (RN).
Street Classification: SW Brisband Street and SW Wehler Way are classified as local streets.

INTRODUCTION

APPLICANT'S REQUEST

The City of Wilsonville ("the Applicant") is proposing a new neighborhood park and seeks approval of concurrent Site Development Permit applications for a Site Design Review, Class III Tree Removal Application, and Class II Sign Permit. This narrative describes the proposed development and demonstrates compliance with the relevant approval standards of the City of Wilsonville's Planning and Development Ordinance, Chapter 4 – Planning and Land Development.

The Site Design Review, Class III Tree Removal applications, and Class II Sign Permit included in this application will be evaluated under the quasi-judicial decision process. The Development Review Board will render the decision after a public hearing on the application is held.

SITE DESCRIPTION/SURROUNDING LAND USE

The subject property is located at 7035 SW Boeckman Road within the City of Wilsonville. The site consists of one tax lot, 31W12DD00400. The site is approximately 2.93 acres and is zoned Public Facility (PF). The site has frontage on SW Brisband Street to the north and SW Wehler Way to the south, which are classified as local streets. Tax lot 31W12DD13500, a 0.37-acre parcel to the east of the subject site, separates the site from SW Willow Creek Drive which is classified as a collector street. A new elementary school at Frog Pond is currently under construction to the west of the site. The elementary school construction contains associated frontage improvements on SW Brisband Street. The properties to the north, east, and south are zoned Residential Neighborhood (RN), and are developed with primarily single-family residential homes. The site has a slight grade change from the northeast corner of the site sloping to the southwest. There are no existing structures on the site. The site contains a mix of deciduous and coniferous trees, grasses, and some shrubs.

PROPOSAL

The Applicant proposes to construct a neighborhood park on the subject property to provide outdoor recreation areas to meet the needs of the growing community. The proposed park will offer an approximately 500 square foot permanent shelter with picnic tables, an area with play equipment for young children, a small stage to accommodate small community events, and a central lawn between the picnic shelter and stage. Both paved and unpaved walking paths are proposed that will weave through existing stands of trees, lawns, and meadows on the site. The pathways through the park will lead community members to recreation areas and benches for resting and viewing along the walking paths.

APPLICABLE CRITERIA

The following sections of the City of Wilsonville's Planning and Development Ordinance (WPDO) have been extracted as they have been deemed to be applicable to the proposal. Following each **bold** applicable criteria or design standard, the Applicant has provided a series of draft findings. The intent of providing code and detailed responses and findings is to document, with absolute certainty, that the proposed development has satisfied the approval criteria for a Site Design Review and Class III Tree Removal, and Class II Sign Permit applications.

Administration

Section 4.035 – Site Development Permits.

(.03) Class II—Administrative Review. Consistent with the authority set forth in Section 4.030, a Class II application shall be processed without a public hearing, except as determined appropriate by the Director.

A. Within ten calendar days of receiving a complete Class II Permit application, the Planning Director shall mail notice of the proposed development, pursuant to Section 4.012, to all property owners within 250 feet of the proposal. The notice shall summarize the standards and criteria that will be used to evaluate the application and shall be sent to the persons designated to receive notice by the relevant sections of this Code. The notice shall invite persons to submit information within ten calendar days, relevant to the standards pertinent to the proposal and giving reasons why the application should or should not be approved or proposing conditions the person believes are necessary for approval according to the standards. The notice shall also advise the person of the right to appeal the decision on the proposed development if the person's concerns are not resolved.

B. If the Director anticipates that persons other than the applicant can be expected to question the application's compliance with the Comprehensive Plan or Development Standards, the Planning Director may initiate a public hearing.

C. Within ten calendar days of the final response date, the Director shall review any information received under Subsection "A", above, and make a final decision. The final decision and supporting findings shall be forwarded to the applicant, affected parties required to be notified, and the Development Review Board. The decision shall be based upon a determination of whether the application complies with the standards and criteria listed above for Class I Administrative Reviews and the following additional standards:

- 1. The proposed development or use, including signage, is compatible with developments or uses permitted in the zone;**
- 2. The proposed development or use will not create a nuisance or result in a significant reduction in the value or usefulness of adjacent properties;**
- 3. If the proposed use is to be temporary, the length of time for which it is permitted shall be reasonable in terms of the purpose and nature of the use that is proposed;**

4. If the application involves a Variance, it shall be subject to the standards and criteria listed in Section 4.196;

5. All of the relevant application filing requirements of Chapter 4 have been met.

D. A decision of the Planning Director under a Class II procedure may be appealed by an affected party or may be called up for review by the Development Review Board, provided such action is taken by members of either panel of the Board as specified in Section 4.022.

E. The Development Review Board, Planning Commission, or City Council may delegate specific actions or duties to be executed by the Planning Director. The body making the delegation shall specify the administrative review procedures that the Director is to follow in the process.

Finding: The Applicant acknowledges and understands the procedures for a Class II Sign Permit, but has been instructed by Staff to expect the sign permit to be reviewed as a Class III Sign Permit concurrent with the full application, reviewed by the Development Review Board.

(.04) Site Development Permit Application.

A. An application for a Site Development Permit shall consist of the materials specified as follows, plus any other materials required by this Code.

1. A completed Permit application form, including identification of the project coordinator, or professional design team.
2. An explanation of intent, stating the nature of the proposed development, reasons for the Permit request, pertinent background information, information required by the development standards and other information specified by the Director as required by other sections of this Code because of the type of development proposal or the area involved or that may have a bearing in determining the action to be taken. As noted in Section 4.014, the applicant bears the burden of proving that the application meets all requirements of this Code.
3. Proof that the property affected by the application is in the exclusive ownership of the applicant, or that the applicant has the consent of all individuals or partners in ownership of the affected property.
4. Legal description of the property affected by the application.
5. The application shall include conceptual and quantitatively accurate representations of the entire development sufficient to judge the scope, size and impact of the development on the community, public facilities and adjacent properties; and except as otherwise specified in this Code, shall be accompanied by the following information,
6. Unless specifically waived by the Director, the submittal shall include: ten copies folded to 9" × 12" or (one set of full-sized scaled drawings and nine 8½" × 11" reductions of larger drawings) of the proposed Site Development Plan, including a small scale vicinity map and showing:

- a. Streets, private drives, driveways, sidewalks, pedestrian ways, off-street parking, loading areas, garbage and recycling storage areas, power lines and railroad tracks, and shall indicate the direction of traffic flow into and out of off-street parking and loading areas, the location of each parking space and each loading berth and areas of turning and maneuvering vehicles.
- b. The Site Plan shall indicate how utility service, including sanitary sewer, water and storm drainage, are to be provided. The Site Plan shall also show the following off-site features: distances from the subject property to any structures on adjacent properties and the locations and uses of streets, private drives, or driveways on adjacent properties.
- c. Location and dimensions of structures, utilization of structures, including activities and the number of living units.
- d. Major existing landscaping features including trees to be saved, and existing and proposed contours.
- e. Relevant operational data, drawings and/or elevations clearly establishing the scale, character and relationship of buildings, streets, private drives, and open space.
- f. Topographic information sufficient to determine direction and percentage of slopes, drainage patterns, and in environmentally sensitive areas, e.g., flood plain, forested areas, steep slopes or adjacent to stream banks, the elevations of all points used to determine contours shall be indicated and said points shall be given to true elevation above mean sea level as determined by the City Engineer. The base data shall be clearly indicated and shall be compatible to City datum, if bench marks are not adjacent. The following intervals shall be shown:
 - i. One foot contours for slopes of up to five percent;
 - ii. Two foot contours for slopes of from six percent to 12 percent;
 - iii. Five foot contours for slopes of from 12 percent to 20 percent. These slopes shall be clearly identified, and
 - iv. Ten foot contours for slopes exceeding 20 percent.
- g. A tabulation of land area, in square feet, devoted to various uses such as building area (gross and net rentable), parking and paving coverage, landscaped area coverage and average residential density per net acre.
- h. An application fee as set by the City Council.
- i. If there are trees in the development area, an arborist's report, as required in Section 4.600. This report shall also show the impacts of grading on the trees.
- j. A list of all owners of property within 250 feet of the subject property, printed on label format. The list is to be based on the latest available information from the County Assessor.

Finding: All of the required application materials for a Site Development Permit Application are included with this proposal. This standard is met.

Zoning: Public Facility Zone

Section 4.136 – PF – Public Facility Zone

(.01) Purpose. The PF zone is intended to be applied to existing public lands and facilities; including quasi-public lands and facilities which serve and benefit the community and its citizens. Typical uses permitted in the PF Zone are schools, churches, public buildings, hospitals, parks and public utilities. Not all of the uses permitted in this zone are expected to be publicly owned.

(.02) Uses Permitted Outright:

- E. Recreational and community buildings and grounds, playgrounds, swimming pools, tennis courts and similar recreational uses.**
- I. Trails and pathways.**
- J. Parks.**

Finding: The proposed park is an outright allowed use in the PF zone and will include recreation areas, a picnic shelter, a playground area, trails and pathways, and similar passive and active recreational uses as demonstrated on the Site Plan (Sheet L1.0), provided in Appendix D. This standard is met.

(.04) Dimensional Standards:

- A. Minimum Lot Size: One (1) Acre** The minimum lot area may be reduced upon a finding that the resulting parcel is compatible with the adjoining property in that it does not impair the development of any adjoining property, does not adversely affect the value of adjoining property, and does not adversely affect the public health, safety, or welfare.

Finding: The subject property is 2.93 acres, which exceeds the minimum lot size requirements of the PF Zone. This standard is met.

- B. Minimum front and rear yard setbacks: Thirty feet. Minimum sideyard setback: Ten feet.**

Finding: The proposed neighborhood park meets the front and rear yard setbacks as demonstrated on the Site Plan (Sheet L1.01), provided in Appendix D. The front yard setback measured from the north property line is thirty feet to the nearest point of the proposed picnic shelter. The rear setback measured from the south property line exceeds the thirty foot minimum setback. The side yard setbacks measured from the east and west property lines exceed the ten foot minimum setback. This standard is met.

C. Minimum street frontage: Seventy-five feet.

Finding: There is greater than seventy-five feet of street frontage on both SW Brisband Street and SW Wehler Way as demonstrated on the Site Plan (Sheet L1.01), provided in Appendix D. This standard is met.

D. Maximum height: Thirty five feet.

Finding: The proposed Shelter is less than thirty-five feet in height, as demonstrated on the Picnic Shelter drawings provided by Western Wood Structures in Appendix D. This standard is met.

(.05) Off-Street Parking Requirements: As provided in Section 4.155.

Finding: The applicable off-street parking requirements are addressed further in this narrative.

(.06) Signs: As provided in Sections 4.156.01 through 4.156.11.

Finding: One sign, located at the north entrance to the Park is subject to the sign permit requirements in Sections 4.156.01 through 4.156.11, which are addressed further in this narrative. All other internal signs are not intended to be read from off-site and are exempt from the sign permit requirements as detailed in Section 4.156.05 (.02) B. 1.

(.07) Corner Vision: As provided in Section 4.176.

Finding: The subject site is not located at an intersection and will not require new driveways. The corner vision standards in Section 4.176 are not applicable.

(.08) Special Regulations:

- A. All principal and conditional uses shall be subject to Section 4.400 through 4.450 (Site Design Review) of the Wilsonville Code.**
- B. As part of either a permitted or conditional use, the Planning Commission may review and approve a Master Plan for an entire development or area subject to Section 4.140 (Planned Development Regulations) of the Wilsonville Code. Approval of a Master Plan would allow all uses provided in the Master Plan without further review. Minor changes which do not have off-site impact or increase visitor capacity may be reviewed by the Planning Director.**
- C. Prisons, other than minimum-security mental institutions, are hereby prohibited.**
- D. Development within Public Facility zones shall comply with applicable provisions of adopted legislative master plans.**

Finding: This narrative describes the proposed development and how it meets the Site and Design Review criteria. The subject property is within a Public Facility zone and complies with the applicable provisions of the adopted legislative master plans as detailed in this narrative. The Frog Pond West Master Plan (Master Plan) states that a Neighborhood Park is one of the five key projects outlined in the Master Plan: with preliminary designs, estimated costs and proposed funding strategies for a neighborhood park included. The proposed Frog Pond Neighborhood Park described in this narrative meets the stated intent in the Master Plan and is located on the previously “land banked” parcel identified as a potential site for a park. With connected paths, a shelter area, and a relationship between the adjacent homes and the park, the proposed Frog Pong Neighborhood Park will be a shared amenity for the neighborhood and also complies with the Frog Pond West Master Plan vision, principles, and intent. This standard is met.

(.09) Block and access standards: The PF zone shall be subject to the same block and access standards as the PDC zone, Section 4.131(.03).

Finding: The block and access standards of the PDC zone are addressed further in this narrative.

Section 4.131 – PDC—Planned Development Commercial Zone.

(.03)Block and access standards:

- 1. The Development Review Board shall determine appropriate conditions of approval to assure that adequate connectivity results for pedestrians, bicyclists, and motor vehicle drivers. Consideration shall be given to the use of public transit as a means of meeting access needs.**

Finding: The block and access standards of the PDC zone are applicable as outlined in Section 4.136(.09). The proposed park will provide connectivity for pedestrians and bicyclists through the site. Vehicular access will be provided through the existing street network. New streets are not proposed as part of the development. The Applicant finds that the access to the park from the surrounding neighborhood and uses meets the intent of the code.

Zoning: Significant Resource Overlay Zone (SROZ)

Section 4.139.00. – Significant Resource Overlay Zone (SROZ) Ordinance.

Definitions:

5. Impact Area. The area adjacent to the outer boundary of a Significant Resource within which development or other alteration activities may be permitted through the review of a Significant Resource Impact Report (SRIR) or where an SRIR has been waived in accordance with this ordinance. The impact area is 25 feet wide unless otherwise specified in this ordinance or by the decision making body.

Finding: The Applicant finds that there are SROZ Impact Areas on the subject property consistent with this definition. The identified impact areas are on the east portion of the subject property, adjacent to tax lot 31W12DD13500.

Section 4.139.02 – Where regulations apply.

The regulations of this Section apply to the portion of any lot or development site, which is within a Significant Resource Overlay Zone and its associated "Impact Areas". The text provisions of the Significant Resource Overlay Zone ordinance take precedence over the Significant Resource Overlay Zone maps. The Significant Resource Overlay Zone is described by boundary lines shown on the City of Wilsonville Significant Resource Overlay Zone Map. For the purpose of implementing the provisions of this Section, the Wilsonville Significant Resource Overlay Zone Map is used to determine whether a Significant Resource Impact Report (SRIR) is required. Through the development of an SRIR, a more specific determination can be made of possible impacts on the significant resources.

Unless otherwise exempted by these regulations, any development proposed to be located within the Significant Resource Overlay Zone and/or Impact Area must comply with these regulations. Where the provisions of this Section conflict with other provisions of the City of Wilsonville Planning and Land Development Ordinance, the more restrictive shall apply.

The SROZ represents the area within the outer boundary of all inventoried significant natural resources. The Significant Resource Overlay Zone includes all land identified and protected under Metro's UGMFP Title 3 Water Quality Resource Areas and Title 13 Habitat Conservation Areas, as currently configured, significant wetlands, riparian corridors, and significant wildlife habitat that is inventoried and mapped on the Wilsonville Significant Resource Overlay Zone Map.

Finding: The Applicant finds that the SROZ regulations apply to the portion of the subject property that have Impact Areas identified.

Section 4.139.03 – Administration

(.01) Resources. The text provisions of this section shall be used to determine whether applications may be approved within the Significant Resource Overlay Zone. The following maps and documents may be used as references for identifying areas subject to the requirements of this Section:

- A. Metro's UGMFP Title 3 Water Quality Resource Area maps.
- B. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM).
- C. The Wilsonville Local Wetland Inventory (LWI) (1998).
- D. The Wilsonville Riparian Corridor Inventory (RCI) (1998).
- E. Locally adopted studies or maps.
- F. City of Wilsonville slope analysis maps.
- G. Clackamas and Washington County soils surveys.

H. Metro's UGMFP Title 13 Habitat Conservation Area Map.

Finding: The Applicant acknowledges and understands that the listed maps and documents may be used as references for identifying areas subject to the SROZ requirements.

(.02) Impact Area. The "Impact Area" is the area adjacent to the outer boundary of a Significant Resource within which development or other alteration activities may be permitted through the review of an SRIR (Significant Resource Impact Report). Where it can be clearly determined by the Planning Director that development is only in the Impact Area and there is no impact to the Significant Resource, development may be permitted without SRIR review. The impact area is 25 feet wide unless otherwise specified in this ordinance or by the decision making body. Designation of an Impact Area is required by Statewide Planning Goal 5. The primary purpose of the Impact Area is to ensure that development does not encroach into the SROZ.

Finding: The proposed development will include landscape enhancement and a pervious walking path within the identified Impact area of the SROZ on the adjacent property. The improvements will not have a negative impact to the Significant Resource. This standard is met.

(.03) Significant Resource Impact Report (SRIR). For proposed non-exempt development within the SROZ, the applicant shall submit a Significant Resource Impact Report (SRIR) as part of any application for a development permit.

Finding: The proposed development is found to not have a negative impact on the SROZ; therefore, it is exempt from the requirement for a SRIR.

(.04) Prohibited Activities. New structures, development and construction activities shall not be permitted within the SROZ if they will negatively impact significant natural resources. Gardens, lawns, application of chemicals, uncontained areas of hazardous materials as defined by DEQ, domestic animal waste, dumping of materials of any kind, or other activities shall not be permitted within the SROZ if they will negatively impact water quality. Unauthorized land clearing or grading of a site to alter site conditions is not allowed, and may result in the maximum requirement of mitigation/enhancement regardless of pre-existing conditions.

Finding: None of the above listed prohibited activities are proposed in the SROZ with this application. This standard is met.

Section 4.139.04. - Uses and Activities Exempt from These Regulations.

A request for exemption shall be consistent with the submittal requirements listed under Section 4.139.06(.01)(B—I), as applicable to the exempt use and activity.

(.08) The construction of new roads, pedestrian or bike paths into the SROZ in order to provide access to the sensitive area or across the sensitive area, provided the location of the crossing is consistent with the intent of the Wilsonville Comprehensive Plan. Roads and paths shall be constructed so as to minimize and repair disturbance to existing vegetation and slope stability.

(.10) The removal of invasive vegetation such as Himalayan Blackberry, English Ivy, Poison Oak, Scots (Scotch) Broom or as defined as invasive in the Metro Native Plant List.

(.11) The planting or propagation of any plant identified as native on the Metro Native Plant List. See Wilsonville Planning Division to obtain a copy of this list.

(.12) Grading for the purpose of enhancing the Significant Resource as approved by the City.

(.13) Enhancement of the riparian corridor or wetlands for water quality or quantity benefits, fish, or wildlife habitat as approved by the City and other appropriate regulatory authorities.

Finding: The proposed development within the riparian corridor will include a pervious porous aggregate paving pedestrian path, associated grading, columnar basalt seating, invasive plant removal, and replanting with native plant species. The proposed development within the riparian corridor is considered exempt from the Significant Resource review criteria.

Zoning: Planned Development Regulations

Section 4.140 – Planned Development Regulations.

(.09) Final Approval (Stage Two):

- A. Unless an extension has been granted by the Development Review Board or Planning Director, as applicable, within two years after the approval or modified approval of a preliminary development plan (Stage I), the applicant shall file with the City Planning Department a final plan for the entire development or when submission in stages has been authorized pursuant to Section 4.035 for the first unit of the development, a public hearing shall be held on each such application as provided in Section 4.013. As provided in Section 4.134, an application for a Stage II approval within the Coffee Creek Industrial Design Overlay District may be considered by the Planning Director without a public hearing as a Class II Administrative Review as provided in Section 4.035(.03).**
- B. The Development Review Board or Planning Director, as applicable, shall determine whether the proposal conforms to the permit criteria set forth in this Code, and shall approve, conditionally approve, or disapprove the application.**
- C. The final plan shall conform in all major respects with the approved preliminary development plan, and shall include all information included in the preliminary plan plus the following:**
 - 1. The location of water, sewerage and drainage facilities;**
 - 2. Preliminary building and landscaping plans and elevations, sufficient to indicate the general character of the development;**
 - 3. The general type and location of signs;**
 - 4. Topographic information as set forth in Section 4.035;**
 - 5. A map indicating the types and locations of all proposed uses; and**

- 6. A grading plan.**
- D. The final plan shall be sufficiently detailed to indicate fully the ultimate operation and appearance of the development or phase of development. However, Site Design Review is a separate and more detailed review of proposed design features, subject to the standards of Section 4.400.**
 - E. Copies of legal documents required by the Development Review Board or Planning Director, as applicable, for dedication or reservation of public facilities, or for the creation of a non-profit homeowner's association, shall also be submitted.**
 - F. Within 30 days after the filing of the final development plan, the Planning staff shall forward such development plan and the original application to the Tualatin Valley Fire and Rescue District, if applicable, and other agencies involved for review of public improvements, including streets, sewers and drainage. The Development Review Board or Planning Director, as applicable, shall not act on a final development plan until it has first received a report from the agencies or until more than 30 days have elapsed since the plan and application were sent to the agencies, whichever is the shorter period.**
 - G. Upon receipt of the final development plan, the Development Review Board or Planning Director, as applicable shall examine such plan and determine:1.Whether it conforms to all applicable criteria and standards; and2.Whether it conforms in all substantial respects to the preliminary approval; or3.Require such changes in the proposed development or impose such conditions of approval as are in its judgment necessary to insure conformity to the applicable criteria and standards.**
 - H. If the Development Review Board or Planning Director, as applicable, permits the applicant to revise the plan, it shall be resubmitted as a final development plan within 60 days. If the Board or Planning Director approves, disapproves or grants such permission to resubmit, the decision of the Board shall become final at the end of the appeal period for the decision, unless appealed to the City Council, in accordance with Sections 4.022 of this Code.**
 - I. All Stage II Site Development plan approvals shall expire two years after their approval date, if substantial development has not occurred on the property prior to that time. Provided, however, that the Development Review Board or Planning Director, as applicable, may extend these expiration times for up to three additional periods of not more than one year each. Applicants seeking time extensions shall make their requests in writing at least 30 days in advance of the expiration date. Requests for time extensions shall only be granted upon (1) a showing that the applicant has in good faith attempted to develop or market the property in the preceding year or that development can be expected to occur within the next year, and (2) payment of any and all Supplemental Street SDCs applicable to the development. Upon such payment, the development shall have vested traffic generation rights under [section] 4.140(.10), provided however, that if the Stage II approval should expire, the vested right to use trips is terminated upon City repayment, without interest, of Supplemental Street SDCs. For purposes of this Ordinance, "substantial development" is deemed to have occurred if the required building permits or public works permits have been issued for**

the development, and the development has been diligently pursued, including the completion of all conditions of approval established for the permit.

- J. A planned development permit may be granted by the Development Review Board or Planning Director, as applicable, only if it is found that the development conforms to all the following criteria, as well as to the Planned Development Regulations in Section 4.140:
1. The location, design, size and uses, both separately and as a whole, are consistent with the Comprehensive Plan, and with any other applicable plan, development map or Ordinance adopted by the City Council.

Finding: The development site is dedicated as public land by the Comprehensive plan and is designated as a neighborhood park in the Frog Pond West Master Plan, thus the proposed Frog Pond Neighborhood Park is consistent.

2. That the location, design, size and uses are such that traffic generated by the development at the most probable used intersection(s) can be accommodated safely and without congestion in excess of Level of Service D, as defined in the Highway Capacity Manual published by the National Highway Research Board, on existing or immediately planned arterial or collector streets and will, in the case of commercial or industrial developments, avoid traversing local streets. Immediately planned arterial and collector streets are those listed in the City's adopted Capital Improvement Program, for which funding has been approved or committed, and that are scheduled for completion within two years of occupancy of the development or four year if they are an associated crossing, interchange, or approach street improvement to Interstate 5.
 - b. In determining levels of Service D, the City shall hire a traffic engineer at the applicant's expense who shall prepare a written report containing the following minimum information for consideration by the Development Review Board:
 - i. An estimate of the amount of traffic generated by the proposed development, the likely routes of travel of the estimated generated traffic, and the source(s) of information of the estimate of the traffic generated and the likely routes of travel;
 - ii. What impact the estimate generated traffic will have on existing level of service including traffic generated by (1) the development itself, (2) all existing developments, (3) Stage II developments approved but not yet built, and (4) all developments that have vested traffic generation rights under section 4.140(.10), through the most probable used intersection(s), including state and county intersections, at the time of peak level of traffic. This analysis shall be conducted for each direction of travel if backup from other intersections will interfere with intersection operations.
 - c. The following are exempt from meeting the Level of Service D criteria standard:

- i. **A planned development or expansion thereof which generates three new p.m. peak hour traffic trips or less;**
- ii. **A planned development or expansion thereof which provides an essential governmental service.**
- d. **Traffic generated by development exempted under this subsection on or after Ordinance No. 463 was enacted shall not be counted in determining levels of service for any future applicant.**
- e. **Exemptions under 'b' of this subsection shall not exempt the development or expansion from payment of system development charges or other applicable regulations.**
- f. **In no case will development be permitted that creates an aggregate level of traffic at LOS "F".3.That the location, design, size and uses are such that the residents or establishments to be accommodated will be adequately served by existing or immediately planned facilities and services.**

Finding: The City's Engineering department determined a Traffic Impact Analysis is not necessary for the proposed development. As is referenced throughout the narrative, the proposed park is intended to serve the surrounding neighborhood. Vehicular traffic is not expected to increase with the installation of the park. Instead traffic to the park will be mostly pedestrians traveling on wheels or on foot.

General Development Regulations

Section 4.155 - General Regulations—Parking, Loading and Bicycle Parking.

(.02) General Provisions:

- A. The provision and maintenance of off-street parking spaces is a continuing obligation of the property owner. The standards set forth herein shall be considered by the Development Review Board as minimum criteria**

Finding: Vehicle parking spaces for parks are not specifically required by this code, as addressed in 4.155(.02)M. Additionally, Statewide Transportation Planning Rules, as determined by the Oregon Land Conservation and Development Department and outlined in the Parking Reform Near Transit Corridors rules (OAR 660-012-0440), states that:

(3) Cities and counties may not enforce parking mandates for developments on a lot or parcel that includes lands within one-half mile of frequent transit corridors, including:

- (a) Priority transit corridors designated under OAR 660-012-0710;*
- (b) Corridors with transit service arriving with a scheduled frequency of at least four times an hour during peak service; and*
- (c) If a community has no corridor qualifying under subsection (b), corridors with the most frequent transit service in the community if the scheduled frequency is at least once per hour during peak service.*

The South Metro Area Regional Transit (SMART) that serves Wilsonville, has no transit corridors qualifying under subsection (b) of this administrative rule. However, SMART Route 4 has the most frequent transit service within the community, as outlined in the SMART Route 4 transit schedule, with transit service arriving with a scheduled frequency of at least two times an hour during peak service. The closest transit bus stop to the proposed park is located at the intersection of SW Wilsonville Rd and SW Landover Dr. This transit bus stop is 0.4 miles walking distance from the south access of the proposed park, and 0.3 miles straight-line distance from the south access to the park. Therefore, in addition to the parking spaces not specifically being required by the City of Wilsonville's Planning and Development Ordinance, the City of Wilsonville may not enforce parking mandates for this proposed development in accordance with OAR 660-012-0440. This standard is met.

(.02) General Provisions:

M. Off-street parking requirements for types of uses and structures not specifically listed in this Code shall be determined by the Development Review Board if an application is pending before the Board. Otherwise, the requirements shall be specified by the Planning Director, based upon consideration of comparable uses.

Finding: The parking standards in Table 5 do not list Parks as a use. No minimum, maximum, and bicycle parking standards are outlined in the table. The proposed park is meant to be a neighborhood park to serve the surrounding residential neighborhood. It is anticipated that many who utilize the park will live within walking and biking distance to the park. On-street parking on the surrounding street network will provide parking for those who may drive to the proposed park. This standard is met.

(.04) Bicycle Parking :

A. Required Bicycle Parking – General Provisions

- 1. The required minimum number of bicycle parking spaces for each use category is shown in Table 5, Parking Standards**
- 2. Bicycle parking spaces are not required for accessory buildings. If a primary use is listed in Table 5, bicycle parking is not required for the accessory use.**
- 3. When there are two or more primary uses on a site, the required bicycle parking for the site is the sum of the required bicycle parking for the individual primary uses.**
- 4. Bicycle parking space requirements may be waived by the Development Review Board per Section 4.118(.03)A.9. and 10.**

Finding: The parking standards in Table 5 do not list Parks as a use. No minimum, maximum, and bicycle parking standards are outlined in the table. However, as previously referenced the proposed park is meant to be a neighborhood park to serve the surrounding residential neighborhood and it is anticipated that many who utilize the park will travel

to the park on wheels. While not required, in anticipation and encouragement of this need bicycle parking is provided at the north entrance of the park.

Section 4.156.02 – Sign Review Process and General Requirements.

(.01) Permit Required. Unless exempt under Section 4.156.05, no sign, permanent or temporary, shall be displayed or installed in the City without first obtaining a sign permit.

(.02) Sign Permits and Master Sign Plans. Many properties in the City have signs pre-approved through a Master Sign Plan. For the majority of applications where a Master Sign Plan has been approved the applicant need not consult the sign requirements for the zone, but rather the Master Sign Plan, copies of which are available from the Planning Division. Signs conforming to a Master Sign Plan require only a Class I Sign Permit.

(.03) Classes of Sign Permits, Master Sign Plans, and Review Process. The City has three classes of sign permits for permanent signs: Class I, Class II, and Class III. In addition, non-residential developments with three or more tenants require a Master Sign Plan. Class I sign permits are reviewed through the Class I Administrative Review Process as outlined in Subsection 4.030(.01)A. Class II sign permits are reviewed through the Class II Administrative Review Process as outlined in Subsection 4.030 (.01)B. Class III Sign Permits and Master Sign Plans are reviewed by the Development Review Board (DRB) as outlined in Section 4.031.

Finding: This proposal includes an application for a Class III Sign Permit for a proposed sign displaying the name of the park. The proposed sign will be located on the north frontage of the site in between two concrete pedestrian paths. Staff have instructed the Applicant that the Class II sign permit application will be reviewed by the Development Review Board. This standard is met.

(.05) Class II Sign Permit. Sign permit requests for meeting one or more of the descriptions listed in A. through C. below shall be processed as a Class II Sign Permit when the request does not conform with a Master Sign Plan or other previous sign approval but meets the requirements of the applicable sign regulations, unless the request would modify a condition of approval specifically imposed by the DRB or City Council:

Finding: This application includes a Class III Sign Permit for a proposed sign displaying the name of the park, located at the north frontage of the site in between two concrete pedestrian paths. Staff have instructed the Applicant that the Class II sign permit application will be reviewed by the Development Review Board. This standard is met.

E. Class II Sign Permit Submission Requirements: Application for a Class II Sign Permit shall include two paper copies and one electronic copy of the following in addition to all required fees:

- 1. Completed application form prescribed by the City and signed by the property owner or their authorized representative;**

2. **Sign drawings or descriptions of all materials, sign area and dimensions used to calculate areas, lighting methods, and other details sufficient to judge the full scale of the signs and related improvements;**
3. **Documentation of the lengths of building or tenant space facades used in calculating maximum allowed sign area;**
4. **Drawings of all building facades on which signs are proposed indicating the areas of the facades on which signs will be allowed; and**
5. **Narrative describing the scope of the project, including written findings addressing all applicable review criteria, along with any other information showing how the proposed signage conforms with requirements for the applicable zone.**

Finding: All of the required Class III Sign Permit materials have been submitted with this proposal. Drawings of the proposed sign are shown on the Sign Details (Sheet L6.40) provided in Appendix D.

F. Class II Sign Permit Review Criteria. Class II Sign Permits shall satisfy the sign regulations for the applicable zoning district and the Site Design Review Criteria in Sections 4.400 through 4.421, as well as the following criteria:

1. **The proposed signage is compatible with developments or uses permitted in the zone in terms of design, materials used, color schemes, proportionality, and location, so that it does not interfere with or detract from the visual appearance of surrounding development;**
2. **The proposed signage will not create a nuisance or result in a significant reduction in the value or usefulness of surrounding development; and**
3. **Special attention is paid to the interface between signs and other site elements including building architecture and landscaping, including trees.**

Finding: The proposed sign, shown on the Sign Details (Sheet L6.40) provided in Appendix D will complement the surrounding developments and uses in terms of design, materials, and color schemes. The proposed sign has been designed in accordance with the City of Wilsonville’s Citywide Signage & Wayfinding Plan, adopted in March 2019. The proposed sign features the City’s Preferred Design, the Undulating Stone concept, using the “Park Sign” example in the Citywide Signage & Wayfinding Plan for guidance on the proposed park sign. The high-quality design proposed meets the Citywide Signage & Wayfinding Plan objective which “captures the local character and is coherent and attractive” with other new signs and future signs in the City. The proposed sign is designed with local stone, soft curves of corten steel, and is accented by laser cut details that allows light through. The warm color of the corten steel on the proposed sign complements the City’s branding colors, resulting in a modern looking and aesthetically pleasing sign that displays the proposed park name. The proposed sign will not create a nuisance or result in reduction in value or usefulness of surrounding development, and the location of the sign placement has been determined in accordance with the Wayfinding Principles

outlined in the Citywide Signage & Wayfinding Plan, with the location enabling individuals to “easily and successfully find their destination”. Special consideration has been given to the interface between the proposed sign and the other proposed park elements including the picnic structure, walking paths, and existing natural elements and landscaping and planting plan in order to create an inviting experience when entering the site from the north. The above sign permit review criteria has been met.

Section 4.156.08 – Sign Regulations in the PDC, TC, PDI, and PF Zones.

(.01) Freestanding and Ground Mounted Signs:

- B. One freestanding or ground mounted sign is allowed for the first 200 linear feet of site frontage. One additional freestanding or ground mounted sign may be added for through and corner lots having at least 200 feet of frontage on one street or right-of-way and 100 feet on the other street or right-of-way.**
- C. The allowed height above ground of a freestanding or ground mounted sign is 20 feet except as noted in 1-2 below.**
- D. The maximum allowed area for each freestanding or ground-mounted sign is determined based on gross floor area and number of tenant spaces:**
 - 1. For frontages along streets other than those indicated in two below sign area allowed is calculated as follows:**
 - a. The sign area allowed for signs pertaining to a single tenant:**
 - i. For PF (Public Facility) zoned properties adjacent to residential zoned land the maximum allowed area is 32 square feet.**

Finding: One ground mounted sign displaying the name of the proposed park “Frog Pond Park” is proposed. The sign will also include the Wilsonville City logo. The park name and City logo will be displayed on a laser cut sign panel with a ledgestone base. The proposed sign will be located on the north frontage of the site in between two concrete pedestrian paths. The sign design and details are shown on the Sign Details (Sheet L6.40) provided in Appendix D. The site frontage exceeds 200 linear feet, and only one ground mounted sign is proposed. The proposed height of the sign is six feet and six inches. The ledgestone base is the widest point of the sign, which measures one foot four inches. The entire sign does not exceed the maximum allowed area of 32 square feet for the PF zone. This standard is met.

- E. Freestanding and ground mounted signs shall not extend into or above public rights-of-way, parking areas, or vehicle maneuvering areas.**

Finding: The proposed ground mounted sign does not extend into or above public rights-of-way, parking areas, or vehicle maneuvering areas. This standard is met.

- F. The location of free standing or ground mounted signs located adjacent to or near the Public Right-of-Way shall be in compliance with the City's Public Works Standards for sight**

distance clearance. Prior to construction, the location of the sign shall be approved by the City of Wilsonville Engineering Division.

Finding: The location of the ground mounted sign is in compliance with the City's Public Works Standards for sight distance clearance. Prior to construction, the location of the sign shall be approved by the City of Wilsonville Engineering Division, and the Applicant understands and acknowledges this criteria. This standard is met.

G. Freestanding and ground mounted signs shall be designed to match or complement the architectural design of buildings on the site.

Finding: The proposed sign has been designed to match and complement the architectural design of the proposed picnic shelter on the site, as well as other Wilsonville City Park signs. This standard is met.

H. For freestanding and ground mounted signs greater than eight feet in height, the width of the sign shall not exceed the height.

J. Freestanding and ground mounted signs shall be no further than 15 feet from the property line and no closer than two feet from a sidewalk or other hard surface in the public right-of-way.

Finding: The proposed sign is not greater than eight feet in height, and the sign is not proposed to be located further than 15 feet from the property line, and is not closer than two feet from a sidewalk or other hard surface in the public right-of-way as shown on the Site Plan (Sheet L1.01) provided in Appendix D. This standard is met.

K. Except for those signs fronting Interstate 5, freestanding and ground mounted signs shall include the address number of associated buildings unless otherwise approved in writing by the City and the Fire District.

Finding: No addressing of associated buildings are expected to be required for the proposed neighborhood park, therefore this standard is not applicable.

Section 4.175 – Public Safety and Crime Prevention

(.01) All developments shall be designed to deter crime and insure public safety.

(.02) Addressing and directional signing shall be designed to assure identification of all buildings and structures by emergency response personnel, as well as the general public.

(.03) Areas vulnerable to crime shall be designed to allow surveillance. Parking and loading areas shall be designed for access by police in the course of routine patrol duties.

(.04) Exterior lighting shall be designed and oriented to discourage crime.

Finding: This development has been designed to deter crime and ensure public safety. The park has open areas that are easily monitored by patrolling law enforcement and does not promote nighttime activity in the park. The park will be operated and managed by the City of Wilsonville Parks and Recreation department, and all standard maintenance and operations, addressing and directional signage, and other crime deterrence practices will be used. Safety lighting proposed has been designed in accordance with City of Wilsonville Parks and Recreation standards and is oriented to discourage crime. These standards are met.

Section 4.176 – Landscaping, Screening, and Buffer

(.03) Landscape Area. Not less than 15 percent) of the total lot area, shall be landscaped with vegetative plant materials. The ten percent parking area landscaping required by section 4.155.03(B)(1) is included in the 15 percent total lot landscaping requirement. Landscaping shall be located in at least three separate and distinct areas of the lot, one of which must be in the contiguous frontage area. Planting areas shall be encouraged adjacent to structures. Landscaping shall be used to define, soften or screen the appearance of buildings and off-street parking areas. Materials to be installed shall achieve a balance between various plant forms, textures, and heights. The installation of native plant materials shall be used whenever practicable. (For recommendations refer to the Native Plant List maintained by the City of Wilsonville).

Finding: The proposed use of the site as a park will provide over approximately 84 percent of the total lot area with landscaping, for a total of 102,628 square feet of planted area. The Site Plan, Landscape Plan, and Planting Plan demonstrate compliance with this criteria and are found in Appendix D. This standard is met.

(.06) Plant Materials:

A. Shrubs and Ground Cover. All required ground cover plants and shrubs must be of sufficient size and number to meet these standards within three years of planting. Non-horticultural plastic sheeting or other impermeable surface shall not be placed under mulch. Native topsoil shall be preserved and reused to the extent feasible. Surface mulch or bark dust are to be fully raked into soil of appropriate depth, sufficient to control erosion, and are confined to areas around plantings. Areas exhibiting only surface mulch, compost or barkdust are not to be used as substitutes for plant areas.

- 1. Shrubs. All shrubs shall be well branched and typical of their type as described in current AAN Standards and shall be equal to or better than 2-gallon containers and ten inches to 12 inches spread.**
- 2. Ground cover. Shall be equal to or better than the following depending on the type of plant materials used: gallon containers spaced at four feet on center minimum, four inch pot spaced two feet on center minimum, two one-fourth inch pots spaced at 18 inch on center minimum. No bare root planting shall be permitted. Ground cover shall be sufficient to cover at least 80 percent of the bare soil in required landscape areas**

within three years of planting. Where wildflower seeds are designated for use as a ground cover, the City may require annual re-seeding as necessary.

3. Turf or lawn in non-residential developments. Shall not be used to cover more than ten percent of the landscaped area, unless specifically approved based on a finding that, due to site conditions and availability of water, a larger percentage of turf or lawn area is appropriate. Use of lawn fertilizer shall be discouraged. Irrigation drainage runoff from lawns shall be retained within lawn areas.
 4. Plant materials under trees or large shrubs. Appropriate plant materials shall be installed beneath the canopies of trees and large shrubs to avoid the appearance of bare ground in those locations.
 5. Integrate compost-amended topsoil in all areas to be landscaped, including lawns, to help detain runoff, reduce irrigation and fertilizer needs, and create a sustainable, low-maintenance landscape.
- B. Trees.** All trees shall be well-branched and typical of their type as described in current American Association of Nurserymen (AAN) Standards and shall be balled and burlapped. The trees shall be grouped as follows:
1. Primary trees which define, outline or enclose major spaces, such as Oak, Maple, Linden, and Seedless Ash, shall be a minimum of two inch caliper.
 2. Secondary trees which define, outline or enclose interior areas, such as Columnar Red Maple, Flowering Pear, Flame Ash, and Honeylocust, shall be a minimum of 1¾ inch to 2 inch caliper.
 3. Accent trees which, are used to add color, variation and accent to architectural features, such as Flowering Pear and Kousa Dogwood, shall be 1¾ inch minimum caliper.
 4. Large conifer trees such as Douglas Fir or Deodar Cedar shall be installed at a minimum height of eight feet.
 5. Medium-sized conifers such as Shore Pine, Western Red Cedar or Mountain Hemlock shall be installed at a minimum height of five to six feet.
- C.** Where a proposed development includes buildings larger than 24 feet in height or greater than 50,000 square feet in footprint area, the Planning Director or the Development Review Board, as applicable, may require larger or more mature plant materials.
1. At maturity, proposed trees shall be at least one-half the height of the building to which they are closest, and building walls longer than 50 feet shall require tree groups located no more than 50 feet on center, to break up the length and height of the façade.
 2. Either fully branched deciduous or evergreen trees may be specified depending upon the desired results. Where solar access is to be preserved, only solar-friendly deciduous trees are to be used. Where year-round sight obscuring is the highest priority, evergreen trees are to be used.
 3. The following standards are to be applied:
 - a. Deciduous trees:
 - i. Minimum height of ten feet; and

- ii. Minimum trunk diameter (caliper) of two inches (measured at four and one-half feet above grade).
 - b. Evergreen trees: Minimum height of 12 feet.
- D. Street Trees. In order to provide a diversity of species, the Development Review Board may require a mix of street trees throughout a development. Unless the Board waives the requirement for reasons supported by a finding in the record, different types of street trees shall be required for adjoining blocks in a development.
 - 1. All trees shall be standard base grafted, well branched and typical of their type as described in current AAN Standards and shall be balled and burlapped (b&b). Street trees shall be planted at sizes in accordance with the following standards:
 - a. Arterial streets—Three inches minimum caliper
 - b. Collector streets—Two inches minimum caliper.
 - c. Local streets or residential private access drives—1¾ inches minimum caliper.
 - d. Accent or median tree—1¾ inches minimum caliper.
 - 2. The following trees and varieties thereof are considered satisfactory street trees in most circumstances; however, other varieties and species are encouraged and will be considered:
 - a. Trees over 50 feet mature height: *Quercus garryana* (Native Oregon White Oak), *Quercus rubra borealis* (Red Oak), *Acer Macrophyllum* (Native Big Leaf Maple), *Acer nigrum* (Green Column Black Maple), *Fraxinus americanus* (White Ash), *Fraxinus pennsylvannica* 'Marshall' (Marshall Seedless Green Ash), *Quercus coccinea* (Scarlet Oak), *Quercus pulustris* (PinOak), *Tilia americana* (American Linden).
 - b. Trees under 50 feet mature height: *Acer rubrum* (Red Sunset Maple), *Cornus nuttallii* (Native Pacific Dogwood), *Gleditsia triacanthos* (Honey Locust), *Pyrus calleryana* 'Bradford' (Bradford Pear), *Tilia cordata* (Little Leaf Linden), *Fraxinus oxycarpa* (Flame Ash).
 - c. Other street tree species. Other species may be specified for use in certain situations. For instance, evergreen species may be specified where year-round color is desirable and no adverse effect on solar access is anticipated. Water-loving species may be specified in low locations where wet soil conditions are anticipated.
- E. Types of Plant Species:
 - 1. Existing landscaping or native vegetation may be used to meet these standards, if protected and maintained during the construction phase of the development and if the plant species do not include any that have been listed by the City as prohibited. The existing native and non-native vegetation to be incorporated into the landscaping shall be identified.
 - 2. Selection of plant materials. Landscape materials shall be selected and sited to produce hardy and drought-tolerant landscaping. Selection shall be based on soil characteristics, maintenance requirements, exposure to sun and wind, slope and contours of the site, and compatibility with other vegetation that will remain on the site. Suggested species lists for street trees, shrubs and groundcovers shall be provided by the City of Wilsonville.

3. **Prohibited plant materials.** The City may establish a list of plants that are prohibited in landscaped areas. Plants may be prohibited because they are potentially damaging to sidewalks, roads, underground utilities, drainage improvements, or foundations, or because they are known to be invasive to native vegetation.
- F. **Tree Credit.** Existing trees that are in good health as certified by an arborist and are not disturbed during construction may count for landscaping tree credit as follows (measured at four and one-half feet above grade and rounded to the nearest inch):

Existing trunk diameter	Number of Tree Credits
18 to 24 inches in diameter	3 tree credits
25 to 31 inches in diameter	4 tree credits
32 inches or greater	5 tree credits

1. It shall be the responsibility of the owner to use reasonable care to maintain preserved trees. Trees preserved under this section may only be removed if an application for removal permit under Section 4.610.10(01)(H) has been approved. Required mitigation for removal shall be replacement with the number of trees credited to the preserved and removed tree.
 2. Within five years of occupancy and upon notice from the City, the property owner shall replace any preserved tree that cannot be maintained due to disease or damage, or hazard or nuisance as defined in Chapter 6 of this Code. The notice shall be based on complete information provided by an arborist. Replacement with the number of trees credited shall occur within one growing season of notice.
- G. **Exceeding Standards.** Landscape materials that exceed the minimum standards of this Section are encouraged, provided that height and vision clearance requirements are met.
- H. **Compliance with Standards.** The burden of proof is on the applicant to show that proposed landscaping materials will comply with the purposes and standards of this Section.

Finding: The proposed development includes a mix of landscaping including trees, shrubs, lawn, and a few existing trees to remain. There are 7 street trees, Bigleaf Linden (*Tilia cordata*) as required in the Frog Pond West Master Plan) along Brisband Street that have been recently installed as part of the new development to the north of the project site. They will be salvaged and replanted as described in sheets L0.02 and L5.01. The planting layout with this application including planting details is described on sheets L1.01, L5.00, and L5.01.. This standard is met.

(.08) Landscaping on Corner Lots. All landscaping on corner lots shall meet the vision clearance standards of Section 4.177. If high screening would ordinarily be required by this Code, low screening shall be substituted within vision clearance areas. Taller screening may be required outside of the vision clearance area to mitigate for the reduced height within it.

Finding: The proposed park is not located on a corner lot. The requirements of this section are not applicable.

Section 4.199. - Outdoor Lighting.

Section 4.199.20. - Applicability.

(.01) This Ordinance is applicable to:

- A. Installation of new exterior lighting systems in public facility, commercial, industrial and multi-family housing projects with common areas**

Finding: New exterior lighting is proposed on the subject site, which is in a public facility zone.

Section 4.199.30. - Lighting Overlay Zones.

(.01) The designated Lighting Zone as indicated on the Lighting Overlay Zone Map for a commercial, industrial, multi-family or public facility parcel or project shall determine the limitations for lighting systems and fixtures as specified in this Ordinance.

- A. Property may contain more than one lighting zone depending on site conditions and natural resource characteristics.**

(.02) The Lighting Zones shall be:

- A. LZ 2. Low-density suburban neighborhoods and suburban commercial districts, industrial parks and districts. This zone is intended to be the default condition for the majority of the City.**

Finding: The subject property is not designated on the Lighting Overlay Zone Map. Based on the description of LZ 2 including “Low-density suburban neighborhoods”, and based on discussion with City staff, the Applicant finds that the LZ 2 zone shall apply. This narrative will address those standards as applicable.

Section 4.199.40. - Lighting Systems Standards for Approval.

(.01) Non-Residential Uses and Common Residential Areas.

- A. All outdoor lighting shall comply with either the Prescriptive Option or the Performance Option below.**

Finding: The Applicant will comply with the Performance Option.

- C. Performance Option. If the lighting is to comply with the Performance Option, the proposed lighting design shall be submitted by the applicant for approval by the City meeting all of the following:**

- 1. The weighted average percentage of direct upright lumens shall be less than the allowed amount per Table 9.**

Finding: The weighted average percentage of direct upright lumens proposed will be less than the allowed amount of 5%. This standard can be met through a condition of approval.

2. The maximum light level at any property line shall be less than the values in Table 9, as evidenced by a complete photometric analysis including horizontal illuminance of the site and vertical illuminance on the plane facing the site up to the mounting height of the luminaire mounted highest above grade. The Building Official or designee may accept a photometric test report, demonstration or sample, or other satisfactory confirmation that the luminaire meets the shielding requirements of Table 7. Luminaires shall not be mounted so as to permit aiming or use in any way other than the manner maintaining the shielding classification required herein:
 - a. Exception 1. If the property line abuts a public right-of-way, including a sidewalk or street, the analysis may be performed across the street at the adjacent property line to the right-of-way.
 - b. Exception 2. If, in the opinion of the Building Official or designee, compliance is impractical due to unique site circumstances such as lot size or shape, topography, or size or shape of building, which are circumstances not typical of the general conditions of the surrounding area. The Building Official may impose conditions of approval to avoid light trespass to the maximum extent possible and minimize any additional negative impacts resulting to abutting and adjacent parcels, as well as public rights-of-way, based on best lighting practices and available lighting technology.

Lighting Zone	Maximum percentage of direct uplight lumens	Maximum Light Level at Property Line	
		Horizontal plane at grade (foot candles fc)	Vertical plane facing the site in question, from grade to mounting height of highest mounted luminaire (foot candles - fc)
LZ 2	100	0.2 fc	.04 fc

Finding: The Applicant has included a photometric analysis provided on Sheet E1.01 in Appendix D. The Applicant requests that Exception 2 is granted for this application due to site circumstances. The location of the light poles in the south portion of the site has been determined as the best location to provide safety lighting between the proposed park and the adjacent elementary school connecting pathway. This lighting will provide a path for site users and neighbors who wish to use the path to traverse from the public right-of-way to the adjacent school in a safe and accessible manner. This standard is met.

3. The maximum pole or mounting height shall comply with Table 8. The maximum luminaire lamp wattage and shielding shall comply with Table 7.

Lighting Zone	Lighting for walkways, bikeways, plazas and other pedestrian areas
LZ 2	18

(non-relevant table information omitted)

Table 7: Maximum Wattage And Required Shielding				
Lighting Zone	Fully Shielded	Shielded	Partly Shielded	Unshielded
LZ 2	100	35	39	Low voltage landscape lighting 50 watts or less

(non-relevant table information omitted)

Finding: The proposed mounted lighting will be mounted at 10 feet, as demonstrated on Sheet E1.00 in Appendix D. The proposed 10 foot mounted lighting complies with the Table 8 Maximum Lighting Mounting Height In Feet. The proposed lighting will be appropriately shielded and can meet the Table 7 standards through a condition of approval. This standard is met.

Site Design Review

Section 4.400 Site Design Review Purpose.

(.01) Excessive uniformity, inappropriateness or poor design of the exterior appearance of structures and signs and the lack of proper attention to site development and landscaping in the business, commercial, industrial and certain residential areas of the City hinders the harmonious development of the City, impairs the desirability of residence, investment or occupation in the City, limits the opportunity to attain the optimum use in value and improvements, adversely affects the stability and value of property, produces degeneration of property in such areas and with attendant deterioration of conditions affecting the peace, health and welfare, and destroys a proper relationship between the taxable value of property and the cost of municipal services therefor.

Finding: The design of the proposed neighborhood park will fit harmoniously with the surrounding residential areas of the City and will not adversely affect the community. This standard is met.

(.02) The City Council declares that the purposes and objectives of site development requirements and the site design review procedure are to:

- A. Assure that Site Development Plans are designed in a manner that insures proper functioning of the site and maintains a high quality visual environment.**
- B. Encourage originality, flexibility and innovation in site planning and development, including the architecture, landscaping and graphic design of said development;**
- C. Discourage monotonous, drab, unsightly, dreary and inharmonious developments;**
- D. Conserve the City's natural beauty and visual character and charm by assuring that structures, signs and other improvements are properly related to their sites, and to surrounding sites and structures, with due regard to the aesthetic qualities of the natural terrain and landscaping, and that proper attention is given to exterior appearances of structures, signs and other improvements;**

- E. **Protect and enhance the City's appeal and thus support and stimulate business and industry and promote the desirability of investment and occupancy in business, commercial and industrial purposes;**
- F. **Stabilize and improve property values and prevent blighted areas and, thus, increase tax revenues;**
- G. **Insure that adequate public facilities are available to serve development as it occurs and that proper attention is given to site planning and development so as to not adversely impact the orderly, efficient and economic provision of public facilities and services.**
- H. **Achieve the beneficial influence of pleasant environments for living and working on behavioral patterns and, thus, decrease the cost of governmental services and reduce opportunities for crime through careful consideration of physical design and site layout under defensible space guidelines that clearly define all areas as either public, semi-private, or private, provide clear identity of structures and opportunities for easy surveillance of the site that maximize resident control of behavior—particularly crime;**
- I. **Foster civic pride and community spirit so as to improve the quality and quantity of citizen participation in local government and in community growth, change and improvements;**
- J. **Sustain the comfort, health, tranquility and contentment of residents and attract new residents by reason of the City's favorable environment and, thus, to promote and protect the peace, health and welfare of the City.**

Finding: The proposal is consistent with the purposes and objectives of site development requirements and the site design review procedure, and the proposed park has been designed to ensure a high quality visual environment and functionality. Flexibility in site planning and development is demonstrated through the incorporation and highlighting of existing natural elements of the site. The proposed structures, signs, walking paths, and interactive elements of the park are designed to provide additional public facilities, and to provide a pleasant environment for living in the adjacent neighborhood that the park will serve. The Applicant has taken into consideration these purposes and objectives in designing the park and the facilities provided in order to improve the contentment of residents, and to foster community spirit.

Section 4.421 – Criteria and Application of Design Standards.

(.01) The following standards shall be utilized by the Board in reviewing the plans, drawings, sketches and other documents required for Site Design Review. These standards are intended to provide a frame of reference for the applicant in the development of site and building plans as well as a method of review for the Board. These standards shall not be regarded as inflexible requirements. They are not intended to discourage creativity, invention and innovation. The specifications of one or more particular architectural styles is not included

in these standards. (Even in the Boones Ferry Overlay Zone, a range of architectural styles will be encouraged.)

- A. *Preservation of Landscape.*** The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soils removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas.

Finding: The proposed park design includes the preservation and incorporation of existing landscaped areas on the subject property as appropriate. The existing landscaping will be enhanced through additional plantings, pathways, and passive and active recreation areas. The preservation of landscape is demonstrated on the Tree Removal Plan (Sheet L0.02), provided in Appendix D. The only trees proposed for removal are for the pedestrian connection to the west of the subject property to be completed. The minimal removal of trees and soils, and grading proposed will keep with the general appearance of the neighboring developed area and keep with the general appearance of other public parks within the City. This standard is met.

- B. *Relation of Proposed Buildings to Environment.*** Proposed structures shall be located and designed to assure harmony with the natural environment, including protection of steep slopes, vegetation and other naturally sensitive areas for wildlife habitat and shall provide proper buffering from less intensive uses in accordance with Sections 4.171 and 4.139 and 4.139.5. The achievement of such relationship may include the enclosure of space in conjunction with other existing buildings or other proposed buildings and the creation of focal points with respect to avenues of approach, street access or relationships to natural features such as vegetation or topography.

Finding: The proposed park shelter is located and designed to harmonize with and enhance the natural environment of the site. The location of the proposed picnic shelter maintains visual connectivity from the pedestrian right's-of-way and other portions of the park. The picnicking area is angled to take in the view from the west as the park slopes downward to the southeast, taking advantage of the natural sloping and reflecting a valley. Protection of slopes, existing non-invasive vegetation, and sensitive areas have been taken into consideration with the location of the structure. The proposed 530 square foot shelter has been designed in accordance with this standard to protect and enhance the natural environment present on the site. This standard is met.

- C. *Drives, Parking and Circulation.*** With respect to vehicular and pedestrian circulation, including walkways, interior drives and parking, special attention shall be given to location and number of access points, general interior circulation, separation of pedestrian and vehicular traffic, and arrangement of parking areas that are safe and convenient and, insofar as practicable, do not detract from the design of proposed buildings and structures and the neighboring properties.

Finding: The proposed park was designed with special consideration and attention given to the access points. The intent for the proposed park is to be an inviting neighborhood park with park users expected to primarily walk and bike to the park, with the park serving primarily the surrounding neighborhood. The access points have been located in order to provide accessible entrance for pedestrians with access points off of the surrounding local streets. The proposed park also has been designed with an access connection to the elementary school on the adjacent site, to the west of the proposed park. This design helps to separate pedestrian activity from vehicular traffic for safety and practicability. This standard is met.

D. *Surface Water Drainage.* Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties of the public storm drainage system.

Finding: The proposed park is exempt from stormwater management requirements per WPDO Section 301.1.04.f. which states that pedestrian and bicycle improvements (sidewalks, trails, pathways, and bicycle paths/lanes) where no other impervious surfaces are created or replaced, built to direct stormwater runoff to adjacent vegetated areas are exempt from stormwater management requirements. The requirements of this section are not applicable.

E. *Utility Service.* Any utility installations above ground shall be located so as to have a harmonious relation to neighboring properties and site. The proposed method of sanitary and storm sewage disposal from all buildings shall be indicated.

Finding: The utility service proposed to serve the site are shown on the Brisband Plan and Profile (Sheet C7.20) provided in Appendix D. This standard is met.

F. *Advertising Features.* In addition to the requirements of the City's sign regulations, the following criteria should be included: the size, location, design, color, texture, lighting and materials of all exterior signs and outdoor advertising structures or features shall not detract from the design of proposed buildings and structures and the surrounding properties.

Finding: No advertising features are proposed with this application. This standard is not applicable.

G. *Special Features.* Exposed storage areas, exposed machinery installations, surface areas, truck loading areas, utility buildings and structures and similar accessory areas and structures shall be subject to such setbacks, screen plantings or other screening methods as shall be required to prevent their being incongruous with the existing or

contemplated environment and its surrounding properties. Standards for screening and buffering are contained in Section 4.176.

Finding: The proposed park will not include any of the special features listed above. The park shelter meets the applicable setback requirements and has been designed to complement the surrounding environment and properties. This standard is met.

Tree Preservation and Protection

Section 4.620.00 – Tree Relocation, Mitigation, or Replacement

(.01) Requirement Established. A Type B or C Tree Removal Permit grantee shall replace or relocate each removed tree having six inches or greater d.b.h. within one year of removal.

(.02) Basis For Determining Replacement. The permit grantee shall replace removed trees on a basis of one tree replanted for each tree removed. All replacement trees must measure two inches or more in diameter. Alternatively, the Planning Director or Development Review Board may require the permit grantee to replace removed trees on a per caliper inch basis, based on a finding that the large size of the trees being removed justifies an increase in the replacement trees required. Except, however, that the Planning Director or Development Review Board may allow the use of replacement Oregon white oaks and other uniquely valuable trees with a smaller diameter.

(.03) Replacement Tree Requirements. A mitigation or replacement tree plan shall be reviewed by the City prior to planting and according to the standards of this subsection.

- B.** Replacement trees shall have shade potential or other characteristics comparable to the removed trees, shall be appropriately chosen for the site from an approved tree species list supplied by the City, and shall be state Department of Agriculture Nursery Grade No. 1 or better.
- C.** Replacement trees must be staked, fertilized and mulched, and shall be guaranteed by the permit grantee or the grantee's successors-in-interest for two years after the planting date.
- D.** A "guaranteed" tree that dies or becomes diseased during that time shall be replaced.
- E.** Diversity of tree species shall be encouraged where trees will be replaced, and diversity of species shall also be maintained where essential to preserving a wooded area or habitat.

Finding: The Arborist Report submitted with this application and provided in Appendix C details the Tree Maintenance and Protection Plan. The Arborist Report includes the full information of all trees inventoried on the site, as well as the mitigation requirements for the trees proposed for removal, and the tree protection specifications for all trees on the site that are planned for protection. In total there are nine trees to be removed, shown on the Tree Removal and Protection Plan (Sheet L0.02) in Appendix D. Of the nine trees to be removed, four are in Poor Condition, four are in Fair Condition, and one is in Good Condition. The nine trees for removal include:

- Tree #4087, a 7-inch diameter Oregon ash (*Fraxinus latifolia*), in generally good condition but is not expected to be a long-term site amenity due to the arrival of Emerald ash borer, a destructive wood-boring pest of ash trees, to our region;
- Trees #4088, #4090, two princess trees (*Paulownia tomentosa*) measuring 13-inches and 19-inches diameter each, are widely accepted as an invasive species in our region;
- Tree #4108, a 10-inch diameter Norway maple (*Acer platanoides*), which is widely accepted as an invasive species in our region;
- Tree #4089, a multi-stemmed pear (*Pyrus sp.*), which is in poor condition and has very poor structure;
- Tree #4110, a 9-inch diameter sweetgum in fair condition, but with multiple leaders and an history of branch failure and lower trunk decay, and
- Trees #4330, #4331, and #4332, a dense group of Lombardy poplars (*Populus nigra*) which are in fair to poor condition with dieback and crown decay. These three trees are located in the SROZ near the southeast corner of the site. Lombardy poplar is a fast-growing and short-lived species that tends to fall apart with maturity. These trees are declining and will be replaced with native Sitka willow (*Salix sitchensis*).

The replacement trees are majority native species with a range of mature sizes, chosen to enhance the vertical layering (canopy, subcanopy) of vegetation on site which promotes ecological diversity and resilience. The replacement trees proposed include one bigleaf maple (*Acer macrophyllum*), five western redbuds (*Cercis canadensis*), and one saucer magnolia (*Magnolia x Soulangeana*), as well as three native Sitka willow (*Salix sitchensis*) trees to be planted in the SROZ. All replacement trees will be a minimum 2-inch caliper each. In addition, two 6- to 8-foot-tall giant sequoias, along with numerous other trees and ground cover plants are proposed to be planted in the park. All nine of the proposed mitigation trees, as well as additional landscape materials proposed for the site are demonstrated on the Planting Plan (Sheet L5.01) in Appendix D. The total number of trees to be planted on the site is 40, with 7 salvaged street trees along Brisband, which exceeds the requirement of nine trees replacement trees to mitigate the nine trees being removed. The replacement trees will have comparable shade potential or other characteristics to the removed trees, and have been chosen from the approved tree species list supplied by the City. This standard is met.

(.04) All trees to be planted shall consist of nursery stock that meets requirements of the American Association of Nurserymen (AAN) American Standards for Nursery Stock (ANSI Z60.1) for top grade.

(.05) Replacement Tree Location.

A. City Review Required. The City shall review tree relocation or replacement plans in order to provide optimum enhancement, preservation and protection of wooded areas. To the extent feasible and desirable, trees shall be relocated or replaced on-site and within the same general area as trees removed.

B. Relocation or Replacement Off-Site. When it is not feasible or desirable to relocate or replace trees on-site, relocation or replacement may be made at another location approved by the City.

(.06) City Tree Fund. Where it is not feasible to relocate or replace trees on site or at another approved location in the City, the Tree Removal Permit grantee shall pay into the City Tree Fund, which fund is hereby created, an amount of money approximately the value as defined by this subchapter, of the replacement trees that would otherwise be required by this subchapter. The City shall use the City Tree Fund for the purpose of producing, maintaining and preserving wooded areas and heritage trees, and for planting trees within the City.

- A.** The City Tree Fund shall be used to offer trees at low cost on a first-come, first-serve basis to any Type A Permit grantee who requests a tree and registers with the City Tree Fund.
- B.** In addition, and as funds allow, the City Tree Fund shall provide educational materials to assist with tree planting, mitigation, and relocation.

(.07) Exception. Tree replacement may not be required for applicants in circumstances where the Director determines that there is good cause to not so require. Good cause shall be based on a consideration of preservation of natural resources, including preservation of mature trees and diversity of ages of trees. Other criteria shall include consideration of terrain, difficulty of replacement and impact on adjacent property.

Finding: This proposal requires the removal of trees to construct the necessary site improvements and frontage improvements along SW Wehler Way. A total of 40 trees will be planted on the site, and 7 salvaged street trees along Brisband, as detailed in the Plant Schedule and Notes (Sheet L5.00), and demonstrated on the Planting Plan (Sheet L5.01) provided in Appendix D. The proposed trees have been chosen in accordance with this code. This standard is met.

Section 4.620.10 – Tree Protection During Construction

(.01) Where tree protection is required by a condition of development under Chapter 4 or by a Tree Maintenance and Protection Plan approved under this subchapter, the following standards apply:

- A.** All trees required to be protected must be clearly labeled as such.
- B. Placing Construction Materials Near Tree.** No person may conduct any construction activity likely to be injurious to a tree designated to remain, including, but not limited to, placing solvents, building material, construction equipment, or depositing soil, or placing irrigated landscaping, within the drip line, unless a plan for such construction activity has been approved by the Planning Director or Development Review Board based upon the recommendations of an arborist.
- C. Attachments to Trees During Construction.** Notwithstanding the requirement of WC 4.620.10(1)(A), no person shall attach any device or wire to any protected tree unless needed for tree protection.
- D. Protective Barrier.** Before development, land clearing, filling or any land alteration for which a Tree Removal Permit is required, the developer shall erect and maintain suitable barriers as identified by an arborist to protect remaining trees. Protective barriers shall remain in place until the City authorizes their removal or issues a final certificate of occupancy, whichever occurs first. Barriers shall be sufficiently substantial to withstand

nearby construction activities. Plastic tape or similar forms of markers do not constitute "barriers." The most appropriate and protective barrier shall be utilized. Barriers are required for all trees designated to remain, except in the following cases:

1. **Rights-of-Way and Easements.** Street right-of-way and utility easements may be cordoned by placing stakes a minimum of 50 feet apart and tying ribbon, plastic tape, rope, etc., from stake to stake along the outside perimeters of areas to be cleared.
2. **Any property area separate from the construction or land clearing area onto which no equipment will venture may also be cordoned off as described in paragraph (D) of this subsection, or by other reasonable means as approved by the reviewing authority.**

Finding: All trees that are required to be protected will be protected with the measures described in this code. All 20 off-site trees are planned for protection, along with 20 on-site trees proposed for retention. The other nine on-site trees proposed for removal for construction and site improvements will be mitigated in accordance with this code. Protection measures are described in the notes section of the Tree Protection and Removal Plan (Sheet L0.02) in Appendix D, and further detailed in the Arborist Report provided in Appendix C. Compliance will be verified prior to issuance of grading permits. This standard is met.

SUMMARY AND CONCLUSION

Based upon the materials submitted herein, the Applicant respectfully requests approval from the City of Wilsonville Development Review Board for this application.



Frog Pond Neighborhood Park – Wilsonville, Oregon
Tree Maintenance and Protection Plan
March 29, 2024

MHA23042

Purpose

This Tree Maintenance and Protection Plan for the Frog Pond Neighborhood Park development project located in Wilsonville, Oregon, is provided pursuant to City of Wilsonville Development Code (WDC) Section 4.610.40. This arborist report describes the existing trees located on and directly adjacent to the project site, as well as recommendations for tree removal, retention, mitigation and protection. This report is based on observations made by International Society of Arboriculture (ISA) Board Certified Master Arborist (PN-6145B) and Qualified Tree Risk Assessor Morgan Holen during a site visit conducted on October 11, 2023, an on-site design team meeting conducted on November 7, 2023, and subsequent tree plan coordination with Mayer/Reed, Inc. and 3J Consulting.

Scope of Work and Limitations

Morgan Holen & Associates, LLC, was contracted by the City of Wilsonville to visually assess existing trees measuring six inches in diameter and larger in terms of general condition and suitability for preservation with site development, and to develop a tree maintenance and protection plan for the project in coordination with Mayer/Reed, Inc. and 3J Consulting. Prior to our fieldwork, an existing conditions survey was provided to us by Mayer/Reed, Inc. illustrating the location of existing trees and survey point numbers. In accordance with WDC Section 4.610.40(.02)(A)(2)(b), all trees being retained have been identified by numbered metal tags corresponding with the tree plan.

Visual Tree Assessment (VTA¹) was performed on existing individual trees located on and directly adjacent to the project site. Individual trees were evaluated in terms of species, diameter, crown radius, general condition and potential construction impacts. Following the tree inventory fieldwork, we coordinated with the design team and City staff to discuss and finalize treatment recommendations for tree removal and protection based on the proposed site plan.

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

General Description

The 2.9-acre Frog Pond Neighborhood Park project site is located within Frog Pond West adjacent to the primary school currently under construction on Boeckman Road. The site is undeveloped and relatively flat. The project proposes to develop a neighborhood park with walking paths, a playground and fitness area, a picnic shelter, benches, a drinking fountain, and landscaping. The eastern portion of the site includes a mapped Significant Resource Overlay Zone (SROZ).

¹ Visual Tree Assessment (VTA): The standard process of visual tree inspection whereby the inspector visually assesses the tree from a distance and up close, looking for defect symptoms and evaluating overall condition and vitality.

In all, 49 existing trees were inventoried including 29 on-site trees and 20 off-site trees representing 16 different species. One of the inventoried trees is an Oregon white oak (*Quercus garryana*), tree #5002, that is located just off-site to the east and planned for protection with site development. Otherwise, there are no native yews (*Taxus brevifolia*) or any species listed by either the state or federal government as rare or endangered. Table 1 provides a summary of the count of inventoried trees by species and general location. A complete description of individual trees is provided in the enclosed tree data.

Table 1. Count of Inventoried Trees by Species and Location – Frog Pond Neighborhood Park.

Common Name	Species Name	On-Site	Off-Site	Total	Percent*
Austrian pine	<i>Pinus nigra</i>	1		1	2%
black cottonwood	<i>Populus trichocarpa</i>		12	12	24%
blue spruce	<i>Picea pungens</i>	2		2	4%
Douglas-fir	<i>Pseudotsuga menziesii</i>	14	4	18	37%
giant sequoia	<i>Sequoiadendron giganteum</i>	1		1	2%
Lombardy poplar	<i>Populus nigra</i>	3		3	6%
Norway maple^	<i>Acer platanoides</i>	1		1	2%
Oregon ash	<i>Fraxinus latifolia</i>	1		1	2%
Oregon white oak	<i>Quercus garryana</i>		1	1	2%
pear	<i>Pyrus sp.</i>	1		1	2%
pin oak	<i>Quercus palustris</i>	1		1	2%
princess tree^	<i>Paulownia tomentosa</i>	2		2	4%
river birch	<i>Betula nigra</i>		1	1	2%
Scouler's willow	<i>Salix scouleriana</i>	1	1	2	4%
sweetgum	<i>Liquidambar styraciflua</i>	1		1	2%
weeping willow	<i>Salix babylonica</i>		1	1	2%
Total		29	20	49	100%
Percent		59%	41%		

*Percent total by species does not sum to 100 due to rounding.

^Identifies trees widely accepted as invasive in our region.

Tree Plan Recommendations

As described in the enclosed tree data, individual trees were assigned a general condition rating as follows, although no dead trees were identified:

- D:** Dead
- P:** Poor Condition
- F:** Fair Condition
- G:** Good Condition

Treatment recommendations include remove, retain or protect; the term “retain” is used for on-site trees, while the term “protect” is used for off-site trees. Table 2 provides a summary of the count of trees by treatment and general condition rating.

Table 2. Count of Inventoried Trees by Treatment and General Condition Rating.

Treatment	General Condition Rating				Total	Percent
	D	P	F	G		
Remove	-	4	4	1	9	18%
Retain (on-site)	-	1	13	6	20	41%
Protect (off-site)	-	5	12	3	20	41%
Total	-	10	29	10	49	100%
Percent*	-	20%	59%	20%		

*Percent total by condition does not sum to 100 due to rounding.

All 20 off-site trees are planned for protection, along with 20 on-site trees proposed for retention. The other nine on-site trees are proposed for removal for construction and site improvements. The nine trees proposed for removal include:

- Tree #4087, a 7-inch diameter Oregon ash (*Fraxinus latifolia*) in generally good condition that is not expected to be a long-term site amenity due to the arrival of Emerald ash borer to our region.
- Trees #4088, #4090 and #4108, two princess trees (*Paulownia tomentosa*) measuring 13-inch and 19-inch diameter each, respectively, and one 10-inch diameter Norway maple (*Acer platanoides*), which are widely accepted as invasive species in our region.
- Tree #4089, a multi-stemmed pear (*Pyrus* spp.) tree in poor condition and with very poor structure.
- Tree #4110, a 9-inch diameter sweetgum in generally fair condition, but with multiple leaders, a history of branch failure and lower trunk decay.
- Trees #4330, #4331 and #4332, a dense group of Lombardy poplars (*Populus nigra*) in fair to poor condition with dieback and crown decay. These trees are located in the SROZ near the southeast corner of the site. Lombardy poplar is a fast-growing and short-lived species that tends to fall apart with maturity. These trees are declining and will be replaced with native willows.

For the 20 on-site trees and 20 off-site trees to be retained and protected, tree protection fencing is specified at 5-feet beyond the dripline for all on-site trees and at the dripline of off-site trees at a minimum. The 20 on-site trees planned for retention are further described below:

- Bartlett Tree Experts conducted exploratory air-spade excavation at tree #3334, a 41-inch diameter giant sequoia (*Sequoiadendron giganteum*) on February 12, 2024 to evaluate potential root impacts for proposed sidewalk construction. Four roots measuring approximately 1-inch diameter were revealed and flagged on the western side of the excavation. Based on these findings, the sidewalk was designed to meander south of the tree 5-feet beyond the dripline and be built up from native grade with minimal excavation (removal of the uppermost organic matter only). No work is proposed inside the tree protection fencing, but arborist oversight of sidewalk construction is recommended to ensure that any exposed roots are properly pruned. In addition, Bartlett recommends installing 4-inches of wood-based mulch beneath the dripline of tree #3334 during spring 2024 and using a drip hose to providing supplemental watering to the tree during summer 2024, as needed, based on findings from a soil moisture meter.

- No construction is proposed within the tree protection fencing at the dense stand of 14 Douglas-firs (*Pseudotsuga menziesii*), two blue spruces (*Picea pungens*) and one Austrian pine (*Pinus nigra*) near the southwest corner of the site, except the tree protection fencing must be opened temporarily to remove two trees inside the protection zone, #4090 and #4108. The stumps of these two trees shall be removed by gridding the stump face below grade. In addition, protection fencing may be temporarily opened to remove blackberries by hand and with hand tools only and to access the stand to prune low-lying limbs up to 8-feet above ground level and to remove dead and defective branches as needed. Pruning shall be performed by a Qualified Tree Service. For final landscaping, 3- to 4-inches of wood-based mulch will be applied to the ground surface and native ground cover vegetation and shrubs may be planted by hand, adjusting plant locations as needed to avoid tree root impacts. Irrigation is not recommended beneath the protected tree driplines; use only drip irrigation installed at new plantings, if needed.
- No construction is proposed within the tree protection zone at tree #4086, a 22-inch diameter pin oak (*Quercus palustris*) in fair condition, or tree #4333, a multi-stemmed Scouler's willow (*Salix scouleriana*) in poor condition with a history of branch failure, dieback and decay located in the SROZ. This declining willow has habitat value in the natural resource zone and proposed bench locations along the path were adjusted to be placed well away from this declining tree.

Mitigation Requirements

The nine trees planned for removal are at least 6-inches in diameter and require mitigation per Section 4.620.00; removed trees shall be replaced on a basis of one tree planted for each tree removed. Therefore, nine trees shall be planted as mitigation for tree removal.

In accordance with Section 4.620.00(.03), replacement trees shall have shade potential or other characteristics comparable to the removed trees, shall be appropriately chosen for the site from an approved tree species list supplied by the City, and shall be state Department of Agriculture Nursery Grade No. 1 or better. Replacement trees must be staked, fertilized and mulched, and shall be guaranteed by the permit grantee or the grantee's successors-in-interest for two years after the planting date. A "guaranteed" tree that dies or becomes diseased during that time shall be replaced. Diversity of tree species shall be encouraged where trees will be replaced, and diversity of species shall also be maintained where essential to preserving a wooded area or habitat. All trees to be planted shall consist of nursery stock that meets requirements of the American Association of Nurserymen (AAN) American Standards for Nursery Stock (ANSI Z60.1) for top grade. A mitigation or replacement tree plan is required prior to planting.

Sheet L5.01 details the proposed planting plan which includes one bigleaf maple (*Acer macrophyllum*), five western redbuds (*Cercis canadensis*) and one saucer magnolia (*Magnolia x Soulangeana*), all minimum 2-inch caliper each, and two 6- to 8-foot-tall giant sequoias, along with numerous other trees, shrubs and ground cover plants.

Tree Protection Specifications

The following tree protection measures are provided in accordance with WDC Section 4.620.10 and arborist recommendations specific to this project, and should be copied onto construction documents.

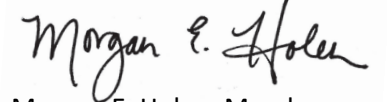
1. **Preconstruction Conference.** Prior to the start of construction activity, the contractor shall coordinate with the Project Arborist in a timely manner to review the tree protection plan, verify that trees to be retained are identified with numbered tags, confirm that trees to be removed are clearly marked, and to inspect and verify the installation of tree protection measures.
2. **Fencing.** Trees to remain on site shall be protected by installation of tree protection fencing as depicted on site plans in order to prevent injury to tree trunks or roots, or soil compaction, within the root protection area. Unless otherwise approved by the City, fences shall be a minimum 6-foot high 2-inch chain link mesh secured to metal posts driven into the ground. The contractor is responsible for coordinating with the Project Arborist in a timely manner prior to opening, adjusting or removing tree protection fencing.
3. **Tree Protection Zone.** Without authorization from the Project Arborist, none of the following shall occur beneath the dripline of any protected tree:
 - a) Grade change or cut and fill;
 - b) New impervious surfaces;
 - c) Utility or drainage field placement;
 - d) Staging or storage of materials and equipment; or
 - e) Vehicle maneuvering.

Root protection zones may be entered for tasks like surveying, measuring and sampling. Fences must be closed upon completion of these tasks.

4. **Tree and Stump Removal.** Trees approved for removal shall be clearly marked with tree marking paint. Protection fencing may be temporarily opened to remove trees #4090 and #4108; directionally fell trees with caution to avoid damage to protected trees. The stumps of trees #4090 and #4108 shall be removed by grinding the stump face up to 6-inches below ground level; do not physically extract these two stumps from the ground.
5. **Crown Pruning.** Within the stand of evergreen trees near the southwest corner of the site, prune to raise crowns up to 8-feet above ground level and to remove dead and defective branches for safety. Pruning shall be performed by a Qualified Tree Service.
6. **Sidewalk Construction – Tree #3334.** The proposed sidewalk meandering south of tree #3334 shall be built up from native grade. Remove only the uppermost organic matter and coordinate with the project arborist to supervise and document root pruning that may be needed outside the 25-foot radius tree protection zone.
7. **Landscaping.** Remove blackberries and weeds from tree protection zones by hand and with hand tools only. Install 3- to 4-inches of wood-based mulch to the ground surface; do not pile mulch against tree trunks. If new plants are installed, field-fit planting locations to avoid tree root impacts. If irrigation is needed, use drip irrigation installed at-grade and directed to water new plantings only; no trenching of irrigation and no spray heads are allowed within tree protection zones.

Thank you for choosing Morgan Holen & Associates, LLC, to provide consulting arborist services for the Frog Pond Neighborhood Park project in Wilsonville, Oregon. Please contact us if you have questions or need any additional information.

Thank you,
Morgan Holen & Associates, LLC

A handwritten signature in black ink that reads "Morgan E. Holen". The signature is written in a cursive style with a large, stylized 'M' and 'H'.

Morgan E. Holen, Member
ISA Board Certified Master Arborist, PN-6145B
ISA Tree Risk Assessment Qualified
Forest Biologist

Enclosures: MHA23042 Frog Pond Neighborhood Park – Tree Data 10-11-2023 Rev. 11-10-2023

No.	Location	Common Name	Species Name	DBH ¹	C-Rad ²	Cond ³	Struct ⁴	Comments	Treatment
3298	Off-site	black cottonwood	<i>Populus trichocarpa</i>	6	8	P	P	One-sided with lean west	Protect
3299	Off-site	black cottonwood	<i>Populus trichocarpa</i>	12	20	F	P	One-sided with lean northwest, upper trunk damage	Protect
3300	Off-site	black cottonwood	<i>Populus trichocarpa</i>	16	12	F	P	One-sided with lean northwest, trunk damage	Protect
3301	Off-site	black cottonwood	<i>Populus trichocarpa</i>	9	10	F	P	One-sided with lean west	Protect
3302	Off-site	black cottonwood	<i>Populus trichocarpa</i>	10,11	15	F	M	Codominant stems, one-sided to west-southwest	Protect
3304	Off-site	Scouler's willow	<i>Salix scouleriana</i>	5x6	20	P	P	Multiple stems, trunk decay	Protect
3305	Off-site	river birch	<i>Betula nigra</i>	10	18	F	M	Crooked trunk, self-correcting	Protect
3306	Off-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	16	16	F	G		Protect
3307	Off-site	black cottonwood	<i>Populus trichocarpa</i>	13	10	F	M	Lower trunk and basal damage	Protect
3308	Off-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	20	18	G	M	Minor asymmetry	Protect
3309	Off-site	black cottonwood	<i>Populus trichocarpa</i>	35	28	G	M	Dead branches, history of branch failure	Protect
3310	Off-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	12	16	G	M	One-sided to east, growing into crown of 3309	Protect
3311	Off-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	12	15	P	P	Suppressed	Protect
3311	Off-site	black cottonwood	<i>Populus trichocarpa</i>	18	18	F	M	Crooked trunk, crown asymmetry	Protect
3334	On-site	giant sequoia	<i>Sequoiadendron giganteum</i>	41	20	F	M	Crown asymmetry	Retain
4086	On-site	pin oak	<i>Quercus palustris</i>	22	24	F	M	Multiple leaders at 20' with included bark, history of branch failure, some twig dieback	Retain
4087	On-site	Oregon ash	<i>Fraxinus latifolia</i>	7	8	G	M	Codominant leaders	Remove
4088	On-site	princess tree	<i>Paulownia tomentosa</i>	13	14	P	P	Thin crown, history of branch failures, invasive species	Remove
4089	On-site	pear	<i>Pyrus sp.</i>	3x2,3,4x5, 6,8,2x12	20	P	P	Cluster of stems, very poor structure	Remove
4090	On-site	princess tree	<i>Paulownia tomentosa</i>	19	18	F	M	Dead and broken branches, invasive species	Remove
4091	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	22	20	G	M	Appears to be a trunk wound about 2/3rd way up	Retain
4092	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	24	22	G	M	Codominant leaders with included bark	Retain
4093	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	20	20	F	M	Codominant leaders with included bark	Retain
4094	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	16	20	F	M	Self-correcting crooks in upper trunk	Retain
4095	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	13	20	F	M	Very one-sided to south	Retain
4096	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	22	20	F	M	Self-correcting crook in mid-trunk	Retain
4097	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	21	22	F	M		Retain
4098	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	16	18	F	M	Self-correcting crook in mid-trunk	Retain
4099	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	20	22	G	M		Retain
4100	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	21	21	G	M		Retain
4101	On-site	blue spruce	<i>Picea pungens</i>	12	14	F	M	Codominant leaders, very one-sided to south	Retain

No.	Location	Common Name	Species Name	DBH ¹	C-Rad ²	Cond ³	Struct ⁴	Comments	Treatment
4102	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	18	9	F	M	overcrowded	Retain
4103	On-site	blue spruce	<i>Picea pungens</i>	14	12	F	M	Crooks in mid trunk, self-correcting, very one-sided to south	Retain
4104	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	18	15	F	M		Retain
4105	On-site	Austrian pine	<i>Pinus nigra</i>	20	24	G	M	Lower trunk sweep, self-correcting	Retain
4106	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	20	16	F	M		Retain
4107	On-site	Douglas-fir	<i>Pseudotsuga menziesii</i>	19	18	G	M		Retain
4108	On-site	Norway maple	<i>Acer platanoides</i>	10	20	F	M	One-sided with lean west, trunk damage at 10' and at lower trunk, invasive species	Remove
4110	On-site	sweetgum	<i>Liquidambar styraciflua</i>	9	8	F	M	Multiple leaders, failed branches, decay pocket at lower trunk	Remove
4330	On-site	Lombardy poplar	<i>Populus nigra</i>	2x2,3,8	5	F	M		Remove
4331	On-site	Lombardy poplar	<i>Populus nigra</i>	3,2x10	6	P	M	Dieback	Remove
4332	On-site	Lombardy poplar	<i>Populus nigra</i>	15,16	8	P	P	Dying, crown decay	Remove
4333	On-site	Scouler's willow	<i>Salix scouleriana</i>	5x8,4x10, 12,15,16	25	P	P	History of branch failures, dieback, decay	Retain
5001	Off-site	weeping willow	<i>Salix babylonica</i>	26	32	F	M	Inaccessible, limited assessment, diameter estimated	Protect
5002	Off-site	Oregon white oak	<i>Quercus garryana</i>	14	16	F	M		Protect
5003	Off-site	black cottonwood	<i>Populus trichocarpa</i>	11	15	F	M	One-sided with lean west	Protect
5004	Off-site	black cottonwood	<i>Populus trichocarpa</i>	6	6	P	P	Suppressed, small one-sided crown with lean west, broken top	Protect
5005	Off-site	black cottonwood	<i>Populus trichocarpa</i>	6	8	P	P	Suppressed, small one-sided crown with lean west	Protect
5006	Off-site	black cottonwood	<i>Populus trichocarpa</i>	7	10	F	M	One-sided with lean west	Protect

¹DBH is tree diameter measured at 4.5-feet above the ground level, in inches. Trees with multiple stems splitting below DBH are measured individually and separated by a comma or recorded as quantity x size.

²C-Rad is the average crown radius measured in feet.

³Cond is an arborist assigned rating to generally describe the condition of individual trees as Dead, Poor, Fair or Good.

⁴Struct is an arborist assigned rating to generally describe the structure of individual trees as Poor, Moderate or Good.



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November 8, 2023

City of Wilsonville Community Development
c/o Mayer/Reed, Inc.
319 SW Washington Street, Suite 820
Portland, OR 97204

Attention: Anne Samuel

**Re: Report of Geotechnical Engineering Services:
CGS Project: Wilsonville-2-01
Frog Pond West Neighborhood Park Project (CIP #9175-80)
Wilsonville, Oregon**

Central Geotechnical Services, LLC (CGS) is pleased to submit this report of geotechnical engineering services for the proposed Frog Pond West Neighborhood Park Project; the City of Wilsonville's capital improvements project #9175-80). The report was prepared for conformance with the signed contract dated May 5, 2023. We appreciate the opportunity to be of service to Mayer/Reed Inc. and the City of Wilsonville. Please feel free to call our office with questions about this report.

Respectfully,

Central Geotechnical Services, LLC



Julio Vela, PhD, P.E., G.E.
Principal Engineer



Report of Geotechnical Engineering Services:

Frog Pond West Neighborhood Park

CGS Project: Wilsonville-2-01

Prepared For: City of Wilsonville c/o
Mayer/Reed, Inc.

Mayer/Reed, Inc.
319 SW Washington Street, Suite 820
Portland, Oregon 97204

November 8, 2023

Submitted by:



CENTRAL
GEOTECHNICAL SERVICES, LLC





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1.0 INTRODUCTION

Central Geotechnical Services, LLC (CGS) is pleased to submit this geotechnical engineering report for the proposed Frog Pond West Neighborhood Project located on the southwest corner of SW Ponderosa Avenue and SW Willow Creek Drive in Wilsonville, Oregon. Currently, the site is generally undeveloped except for a knee-high fence in the southeast corner of the property. Based on our review of aerial imagery the site was formerly occupied by two small footprint structures and an access road in the west half of the property. The location of the site is shown in the Vicinity Map, Figure 1.

Our understanding of the project was developed from discussions with, and information provided to us by Ms. Anne Samuel of Mayer/Reed (M/R), including a final concept design site plan by Mayer/Reed titled “*Site Plan – Frog Pond Neighborhood Park*” dated April 10, 2023, that was provided to us in an email dated September 5, 2023. Based on the information provided to us, we understand that the project will include a shelter building, playground equipment, conventional retaining walls, concrete and/or asphalt paved access drives for maintenance vehicles, gravel paths for pedestrian access, and two stormwater infiltration facilities.

At the time this report was prepared, specific building and traffic loads were not provided. To develop the recommendations presented herein, we have assumed structural loads consistent with development of similar relatively lightly loaded structures with design column and wall loads on the order of 10 kips and 2 kips per lineal foot (klf) or less, respectively, and floor loads of 100 psf or less.

2.0 PURPOSE AND SCOPE OF WORK

The purpose of our services was to provide geotechnical design and construction recommendations for general site development (infrastructure development, overall site grading and design recommendations) and for design of stormwater infrastructure and pavement. Our scope of services was provided in general accordance with our proposal titled “Proposal for Geotechnical Engineering Design Services,” dated May 30, 2023, and authorized September 15, 2023.

3.0 SITE CONDITIONS

3.1. Site Geology

The geology of the Tualatin Valley Region, Oregon (Schlicker and Deacon 1967) shows the project area as mantled by “Willamette Silt,” the term used by this publication for what is now more typically referred to as “fine-grained flood deposits” (Madin 1990). This alluvial sediment is described as “unconsolidated beds and lenses of fine sand, silt and clay.”. Subsurface conditions observed in our explorations are generally consistent with the site mapped geology. However, while not shown on the above referenced map shallow fill from grading activities for the previously existing structures and associated utilities are anticipated.

3.2. Surface Conditions

The site is approximately 2.9 acres of open grass- and weed-covered currently undeveloped ground, bordered by semi-mature coniferous trees along the site margins and blackberry bushes throughout. The project site is generally undeveloped except for existing fence in the southeast corner of the site, a north-south trending dirt



access road along the west margin, and an existing retaining wall along SW Ponderosa Avenue in the northeast corner. Site grades are generally flat or sloping gently down to the east.

3.3. Subsurface Conditions

Subsurface conditions at the site were explored by completing 6 exploratory hand auger borings (HA-1 through HA-6), between October 10 and October 13, 2023. Infiltration testing was performed in one of the hand auger borings (HA-5/INF-1) at a depth of approximately 4 feet below ground surface (bgs). Approximate locations of explorations completed at the site are presented in Figure 2. Logs of our explorations completed for this study are presented in Appendix A.

Soil samples obtained during explorations were taken to CGS's laboratory for further evaluation. Selected samples were tested for determination of moisture content. A description of laboratory testing and test results are presented in Appendix A.

We observed up to approximately 2.5-ft of fill in HA-1 consisting of medium stiff to stiff gravelly silt with sand that was likely placed during previous site grading or adjacent site development. Other than the Fill, subsurface conditions beneath the topsoil at the site are generally consistent with mapped site geology, except and are composed of stiff to very stiff native, brown silt with varying amounts of clay and sand observed to extend up to the maximum depths observed in our explorations of approximately 7.5 feet bgs.

3.3.1. Groundwater Conditions

Groundwater was observed in exploratory borings HA-3 at approximately 5.5-feet below ground surface (bgs). This is likely an observation of perched groundwater over less permeable soils below the surface and not an indication of areal depths. Groundwater may be present at relatively shallow depths in a perched condition on hard underlying layers as surface water moves downward during wet times of the year or during and immediately following extended periods of wet weather. Groundwater conditions at the site are expected to vary seasonally due to rainfall events and other factors not observed in our explorations.

4.0 INFILTRATION TESTING

As requested by the project team, we conducted one on-site infiltration test to assist in evaluation of the site for stormwater management design at the exploration location shown in Figure 2 at an approximate depth of 4 feet bgs.

On-site testing was conducted in general accordance with the encased falling head procedure outlined in the City's Stormwater Design Manual. Our general procedure included drilling an 8-inch diameter hole to insert a 6-inch diameter polyvinyl chloride (PVC) pipe for the encased falling head procedure at a depth of 4 feet bgs.

The encased PVC pipe was filled with clean water to approximately 1 to 2 feet above the soil at the bottom of the drilled hole. The initial fill of water did not drain into the soil within 10 minutes, so the water level was maintained, and the soil allowed to saturate for a minimum of 4 hours at the test location. Water levels were checked several times during the saturation process and the pipes were refilled to 12 inches above the soil in the bottom of the pipes at the end of each hour. The drop-in water level was measured during three, hour-long iterations at both locations. Field test results are summarized in Table 1.



Field-measured rates represent a relatively short-term infiltration rate, and factors of safety have not been applied for the type of infiltration system being considered, or for variability that may be present across large areas in the on-site soil. In our opinion, and consistent with the state of the practice, correction factors should be applied to this measured rate to reflect the localized area of testing relative to the field sizes.

Table 1. Field Measured Infiltration results

Infiltration Test No.	Location	Depth (feet)	USCS Material Type	Field Measured Infiltration Rate ¹ (in/hr)
INF-1	See Site Plan	4	ML	4.5

Notes:

1. Appropriate factors should be applied to the field-measured infiltration rate, based on the design methodology and specify system used.

USCS = Unified Soil Classification System

in/hr = inches per hour

Appropriate correction factors should also be applied by the project civil engineer to account for long-term infiltration parameters. From a geotechnical perspective, we recommend a factor of safety (correction factor) of at least 2 be applied to the field infiltration values to account for potential soil variability with depth and location within the area tested. In addition, the stormwater system design engineer should determine and apply appropriate remaining correction factor values, or factors of safety, to account for repeated wetting and drying that occur in this area, degree of in-system filtration, frequency and type of system maintenance, vegetation, potential for siltation and bio-fouling, etc., as well as system design correction factors for overflow or redundancy, and base and facility size.

Actual depths, lateral extent and estimated infiltration rates can vary from the values presented above. Field testing/confirmation during construction is often required in large or long systems or other situations where soil conditions may vary within the area where the system is constructed. The results of this field testing might necessitate that the infiltration locations be modified to achieve the design infiltration rate.

The infiltration flow rate of a focused stormwater system like a drywell or small infiltration box or pond typically diminishes over time as suspended solids and precipitates in the stormwater further clog the void spaces between the soil particles or cake on the infiltration surface or in the engineered media. The serviceable life of an infiltration media in a stormwater system can be extended by pre-filtering or with on-going accessible maintenance. Eventually, most systems will fail and will need to be replaced or have media regenerated or replaced.

We recommend that infiltration systems include an overflow that is connected to a suitable discharge point. Also, infiltration systems can cause localized, high groundwater levels and should not be located near basement walls, retaining walls or other embedded structures unless these are specifically designed to account for the resulting hydrostatic pressure. Infiltration locations should not be located on sloping ground, unless it is approved by a geotechnical engineer, and should not be infiltrated at a location that allows for flow to travel laterally toward a slope face, such as a mounded water condition or too close to a slope face that could cause instability of the slope.



4.1. Suitability of Infiltration System

Successful design and implementation of stormwater infiltration systems and whether a system is suitable for development depends on several site-specific factors. Stormwater infiltration systems are generally best suited for sites having sandy or gravelly soil with saturated hydraulic conductivities greater than 2-in/hr. Sites with silty or clayey soil, are generally not well-suited for long-term stormwater infiltration or as a sole method of stormwater infiltration. Soils that have fine-grained matrices are susceptible to volumetric change and softening during wetting and drying cycles. Fine-grained soils also have large variations in the magnitude of infiltration rates because of bedding and stratification that occurs during alluvial deposition, and often have thin layers of less permeable or impermeable soil within a larger layer.

Local groundwater conditions also significantly affect the capacity to infiltrate from a stormwater system. Sites with shallow groundwater can result in groundwater mounding. A hydraulic gradient that reaches the level of water in the soil immediately drops to zero and local groundwater will rise and mound, which slows the infiltration rate dramatically, resulting in overflows or system flooding (failure). Groundwater mounding can also negatively impact structures, slopes or other areas adjacent to the stormwater infiltration facility. Typically, we do not recommend using infiltration systems where groundwater is less than 10 feet below the bottom of the proposed system unless the host soil is very permeable and consistently graded and will not cause mounding. Some jurisdictions require a minimum of 5 or 10 feet between high groundwater conditions and the bottom of proposed facilities. Depending on the size of the project, adjacent features such as streams that can source water to a system instead of allowing it to drain and on-site soil infiltration capacities, there may be conditions where even a 10-foot separation between the level of groundwater and the base of the infiltration system may not be sufficient.

Considering the potential for shallow perched groundwater, the hydraulically restricting underlying generally medium stiff or stiffer, fine-grained soil conditions, on-site infiltration will likely be minimal during wet times of the year and infiltration may cause mounding of groundwater if areas of perched water are present in the area. We do not recommend stormwater infiltration be used as the exclusive method of stormwater management and recommend an overflow be a part of system design.

5.0 CONCLUSIONS FOR GEOTECHNICAL DESIGN

Based on our explorations, testing, and analyses, it is our opinion that the site is suitable for the proposed project from a geotechnical standpoint, provided the recommendations in this report are incorporated into the project design and implemented during construction. We offer the following conclusions regarding geotechnical engineering design and construction at the site.

- Existing site structural features designated for removal should be demolished and completely removed from the site in areas of proposed structural improvement.
- Groundwater was observed during our explorations as shallow as approximately 5.5-feet bgs. Based on our experience and our observations, relatively shallow, perched groundwater may be present during periods of persistent rainfall.
- Existing utilities below proposed structural areas, including proposed buildings and roads, should be relocated or abandoned and grouted full if left in place.



- Surface conditions at the site consist primarily of vegetated areas covered with grasses, shrubs and trees. As a result clearing, stripping, and grubbing will be required in areas of proposed development. We anticipate a stripping depth of approximately 4 to 6 inches bgs to remove the upper root and topsoil layer.

Grubbing and deeper excavations up to several feet will be required to remove the root zones of shrubs and trees. Portions of the site are heavily vegetated and previously buried roots are also expected, even in the current grassy areas of the site.

Cleared, stripped and grubbed materials should be hauled off-site and properly disposed unless otherwise allowed by the project specifications for other uses such as landscaping, stockpiling or on-site burning.
- The soils at the site below the upper organic layer are suitable to use as structural fill if they are properly moisture conditioned and compacted. Because site soils are moisture sensitive they will become significantly disturbed from construction traffic if over optimum moisture content, particularly during wet weather. Wet weather construction practices will be required over exposed native soils and to protect exposed subgrades, except during the dry summer months.
- Slabs on grade for the proposed structure can be satisfactorily supported on aggregate base that is founded on the firm native soils or on structural fill that extends to the firm native soils. We recommend that slabs-on-grade be provided with proper moisture control by constructing the aggregate base as a capillary break and providing a vapor barrier for moisture-sensitive applications.
- Proposed structures can be satisfactorily supported on continuous and isolated shallow foundations supported on firm native soils or on structural fill over firm native soils. If construction occurs during wet weather and shallow perched groundwater is encountered at footing subgrade elevation, footings should be supported on 2-foot-thick structural fill crushed rock bearing pads that extend to firm native soils. Crushed rock bearing pads should extend laterally 1 foot beyond the edges of shallow foundations.
- Based on the assumed design loads described in the “Introduction” section of this report, we estimate total settlements will be less than 1 inch for foundations constructed as recommended. If larger structural loads are anticipated, we should review and reassess the estimated settlement.
- Standard pavement sections as summarized in this report, consisting of AC or PCC over Aggregate Base and/or Aggregate Subbase, over properly prepared subgrade, can be used to support the estimated traffic loads provided the pavement sections are designed and constructed as recommended in this report.

6.0 EARTHWORK RECOMMENDATIONS

6.1. Site Preparation and Removal of Existing Fill

In general, initial site preparation and primary earthwork operations will include stripping and grubbing of upper organics, minor logging, minor grading to create level working surfaces, excavating and filling for pavements, foundations, and utilities, recompacting (dry weather) or replacing (wet weather) near surface disturbed soils, demolition of existing structural features, fine grading to establish final grades, and relocating live utilities.

All existing utilities in the proposed earthwork construction areas should be identified prior to excavation. Live utility lines beneath proposed structures should be completely removed or filled with grout to reduce potential



settlement of new structures. Soft or loose soil encountered in utility line excavations should be removed and replaced with structural fill where it is located within structural areas.

Debris materials generated during demolition of existing improvements or relocation of utilities should be transported off site for disposal. Existing voids and new depressions created during site preparation, and resulting from removal of existing utilities, or other subsurface elements, should be cleaned of loose soil or debris down to firm soil and backfilled with compacted structural fill. Disturbance to a greater depth should be expected if site preparation and earthwork are conducted during period of wet weather.

6.2. Demolition

If buried structures or structural features are present or if development extends to areas occupied by hardscapes or other structures, all structures and belowground elements should be demolished and completely removed from proposed new structural areas and for a margin of at least 3 feet around proposed structural areas. Proposed structural areas are areas where new structures will be built, including building pads and roadways. Existing utilities that will be abandoned on site should be identified prior to construction. Abandoned utility lines should be completely removed or filled with grout if abandoned and left in place to reduce potential settlement or caving in the future. Materials generated during demolition should be transported off site and properly disposed.

6.3. Clearing and Grubbing

Site clearing will be required to remove site vegetation, including grass and weeds that are designated for removal. Following clearing and grubbing, excavations up to several feet may be required to remove the root zones of shrubs and trees if encountered. Roots larger than ½ inch in diameter should be removed. Excavations to remove root zones should be done with a smooth bucket to minimize subgrade disturbance. Portions of the site are heavily vegetated and previously buried roots are also expected, even in the current grassy areas of the site. Grubbed materials should be hauled off site and properly disposed of unless otherwise allowed by the project specifications for other uses such as landscaping, stockpiling or on-site burning.

Existing voids and new depressions created during demolition, clearing, grubbing or other site preparation activities, should be excavated to firm soil and backfilled with Imported Select Structural Fill. Greater depths of disturbance should be expected if site preparation and earthwork are conducted during periods of wet weather.

6.4. Stripping

Based on our observations at the site, we estimate that the depth of stripping should be on the order of about 4 to 6 inches. Greater stripping depths may be required to remove localized zones of loose or organic soil, and in areas where moderate to heavy vegetation are present, or where surface disturbance from prior use has occurred. The actual stripping depth should be based on field observations at the time of construction. Stripped material should be transported off site for disposal unless otherwise allowed by the project specifications for other uses such as landscaping.

6.5. Site Subgrade Preparation and Evaluation

Upon completion of site preparation activities, exposed subgrades should be proof-rolled with a fully loaded dump truck or similar heavy rubber-tired construction equipment where space allows to identify soft, loose, or unsuitable areas. Probing may be used for evaluating smaller areas or where proof-rolling is not practical.



Proof-rolling and probing should be conducted prior to placing fill and should be performed by a representative of CGS who will evaluate the suitability of the subgrade and identify areas of yielding that are indicative of soft or loose soil. If soft or loose zones are identified during proof-rolling or probing, these areas should be excavated to the extent indicated by our representative and replaced with structural fill.

As discussed in the Subsurface Conditions section of this report, because of the fines content native sandy silt to silt or clayey soil can be sensitive to small changes in moisture content and will be difficult, or not possible, to compact adequately during wet weather. While tilling and compacting the subgrade is the economical method for subgrade improvement, it will likely only be possible during extended dry periods and following moisture-conditioning of the soil.

During wet weather, or when the exposed subgrade is wet or unsuitable for proof-rolling, the prepared subgrade should be evaluated by observing excavation activity and probing with a steel foundation probe. Observations, probing and compaction testing should be performed by a member of our staff. Wet soil that has been disturbed due to site preparation activities or soft or loose zones identified during probing should be removed and replaced with compacted structural fill.

6.6. Subgrade Protection and Wet Weather Considerations

Site soils are highly susceptible to moisture. Wet weather construction practices will be necessary if work is performed during periods of wet weather. If site grading occurs during wet weather conditions, it will be necessary to use track-mounted equipment, load removed material into trucks supported on gravel haul roads, use gravel working pads and employ other methods to reduce ground disturbance. The contractor should be responsible for protecting the subgrade during construction.

Earthwork planning should include considerations for minimizing subgrade disturbance. We provide the following recommendations if wet weather construction is considered:

- The ground surface in and around the work area should be sloped so that surface water is directed to a sump or discharge location. The ground surface should be graded such that areas of ponded water do not develop. Measures should be taken by the contractor to prevent surface water from collecting in excavations and trenches. Measures should be implemented to remove surface water from the work areas.
- Earthwork activities should not take place during periods of heavy precipitation.
- Slopes with exposed soils should be covered with plastic sheeting or similar means.
- The site soils should not be left in a disturbed or uncompacted state and exposed to moisture. Sealing the surficial soils by rolling with a smooth-drum roller prior to periods of precipitation may reduce the extent to which these soils become wet or unstable.
- Construction activities should be scheduled so that the length of time that soil is left exposed to moisture is reduced to the extent practicable.
- Construction traffic should be restricted to specific areas of the site, preferably areas that are not susceptible to wet weather disturbance such as haul roads and areas that are adequately surfaced with working pad materials.



- When on-site soils are wet of optimum, they are easily disturbed and will not provide adequate support for construction traffic nor for the proposed development. The use of granular haul roads and staging areas will be necessary to support heavy construction traffic. Generally, a 12- to 16-inch-thick mat of Imported Select Structural Fill should be sufficient for light staging areas for the building pad and light staging activities but is not expected to be adequate to support repeated heavy equipment or truck traffic. The thickness of the Imported Select Structural Fill for haul roads and areas with repeated heavy construction traffic should be increased to between 18 and 24 inches. The actual thickness of haul roads and staging areas should be determined at the time of construction and based on the contractor's approach to site development and the amount and type of construction traffic.
- The base rock (Aggregate Base and Aggregate Subbase) thicknesses described in the "Pavement Recommendations" sections of this report are intended to support post-construction design traffic loads. The design base rock thicknesses will likely not support repeated heavy construction traffic during site construction or during pavement construction. A thicker base rock section as described above for haul roads will likely be required to support construction traffic.
- During periods of wet weather, concrete should be placed as soon as practical after preparing foundation excavations. Foundation bearing surfaces should not be exposed to standing water. Should water infiltrate and pool in the excavation, the water should be removed, and the foundation subgrade should be re-evaluated before placing reinforcing steel or concrete. Foundation subgrade protection, such as a 3- to 4-inch thickness of Aggregate Base/Aggregate Subbase or lean concrete, may be necessary if footing excavations are exposed to extended wet weather conditions.

During wet weather, or when the exposed subgrade is wet or unsuitable for proof-rolling, the prepared subgrade should be evaluated by observing excavation activity and probing with a steel foundation probe. Observations and probing should be performed by a member of our staff. Wet soil that has been disturbed due to site preparation activities, or soft or loose zones identified during probing, should be removed, and replaced with Imported Select Structural Fill.

6.7. Dewatering

As discussed in the "Groundwater" section of this report, groundwater was observed in our explorations at relatively shallow depths. However, we do not expect groundwater to be a major factor during shallow excavations and earthwork as relatively minimal cuts and fills are anticipated. Excavations that extend into saturated/wet soils, or excavations that extend into perched groundwater, should be dewatered. Sump pumps are expected to adequately address groundwater encountered in shallow excavations. In addition to groundwater seepage, surface water inflow to the excavations during the wet season can be problematic. Provisions for surface water control during earthwork and excavations should be included in the project plans and should be installed prior to commencing earthwork.

6.8. Permanent Slopes

Permanent cut and fill slopes, where incorporated into the grading plan, should not exceed 2H:1V (horizontal to vertical). The slopes should be planted with appropriate vegetation to provide protection against erosion as soon as possible after grading. Buildings, access roads and pavements should be located at least 10 feet from the top of new fill slopes or existing slopes. Placement of fill near the top of the existing slope should be limited to 2 feet or less in thickness. If the grading plan requires additional fill, we should be contacted to evaluate the impact of the additional loading on the slope. Surface water runoff should be collected and directed away from slopes to prevent water from running down the face of the slope.



6.9. Trench Shoring

All trench excavations should be made in accordance with applicable Occupational Safety and Health Administration (OSHA) and state regulations. In our opinion, native soils are generally OSHA Type B. Temporary excavations deeper than 4 feet should be shored or laid back at an inclination of 1H:1V or flatter if workers are required to enter. Excavations made to construct footings or other structural elements should be laid back or shored at the surface as necessary to prevent soil from falling into excavations.

It should be expected that unsupported cut slopes will experience some sloughing and raveling if exposed to water. Plastic sheeting, placed over the exposed slope and directing water away from the slope, will reduce the potential for sloughing and erosion of cut slopes during wet weather.

The contractor is responsible for shoring methods and shoring system design. Shoring systems should be designed by a professional engineer before installation.

In our opinion, the contractor will be in the best position to observe subsurface conditions continuously throughout the construction process and to respond to the soil and groundwater conditions. Construction site safety is generally the sole responsibility of the contractor, who also is solely responsible for the means, methods, and sequencing of the construction operations and choices regarding excavations and shoring.

Under no circumstances should the information provided by CGS be interpreted to mean that CGS is assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

6.10. Structural Fill and Backfill

6.10.1. General

Structural areas include areas beneath foundations, floor slabs, pavements, and any other areas intended to support structures or within the influence zone of structures. Fill intended for use in structural areas should meet the criteria for structural fill presented below. All structural fill soils should be free of debris, clay balls, roots, organic matter, frozen soil, man-made contaminants, particles with greatest dimension exceeding 4 inches (3-inch-maximum particle size in building footprints) and other deleterious materials.

The suitability of soil for use as structural fill will depend on the gradation and moisture content of the soil. As the amount of fines in the soil matrix increases, the soil becomes increasingly more sensitive to small changes in moisture content and achieving the required degree of compaction becomes more difficult or impossible. Recommendations for suitable fill material are provided in the following sections.

6.10.2. Reuse of On-Site Soils

On-site near surface soil consists of native silt with varying clay and sand content. On-site soils can be used as structural fill, provided the material meets the above requirements, although due to moisture sensitivity, this material will likely be unsuitable as structural fill during most of the year. If the soil is too wet to achieve satisfactory compaction, moisture conditioning by drying back the material will be required. If the material cannot be properly moisture conditioned, we recommend using imported material for structural fill.

An experienced geotechnical engineer from CGS should determine the suitability of on-site soil encountered during earthwork activities for reuse as structural fill.



6.10.3. Imported Select Structural Fill

Imported Select Structural Fill may be used as structural fill and should consist of pit or quarry run rock, crushed rock, or crushed gravel and sand that is fairly well-graded between coarse and fine sizes (approximately 25 to 65 percent passing the U.S. No. 4 sieve). It should have less than 5 percent passing the U.S. No. 200 sieve and have a minimum of 75 percent fractured particles according to American Association of State Highway and Transportation Officials (AASHTO) TP-61.

6.10.4. Aggregate Base

Aggregate base material located under floor slabs and pavements and crushed rock used in footing overexcavations should consist of imported clean, durable, crushed angular rock. Such rock should be well-graded, have a maximum particle size of 1 inch and have less than 5 percent passing the U.S. No. 200 sieve (3 percent for retaining walls). In addition, aggregate base shall have a minimum of 75 percent fractured particles according to AASHTO T-335 and a sand equivalent of not less than 30 percent based on AASHTO T-176.

6.10.5. Aggregate Subbase

Aggregate Subbase material should consist of imported, clean, durable, crushed angular rock. Such rock should be well-graded, have a maximum particle size of 1½ inches, have less than 5 percent passing the U.S. No. 200 sieve and meet the gradation requirements in Oregon Department of Transportation (ODOT) Standard Section 00331. In addition, aggregate base shall have a minimum of 75 percent fractured particles according to AASHTO T-335 and a sand equivalent of not less than 30 percent based on AASHTO T-176.

6.10.6. Fill Placement and Compaction

Fill and backfill material should be placed in uniform, horizontal lifts and compacted with appropriate equipment. The appropriate lift thickness will vary depending on the material and compaction equipment used. Fill material should be compacted in accordance with Table 2. It is the contractor's responsibility to select appropriate compaction equipment and place the material in lifts that are thin enough to meet these criteria. However, in no case should the loose lift thickness exceed 18 inches.

Structural fill should be compacted at moisture contents that are within 3 percent of the optimum moisture content as determined by ASTM International (ASTM) Test Method D 1557 (Modified Proctor). The optimum moisture content varies with gradation and should be evaluated during construction. Fill material that is not near the optimum moisture content should be moisture conditioned prior to compaction.

A representative from CGS should evaluate the compaction of each lift of fill. Compaction should be evaluated by compaction testing unless other methods are proposed for oversized materials and are approved by CGS during construction. These other methods typically involve procedural placement and compaction specifications together with verification requirements such as proof-rolling.

**Table 2. Compaction Criteria**

Fill Type	Compaction Requirements		
	Percent Maximum Dry Density Determined by ASTM Test Method D 1557 at $\pm 3\%$ of Optimum Moisture		
	0 to 2 Feet Below Subgrade	> 2 Feet Below Subgrade	Pipe Zone
Fine-grained soils (non-expansive)	92	92	-----
Imported Granular, maximum particle size < 1¼ inch	95	95	-----
Imported Granular, maximum particle size 1¼ inch to 6 inches (3-inch-maximum under building footprints)	n/a (proof-roll)	n/a (proof-roll)	-----
Retaining Wall Backfill*	92	92	-----
Nonstructural Zones	90	90	90
Trench Backfill	95	90	90

Note:

* Measures should be taken to prevent overcompaction of the backfill behind retaining walls. We recommend placing the zone of backfill located within 5 feet of the wall in lifts not exceeding about 6 inches in loose thickness and compacting this zone with hand-operated equipment such as a vibrating plate compactor or a jumping jack.

Fill and backfill material should be placed in uniform, horizontal lifts and compacted with appropriate equipment. The appropriate lift thickness will vary depending on the material and compaction equipment used. Fill material should be compacted in accordance with Table 2. It is the contractor's responsibility to select appropriate compaction equipment and place the material in lifts that are thin enough to meet these criteria. However, in no case should the loose lift thickness exceed 18 inches.

6.10.7. Trench Backfill

Backfill for pipe bedding and in the pipe zone should consist of well-graded granular material with a maximum particle size of ¾ inch and less than 5 percent passing the U.S. No. 200 sieve. The material should be free of organic matter and other deleterious materials. Further, the backfill should meet the pipe manufacturer's recommendations. Above the pipe zone backfill, Imported Select Structural Fill may be used as described above.

7.0 STRUCTURAL DESIGN RECOMMENDATIONS

7.1. Foundation Support Recommendations

Proposed structures can be satisfactorily founded on continuous wall or isolated column footings supported on firm native soils encountered below upper topsoil or disturbed soils or on structural fill placed over firm native soils. Exterior footings should be established at least 18 inches below the lowest adjacent grade. The recommended minimum footing depth is greater than the anticipated frost depth. Interior footings can be found a minimum of 12 inches below the top of the first-floor slab. Isolated column and continuous wall footings should have minimum widths of 24 and 18 inches, respectively. We have assumed that the column



loads will be 60 kips or less, wall loads will be 2 klf or less, and floor loads for slabs on grade will be 125 psf or less for the proposed buildings. If design loads exceed these values, our recommendations may need to be revised.

7.1.1. Foundation Subgrade Preparation

Subgrades beneath proposed structural elements should be prepared as described in section 6.5 of this report. We recommend loose or disturbed soils resulting from foundation excavation be removed before placing reinforcing steel and concrete. Foundation bearing surfaces should not be exposed to standing water. If water infiltrates and pools in the excavation, the water, along with any disturbed soil, should be removed before placing reinforcing steel and concrete.

To limit potential post-construction settlement, footing elevation subgrade soils should be overexcavated and replaced with a minimum 2-foot-thick granular bearing pad consisting of crushed rock structural fill compacted in accordance with section 6.10.6.

We recommend CGS observe all foundation subgrades before placing concrete forms and reinforcing steel to determine that bearing surfaces have been adequately prepared and the soil conditions are consistent with those observed during our explorations.

7.1.2. Isolated Spread Footings

We recommend conventional footings be proportioned using a maximum allowable bearing pressure of 2,000 psf if supported on firm native soils or on structural fill placed over firm native soils. This bearing pressure applies to the total of dead and long-term live loads and may be increased by one-third when considering earthquake or wind loads. This is a net bearing pressure. The weight of the footing and overlying backfill can be ignored in calculating footing sizes.

7.1.3. Foundation Settlement

Foundations designed and constructed as recommended are expected to experience settlements of less than 1 inch. Differential settlements of up to one half of the total settlement magnitude can be expected between adjacent footings supporting comparable loads.

7.1.4. Lateral Resistance

Lateral loads can be resisted by a combination of friction between the footing and the supporting soil, and by the passive lateral resistance of the soil surrounding the embedded portions of the footings. A coefficient of friction between the concrete and soil of 0.35 and a passive lateral resistance corresponding to an equivalent fluid density of 250 pcf may be used for design. These values are appropriate for foundation elements that are poured directly against the native soils or surrounded by compacted structural fill.

The passive earth pressure and friction components may be combined, provided the passive component does not exceed two-thirds of the total.

The passive earth pressure value is based on the assumptions that the adjacent grade is level and static groundwater remains below the base of the footing throughout the year. The top 1 foot of soil should be neglected when calculating passive lateral earth pressures unless the adjacent area is covered with pavement. The lateral resistance values do not include safety factors.



7.2. Drainage Considerations

We recommend the ground surface be sloped away from buildings at least 5 percent for a minimum distance of 10 feet measured perpendicular to the face of the wall in accordance with section 1804.4 of the 2018 International Building Code (IBC). All downspouts should be tightlined away from the building foundation areas and should also be discharged into a stormwater disposal system. Downspouts should not be connected to footing drains.

Based on the observed subsurface groundwater conditions at the time of our explorations, we recommend the inclusion of perimeter footing drains. Perimeter footing drains should be installed for below-grade structural elements or crawlspaces to control relatively shallow perched groundwater conditions. Footing drains should be installed at the base of exterior building footings where interior spaces should be protected from inflowing water from surrounding soils. Perimeter footing drains should be provided with cleanouts and should consist of at least 4-inch-diameter perforated pipe placed on a 3-inch bed of and surrounded by 6 inches of drainage material enclosed in a non-woven geotextile such as Mirafi 140N (or approved equivalent) to prevent fine soil from migrating into the drain material. We recommend against using flexible tubing for footing drainpipes. The perimeter drains should be sloped to drain by gravity to a suitable discharge point, preferably a storm drain. We recommend that the cleanouts be covered and placed in flush-mounted utility boxes. Water collected in roof downspout lines must not be routed to the footing drain lines.

7.3. Floor Slabs

Satisfactory subgrade support for floor slabs on grade supporting the planned 100 psf floor loads can be obtained provided the floor slab subgrade is described in the “Earthwork Recommendations” section of this report. Slabs should be reinforced according to their proposed use and per the structural engineer’s recommendations. Subgrade support for concrete slabs can be obtained from the firm native soils underlying the topsoil or on structural fill placed over firm native soils.

We recommend that on-grade slabs be underlain by a minimum 6-inch-thickness of Aggregate Base in order to provide the structural design support for subgrade reaction as described below and to act as a capillary break material to reduce the potential for moisture migration into the slab. The aggregate base section should be placed as recommended in the “Fill Placement and Compaction” section of this report.

If dry on-grade slabs are required, for example at interior spaces where adhesives are used to anchor carpet or tile to the slab, a waterproof liner may be placed as a vapor barrier below the slab. The vapor barrier should be selected by the structural engineer and should be accounted for in the design floor section and mix design selection for the concrete, to accommodate the effect of the vapor barrier on concrete slab curing. Load-bearing concrete slabs should be designed assuming a modulus of subgrade reaction (k) of 125 psi per inch. We estimate that concrete slabs constructed as recommended will settle less than $\frac{1}{2}$ inch. Floor slab subgrades should be evaluated according to the “Subgrade Evaluation” section of this report.

7.4. Seismic Design

Parameters provided on Table 3 are based on the conditions encountered during our subsurface exploration program and the procedure and requirements outlined in the 2018 IBC. Per American Society of Civil Engineers (ASCE) 7-16 Section 11.4.8, a site-specific response analysis is required for site class F sites, and a ground motion hazard analysis or site-specific response analysis is required to determine the design ground motions for



structures on Site Class D and E sites with S_1 greater than or equal to 0.2g. For this project, the site is classified as site class D; therefore, the provisions of 11.4.8 are applicable.

Alternatively, the parameters listed on Table 3 may be used to determine the design ground motions if the exceptions provided in ASCE 7-16 Supplement 3 are met. The applicable exceptions for the project site listed in ASCE 7-16 Supplement 3 are provided below for reference. If it is desirable to avoid these exceptions, a ground motion hazard analysis would need to be completed to determine the design seismic parameters for the site.

From ASCE 7-16 Supplement 3

Exception: A ground motion hazard analysis not required:

1. Where the values of the parameter S_{M1} determined by Eq. (11.4-2) is increased by 50% for all applications of S_{M1} in the standard. And:
2. The resulting value of the parameter S_{D1} determined by Eq. (11.4-4) shall be used for all applications of S_{D1} in the standard.

Table 3. Mapped 2018 IBC Seismic design parameters

Parameter	Recommended Value ^{1,2}
Site Class	D
Mapped Spectral Response Acceleration at Short Period (S_s)	0.819 g
Mapped Spectral Response Acceleration at 1 Second Period (S_1)	0.380 g
Site Modified Peak Ground Acceleration (PGA_M)	0.458 g
Site Amplification Factor at 0.2 second period (F_a)	1.17
Site Amplification Factor at 1.0 second period (F_v)	1.92
Design Spectral Acceleration at 0.2 second period (S_{DS})	0.640g
Design Spectral Acceleration at 1.0 second period (S_{D1}) ⁽³⁾	0.730 g

Note:

¹ Parameters developed based on Latitude 44.611569° and Longitude -123.113994 °using the ATC Hazards online tool.

² These values are only valid if the structural engineer utilizes Exception 1 of ASCE 7-16 Supplement 3 Exception 1.

³ Increased by a factor of 1.5 per ASCE 7-16 Supplement 3 Exception 1.

7.5. Design Parameters

Retaining structures free to rotate slightly around the base should be designed for active earth pressures using an equivalent fluid unit weight (efp) of 40 pcf when the ground surface extends level behind the wall equal to a distance of at least twice the height of the wall, and 65 pcf for an inclined slope of 2H:1V above the wall. For lesser slopes between flat and 2H:1V, the efp can be linearly interpolated between the recommended values. The efp value is based on the following assumptions.

- The walls will not be restrained against rotation when the backfill is placed.
- Walls are 8 feet or less in total wall support height.



- The backfill within 2 feet of the wall consists of free-draining granular materials.
- Grades above the top of the walls are no steeper than a 2H:1V slope.
- Total wall heights are determined based on a level front slope from the base of the wall.
- Adequate drainage is provided and maintained such that hydrostatic pressures do not develop behind site retaining walls. If hydrostatic pressures are anticipated, CGS should be contacted to provide updated lateral earth pressure recommendations.

Seismically induced lateral forces on permanent below-grade building walls can be calculated using a dynamic force equal to $10H$ psf, where H is the wall height. This seismic force should be applied with the centroid located at $0.6H$ from the wall base. These values assume that the wall is vertical and unrestrained and the backfill behind the wall is horizontal.

For site retaining walls, seismic lateral earth pressures should be computed as a part of retaining wall design using the Mononobe-Okabe equation or another method appropriate to the selected wall system.

Retaining walls, including foundation walls that are restrained against rotation during backfilling, should be designed for an at-rest equivalent fluid unit weight of 58 pcf when the ground surface extends level behind the wall equal to a distance of at least twice the height of the wall, and 85 pcf for an inclined slope of 2H:1V above the wall. For lesser slopes between flat and 2H:1V, the efp can be linearly interpolated between the recommended values.

Surcharge loads applied closer than one-half of the wall height should be considered as uniformly distributed horizontal pressures equal to one-third of the distributed vertical surcharge pressure. We recommend a minimum surcharge load of 200 psf to account for construction- and post-construction-traffic surcharge loading.

Footings for retaining walls should be designed as recommended for shallow foundations. Backfill should be placed and compacted as recommended for structural fill. Re-evaluation of our recommendations will be required if the retaining wall design criteria for the project vary from these assumptions.

We recommend that CGS be retained to review the retaining wall design to confirm that it meets the requirements in our report. The retaining wall designer should perform global stability analysis of the proposed wall.

8.0 PAVEMENT RECOMMENDATIONS

Our pavement recommendations are based on the results of our on-site field testing as described below, and our analysis. The recommended pavement sections assume that final improvements surrounding the pavement will be designed and constructed such that stormwater or excess irrigation water from landscape areas does not infiltrate below the pavement section into the base rock materials.

8.1. Asphalt Concrete Pavement Sections

Pavement subgrades should be prepared in accordance with the earthwork's recommendations section of this report. Our pavement recommendations assume that traffic at the site will consist of occasional maintenance truck traffic. We do not have specific information on the frequency and type of vehicles that will use the area;



however, we have based our design analysis on traffic loading consistent with heavy trucks to account for service-type vehicles and the assumed equivalent single axle loads (ESALS) presented in Table 4. Recommended AC pavement sections for on-site development is presented in Table 4.

- The pavement subgrades, fill subgrades and site earthwork used to establish road grades below the Aggregate Subbase and Aggregate Base materials have been prepared as described in the “Earthwork Recommendations” section of the Geotechnical Report.
- A resilient modulus of 20,000 pounds per square inch (psi) has been estimated for compacted Aggregate Subbase and Aggregate Base materials.
- A resilient modulus of 5,000 psi was estimated for firm native soils or structural fill placed on firm native soils or compacted on-site soils.
- Initial and terminal serviceability indices of 4.2 and 2.0, respectively.
- Reliability and standard deviations of 75 percent and 0.45, respectively.
- Structural coefficients of 0.42 and 0.10 for the asphalt and base rock, respectively.
- A 20-year design life with no growth.

If any of the noted assumptions vary from project design use, our office should be contacted with the appropriate information so that the pavement designs can be revised or confirmed adequate.

Table 4. Minimum AC Pavement Sections for on-site Development

Section	Minimum Asphalt Thickness (inches)	Minimum Aggregate Base Thickness (inches)	Minimum Aggregate Sub-Base Thickness (inches)	Assumed Traffic Loading (Design Life ESAL’s)
Light Duty	3.0	6.0	-	<10,000
	3.0	3.0	12	
Heavy Duty	3.5	7.5	-	50,000
	3.5	4.0	12	

The aggregate base course should conform to the “Aggregate Base” section of this report and be compacted to at least 95 percent of the maximum dry density (MDD) determined in accordance with AASHTO T-180/ASTM Test Method D 1557. The AC pavement should conform to Section 00745 of the most current edition of the ODOT Standard Specifications for Highway Construction. The Job Mix Formula should meet the requirements for a ½-inch Dense Graded Level 2 Mix. The AC should be PG 64-22 grade meeting the ODOT Standard Specifications for Asphalt Materials. AC pavement should be compacted to 92.0 percent at Maximum Theoretical Unit Weight (Rice Gravity) of AASHTO T-209. Additionally, we recommend that the aggregate base section extend laterally at a minimum 1-ft beyond the edges of the proposed bike path to allow for adequate compaction of material supporting new asphalt.



8.2. Portland Cement Concrete Pavement Sections

PCC pavement section recommendations for the project site are based on the assumptions below. If any of the noted assumptions vary from project design use, our office should be contacted with the appropriate information so that the pavement designs can be revised or confirmed adequate.

- The pavement subgrades, fill subgrades and site earthwork used to establish road grades below the Aggregate Subbase and Aggregate Base materials have been prepared as described in Section 6.0 of this report.
- A modulus of subgrade reaction (k) of 150 psi was estimated for subgrade prepared and compacted as recommended.
- A concrete rupture modulus of 600 psi was estimated based on a 28-day compressive strength of concrete equal to 4500 psi.
- A drainage coefficient of 0.9 was estimated for site silty soils.
- A joint load coefficient of 3.2 was estimated for PCC reinforced using plain dowel bars.
- Initial and terminal serviceability indices of 4.2 and 2.0, respectively.
- Reliability and standard deviations of 75 percent and 0.45, respectively.
- A 20-year design life.
- Design life traffic loading of 50,000 ESAL’s or less

For PCC pavement sections, we recommend the following based on the assumed traffic loading:

- 50,000 ESALS
 - 4.0 inches of PCC
 - 6.0 inches of aggregate base
 - Subgrade stabilization (if required)
 - Subgrade geotextile (if required)

9.0 LIGHT POLE FOUNDATIONS

Foundations for Lamp poles or shared-use path lighting should be designed and constructed in accordance with the City of City of Wilsonville Public Works Standards Drawing RD-1340. If standard light poles are not being utilized, light pole foundations can be designed using the soil parameters presented in the following table.

Table 5. Minimum AC Pavement Sections for on-site Development

Parameter	Recommended Value
Friction Angle (Degrees)	28
Cohesion (psf)	100
Unit Weight (pcf)	115
Buoyant Unit Weight (pcf)	53



10.0 LIMITATIONS OF REPORT

We have prepared this report for the exclusive use of Mayer/Reed, the City of Wilsonville, and their authorized parties, for the project specifically identified in this report only. The report should be provided in its entirety to prospective contractors for bidding and estimating purposes; however, the conclusions and interpretations presented 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, CGS should be notified for review of the recommendations of this report, and revision of such if necessary.

We recommend that CGS be retained to review the plans and specifications and verify that our recommendations have been interpreted and implemented as intended. Sufficient geotechnical monitoring, testing and consultation should be provided during construction to confirm that the conditions encountered are consistent with those indicated by explorations. Recommendations for design changes will be provided should conditions revealed during construction differ from those anticipated. Should CGS not be retained for Design or Construction related services further into the development process, this report and its recommendations should be considered void, as we cannot take on responsibility for construction operations that were unobserved by our office.

Within the limitations of scope, schedule and budget, the analysis, conclusions, and recommendations presented in this report were prepared in accordance with generally accepted professional principles and practices in the fields of geotechnical engineering and engineering geology in this area at the time the report was prepared. No warranty, express 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.

Within the limitations of scope, schedule, and budget, our services were executed in accordance with generally accepted practices in this area at the time this report was prepared. No warranty, express or implied, should be understood.

11.0 REFERENCES

American Association of State Highway and Transportation Officials (AASHTO). 1993. Guide for Design of Pavement Structures.

International Code Council. 2018. 2018 International Building Code.

Occupational Safety and Health Administration (OSHA) Technical Manual Section V: Chapter 2, Excavations: Hazard Recognition in Trenching and Shoring:

Oregon Department of Transportation (ODOT). 2018. Standard Specifications for Highway Construction. Salem, Oregon.

Schlicker, H.G. and R.J. Deacon. 1967. Engineering Geology of the Tualatin Valley Region, Oregon: Oregon Department of Geology and Mineral Industries, Bulletin 60, p. 103, 4 plates, 1:62,500 scale.



12.0 SIGNATURES

Thank you for the opportunity to work with you. If you feel obliged, we welcome referrals from our previous clients and would enjoy the opportunity to work with others in your professional and personal networks.

Central Geotechnical Services, LLC

Julio Vela, PhD, PE, GE
Principal Engineer

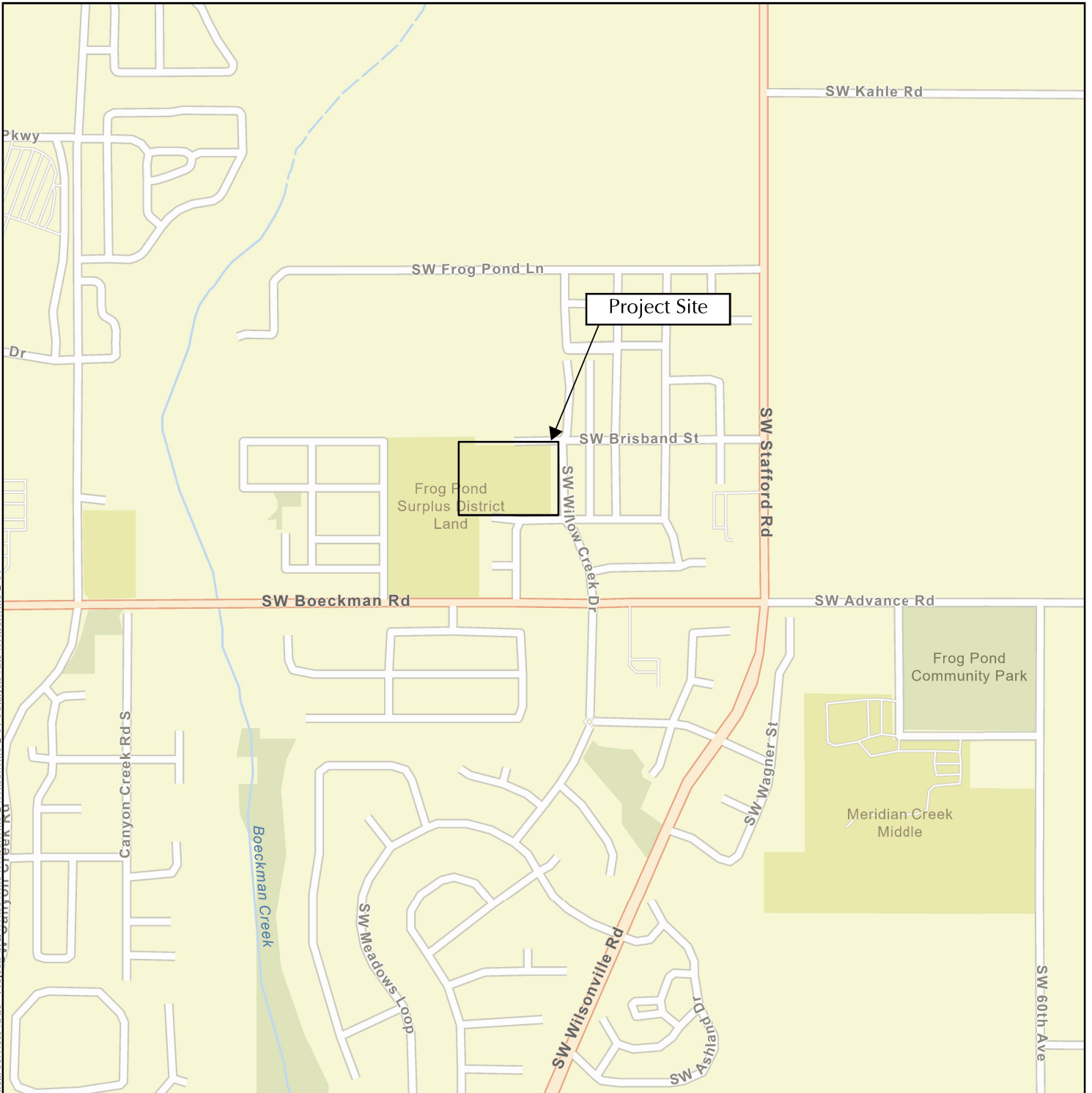
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EXPIRES: 06/30/24



Default folder: C:\Users\veguser\GIS\WORKSTATION\Central_Geotechnical_Services\CGS - Projects\BZ\Wilsonville\Wilsonville-2-01\Analysis\GIS\Wilsonville-2-01\Map\PROJECT_VICINITY_MAP





Esri Community Maps Contributors, Oregon Metro, Oregon State Parks, State of Oregon GEO, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri

Wilsonville-2-01	
Project Vicinity	
	Figure-1



Default Folder: C:\Users\veguser\GIS\WORKSTATION\Central_Geotechnical_Services\CGS - Projects\BZ\Wilsonville-2\Wilsonville-2-01\Analysis\GIS\Wilsonville-2-01

Legend

-  Hand Auger and Drive Probe Designation and approximate location
-  Hand Auger and Infiltration Test Designation and Approximate Location

Sources: Esri Community Maps Contributors, Oregon Metro, Oregon State Parks, State of Oregon GEO, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, Maxar



Wilsonville-2-01	
Site Plan	
 CENTRAL <small>GEOTECHNICAL SERVICES, LLC</small>	Figure-2



APPENDIX A: Field Explorations



APPENDIX A

FIELD EXPLORATIONS AND LABORATORY TESTING

Field Explorations

Soil and groundwater conditions at the proposed project were explored on October 10 and October 13, 2023, by completing six hand augured borings (HA-1 through HA-6); one infiltration test (HA-5/INF-1), and five drive probe soundings at the approximate locations shown on the Site Plan, Figure 2. Hand augured borings were extended to depths of up to 7.5 feet below ground surface using a 3.0-inch diameter solid stem auger.

The hand augured borings were continuously monitored by a qualified staff from our office who maintained detailed logs of subsurface explorations, visually classified the soil encountered and obtained representative soil samples from the borings. Representative grab soil samples were obtained from each boring at select depth intervals.

Recovered soil samples from exploratory borings were visually classified in the field in general accordance with ASTM D 2488 and the classification chart listed in Key to Exploration Logs. Logs of the borings are presented in this Appendix. The logs are based on interpretation of the field and laboratory data and indicate the depth at which subsurface materials, or their characteristics change, although these changes might actually be gradual.

Drive probe tests were performed by a qualified geotechnical staff member from our office who recorded blow count versus cumulative penetration depth. The drive probe test consists of a continuously drive 3/8-inch rod driven with an 11-pound slide hammer over a 39-inch free fall to obtain a correlated, continuous record of in-situ soil strength.

Recovered soil samples from exploratory borings were visually classified in the field in general accordance with ASTM D 2488 and the classification chart listed in Key to Exploration Logs, Figure A-1. Logs of the borings are presented in Figures A-2 through A-7. The logs are based on interpretation of the field and laboratory data and indicate the depth at which subsurface materials, or their characteristics change, although these changes might actually be gradual.

Laboratory Testing

Soil samples obtained from the explorations were visually classified in the field and in our laboratory using the USCS and ASTM classification methods. ASTM Test Method D 2488 was used to visually classify the soil samples, while ASTM D 2487 was used to classify the soils based on laboratory tests results. Moisture content tests were performed in general accordance with ASTM D 2216-05. Results of the moisture contents testing are presented in the appropriate exploration logs at the respective sample depths.

Atterberg limits testing was performed on selected fine-grained soil samples. The tests were used to classify the soil as well as to evaluate index properties. The liquid limit and the plastic limit were estimated through a procedure performed in general accordance with ASTM D 4318. The results of the Atterberg limits testing are summarized in Figure A-8.

SOIL CLASSIFICATION

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS		
			LETTER	GRAPH			
COARSE GRAINED	GRAVEL	CLEAN GRAVELS	GW		WELL-GRADED GRAVELS AND GRAVEL/SAND MIXTURES, LITTLE OR NO FINES		
			GP		POORLY-GRADED GRAVELS, GRAVEL/SAND MIXTURES, LITTLE OR NO FINES		
		GRAVELS WITH FINES	GM		SILTY GRAVELS, GRAVEL/SAND/SILT MIXTURES		
			GC		CLAYEY GRAVELS, GRAVEL/SAND/CLAY MIXTURES		
(MORE THAN 50% RETAINED BY NO. 200 SIEVE)	SAND	CLEAN SANDS	SW		WELL-GRADED SAND AND GRAVELLY SANDS, LITTLE OR NO FINES		
			SP		POORLY-GRADED SAND AND GRAVELLY SANDS, LITTLE OR NO FINES		
		SANDS WITH FINES	SM		SILTY SANDS, SAND/SILT MIXTURES		
			SC		CLAYEY SANDS, SAND/CLAY MIXTURES		
			FINE GRAINED	LIQUID LIMIT LESS THAN 50	ML		INORGANIC SILTS, SILT WITH SLIGHT PLASTICITY
					CL		INORGANIC CLAY, CLAY WITH LOW TO MEDIUM PLASTICITY
(MORE THAN 50% PASSING BY NO. 200 SIEVE)	SILTS AND CLAYS	LIQUID LIMIT MORE THAN 50	OL			ORGANIC SILTS, ORGANIC SILTY CLAYS WITH LOW PLASTICITY	
			MH			INORGANIC SILTS, SILTS WITH CLAY	
		CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS			
		OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY			
HIGHLY ORGANIC SOILS			TS		TOPSOIL, PEAT, HUMUS, MULCH AND OTHER HIGH ORGANIC SOILS		

GEOTECHNICAL TESTING EXPLANATIONS

ATT	Atterberg Limits
CBR	California Bearing Ratio
CON	Consolidation
DD	Dry Density
DS	Direct Shear
HYD	Hydrometer Gradation
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
MC	Moisture Content
MD	Moisture-Density
NP	Non-Plastic
OC	Organic Content
P	Pushed Sample
PP	Pocket Penetrometer
Passing No.200	Percent Passing U.S. Std. No.200 Sieve
RES	Resilient Modulus
SIEV	Sieve Gradation
TOR	Torvane
UC	Unconfined Compressive Strength
VS	Vane Shear

CONTACT TYPES
Distinct contact between soil strata (approximate location)
Approximate contact between soil strata

ADDITIONAL MATERIALS		
AC		ASPHALT CONCRETE
CC		CEMENT CONCRETE
CR		CRUSHED ROCK
SOD		SOD/FOREST DUFF
FILL		FILL

WATER LEVELS	
	Water Level at Time of Drilling, or as labeled
	Water Level at End of Drilling, or as labeled
	Static Water Level, or as labeled

SOIL CHARACTERISTICS			
GRADATION		CAVING	
WELL-GRADED	FULL RANGE OF GRAIN SIZES	NO	WALL STANDING VERTICAL
POORLY GRADED	LIMITED RANGE OF GRAIN SIZES	MINOR	ISOLATED SPALLING
UNIFORMLY GRADED	PREDOMINANTLY ONE GRAIN SIZE	MODERATE	COMMON SPALLING
GAP GRADED	GAPS WITHIN RANGE OF GRAIN SIZES	SEVERE	WILL NOT STAND VERTICAL

SYMBOL	SAMPLER DESCRIPTIONS	SYMBOL	SAMPLER DESCRIPTIONS
	Location of auger cuttings sample		Location of sample collected in general accordance with ASTM D1586 using Standard Penetration Test (SPT) with recovery (SS)
	Location of bulk or grab sample (GS)		Location of sample collected using the thin-wall Shelby tube or Geoprobe sample in general accordance with ASTM D1587 with recovery (SH)
	Location of rock coring interval (RC)		Location of sample collected in general accordance with ASTM D2573 using the field Vane Shear test in saturated fine-grained soils with recovery
	No Recovery		Location of sample collected using Dames & Moore sampler or pushed with recovery

HAND AUGER TEMPLATE - GINT STD US LAB.GDT - 10/31/23 13:15 - C:\USERS\CGS\USER\CENTRAL GEOTECHNICAL SERVICES\CGS - PROJECTS\R-Z\WILSONVILLE\WILSONVILLE-2\WILSONVILLE-2-01\FIELD EXPLORATION\2 - FIELD AND DRAFT LOGS\AC



Central Geotechnical Services
 10240 SW Nimbus Ave, Suite L6
 Portland, OR 97223
 Telephone: (503) 616-9419

Project No:
Wilsonville-2-01

HAND AUGER LOG HA-1

Project: Project CIP #9175-80
Location: Frog Pond Park, Wilsonville, OR
Client: City of Wilsonville

Date Started:
 10/10/23
Date Completed:
 10/10/23

Approximate Ground Elevation:
Groundwater first encountered: ---
Groundwater at end of drilling: ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation:	SAMPLE TYPE NUMBER	RECOVERY (in.)	MOISTURE (%)	LAB RESULTS/REMARKS
0.0							
		Medium-stiff to stiff, gravelly SILT (ML) with sand, sand is fine, dark brown, moist (FILL)		GS S-1	6		
2.5				GS S-2	6		
		Stiff SILT (ML) with sand, gray and orange mottling, moist		GS S-3	6	33	
5.0				GS S-4	6		
		trace fine sand at 6-ft bgs					
7.5							

Boring terminated at 7.5-ft bgs
 No groundwater observed

Operator: Central Geotechnical Services
Drilling Method: 3-inch Hand Auger
Equipment: Hand Auger

Logged By: Ruslan Pavlenko
Checked By: Blayne Sandau
Approximate Location Coordinates:
 Lat: Long:

Remarks:

HAND AUGER TEMPLATE - GINT STD US LAB.GDT - 10/31/23 13:15 - C:\USERS\CGS\USER\CENTRAL GEOTECHNICAL SERVICES\CGS - PROJECTS\R-Z\WILSONVILLE\WILSONVILLE-2\WILSONVILLE-2-01\FIELD EXPLORATION\2 - FIELD AND DRAFT LOGS\AC



Central Geotechnical Services
 10240 SW Nimbus Ave, Suite L6
 Portland, OR 97223
 Telephone: (503) 616-9419

Project No:
Wilsonville-2-01

HAND AUGER LOG HA-2

Project: Project CIP #9175-80 Location: Frog Pond Park, Wilsonville, OR Client: City of Wilsonville	Date Started: 10/10/23 Date Completed: 10/10/23	Approximate Ground Elevation: Groundwater first encountered: --- Groundwater at end of drilling: ---
--	--	---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation:	SAMPLE TYPE NUMBER	RECOVERY (in.)	MOISTURE (%)	LAB RESULTS/REMARKS
0.0		Medium-stiff to stiff, sandy SILT (ML), sand is fine, fine roots in growth position, dark brown, moist (TOPSOIL/DISTURBED NATIVE)					
0.5		Medium-stiff to stiff SILT (ML) with sand, brown, moist					
2.5		becomes stiff and gray brown with orange mottling at 3-ft bgs		GS S-1	6		
				GS S-2	6		
5.0				GS S-3	6		
7.5		becomes brown @ 6.5-ft bgs		GS S-4	6	30	LL = 36 PL = 27 PI = 9

Hand Auger terminated at 7.5-ft bgs
 No groundwater observed

Operator: Central Geotechnical Services Drilling Method: 3-inch Hand Auger Equipment: Hand Auger	Logged By: Ruslan Pavlenko Checked By: Blayne Sandau Approximate Location Coordinates: Lat: Long:	Remarks:
---	--	-----------------

HAND AUGER TEMPLATE - GINT STD US LAB.GDT - 10/31/23 13:15 - C:\USERS\CGSUSER\CENTRAL GEOTECHNICAL SERVICES\CGS - PROJECTS\R-Z\WILSONVILLE\WILSONVILLE-2\WILSONVILLE-2-01\FIELD EXPLORATION\2 - FIELD AND DRAFT LOGS\AC



Central Geotechnical Services
 10240 SW Nimbus Ave, Suite L6
 Portland, OR 97223
 Telephone: (503) 616-9419

Project No:
Wilsonville-2-01

HAND AUGER LOG HA-3

Project: Project CIP #9175-80	Date Started: 10/10/23	Approximate Ground Elevation:
Location: Frog Pond Park, Wilsonville, OR	Date Completed: 10/10/23	Groundwater first encountered: 6.75 ft
Client: City of Wilsonville		Groundwater at end of drilling: 5.50 ft

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation:	SAMPLE TYPE NUMBER	RECOVERY (in.)	MOISTURE (%)	LAB RESULTS/REMARKS
0.0		Medium-stiff, sandy SILT (ML), fine roots in growth position, dark brown, moist (TOPSOIL/DISTURBED NATIVE)					
0.5		Stiff SILT (ML) with sand, brown with gray and orange mottling, moist					
2.5				GS S-1	6		
				GS S-2	6		
5.0				GS S-3	6	▼	
						▽	
7.5				GS S-4	6	33	
8.0							

Hand Auger terminated at 8 feet
 Groundwater observed at 6.75 feet at completion
 Groundwater measured at 5.5 feet after 1.5 hours

Operator: Central Geotechnical Services	Logged By: Ruslan Pavlenko	Remarks:
Drilling Method: 3-inch Hand Auger	Checked By: Blayne Sandau	
Equipment: Hand Auger	Approximate Location Coordinates: Lat: Long:	

HAND AUGER TEMPLATE - GINT STD US LAB.GDT - 10/31/23 13:15 - C:\USERS\CGS\USER\CENTRAL GEOTECHNICAL SERVICES\CGS - PROJECTS\R-Z\WILSONVILLE\WILSONVILLE-2\WILSONVILLE-2-01\FIELD EXPLORATION\2 - FIELD AND DRAFT LOGS\AC



Central Geotechnical Services
 10240 SW Nimbus Ave, Suite L6
 Portland, OR 97223
 Telephone: (503) 616-9419

Project No:
Wilsonville-2-01

HAND AUGER LOG HA-4

Project: Project CIP #9175-80 Location: Frog Pond Park, Wilsonville, OR Client: City of Wilsonville	Date Started: 10/13/23 Date Completed: 10/13/23	Approximate Ground Elevation: Groundwater first encountered: --- Groundwater at end of drilling: ---
--	--	---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation:	SAMPLE TYPE NUMBER	RECOVERY (in.)	MOISTURE (%)	LAB RESULTS/REMARKS
0.0		Medium-stiff, SILT (ML) with sand, sand is fine, fine roots in growth position, dark brown, moist (TOPSOIL/DISTURBED NATIVE)					
0.5		Very stiff SILT (ML) with sand, sand is fine, brown with gray and orange mottling, moist		GS S-1	6		
2.5		Fine roots in growth position a 3-ft bgs becomes trace sand at 3.5-ft bgs		GS S-2	6	31	
5.0				GS S-3	6		
7.5							

Boring terminated at 7.5 feet
 No groundwater observed

Operator: Central Geotechnical Services Drilling Method: 3-inch Hand Auger Equipment: Hand Auger	Logged By: Ruslan Pavlenko Checked By: Blayne Sandau Approximate Location Coordinates: Lat: Long:	Remarks:
---	--	-----------------

HAND AUGER TEMPLATE - GINT STD US LAB.GDT - 10/31/23 13:15 - C:\USERS\CGS\USER\CENTRAL GEOTECHNICAL SERVICES\CGS - PROJECTS\R-Z\WILSONVILLE\WILSONVILLE-2\WILSONVILLE-2-01\FIELD EXPLORATION\2 - FIELD AND DRAFT LOGS\AC



Central Geotechnical Services
 10240 SW Nimbus Ave, Suite L6
 Portland, OR 97223
 Telephone: (503) 616-9419

Project No:
Wilsonville-2-01

HAND AUGER LOG HA-5

Project: Project CIP #9175-80 Location: Frog Pond Park, Wilsonville, OR Client: City of Wilsonville	Date Started: 10/10/23 Date Completed: 10/10/23	Approximate Ground Elevation: Groundwater first encountered: --- Groundwater at end of drilling: ---
--	--	---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation:	SAMPLE TYPE NUMBER	RECOVERY (in.)	MOISTURE (%)	LAB RESULTS/REMARKS
0.0		Medium-stiff, SILT (ML) with sand, sand is fine, fine roots in growth position, dark brown, moist (TOPSOIL/DISTURBED NATIVE)					
0.5		Medium-stiff to stiff, sandy SILT (ML), sand is fine, brown with gray and orange mottling, moist					
2.5		becomes trace fine sand at 2.5-ft bgs		GS S-1	6		
5.0				GS S-2	6		
7.5				GS S-3	6	33	

Boring terminated at 7.5 feet
 No groundwater observed

Operator: Central Geotechnical Services Drilling Method: 6-inch Hand Auger Equipment: Hand Auger	Logged By: Ruslan Pavlenko Checked By: Blayne Sandau Approximate Location Coordinates: Lat: Long:	Remarks:
---	--	-----------------

HAND AUGER TEMPLATE - GINT STD US LAB.GDT - 10/31/23 13:15 - C:\USERS\CGSUSER\CENTRAL GEOTECHNICAL SERVICES\CGS - PROJECTS\R-Z\WILSONVILLE\WILSONVILLE-2\WILSONVILLE-2-01\FIELD EXPLORATION\2 - FIELD AND DRAFT LOGS\AC



Central Geotechnical Services
 10240 SW Nimbus Ave, Suite L6
 Portland, OR 97223
 Telephone: (503) 616-9419

Project No:
Wilsonville-2-01

HAND AUGER LOG HA-6

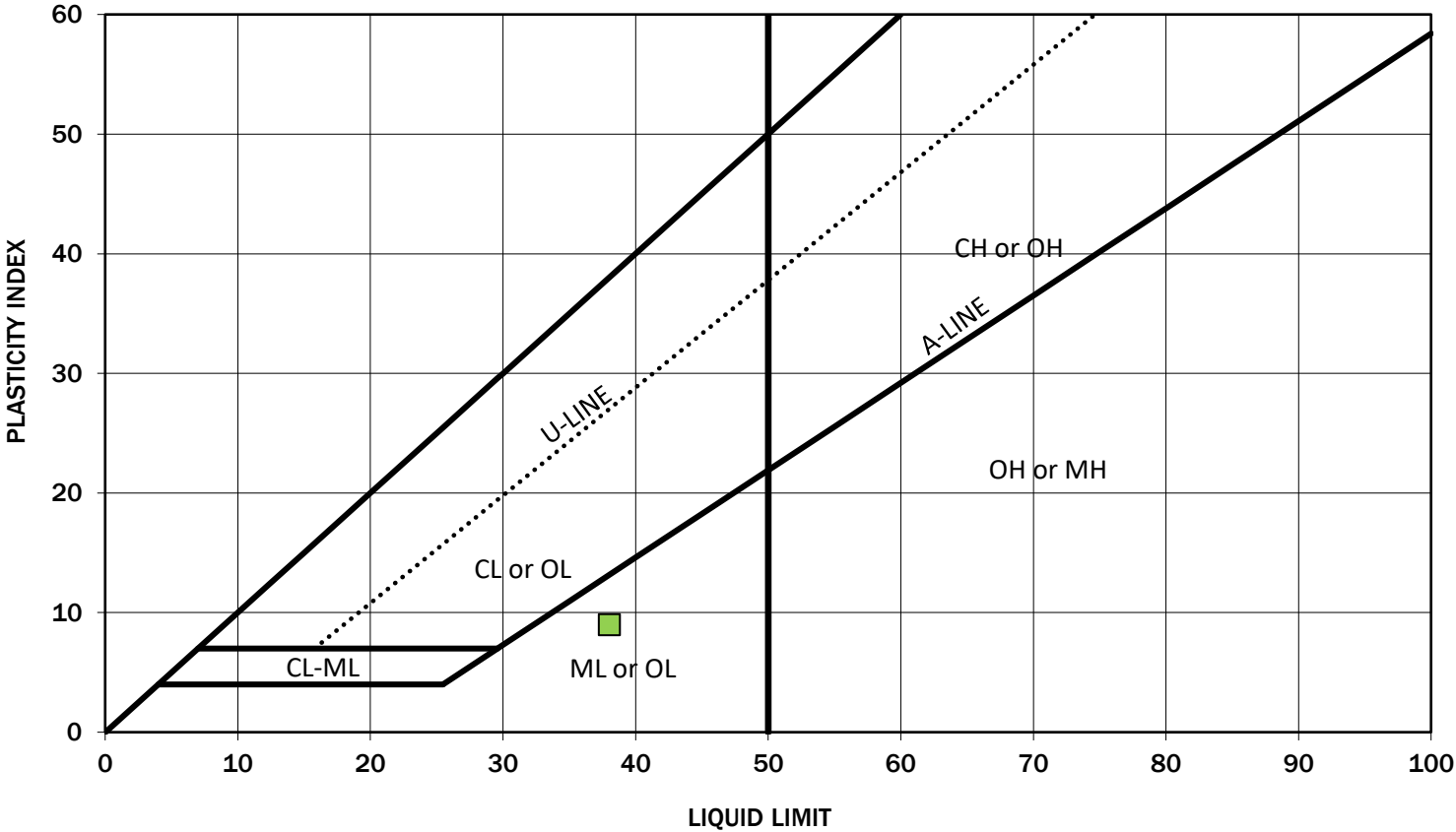
Project: Project CIP #9175-80	Date Started: 10/13/23	Approximate Ground Elevation:
Location: Frog Pond Park, Wilsonville, OR	Date Completed: 10/13/23	Groundwater first encountered: ---
Client: City of Wilsonville		Groundwater at end of drilling: ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation:	SAMPLE TYPE NUMBER	RECOVERY (in.)	MOISTURE (%)	LAB RESULTS/REMARKS
0.0							
1.5		Medium-stiff, sandy SILT (ML) with gravel, sand is fine to coarse, fine roots in growth position, dark brown, moist (FILL)		GS S-1	6		
2.5		Stiff to very stiff, SILT (ML) with sand, sand is fine, brown with gray and orange mottling, moist Fine roots in growth position up to 3 feet becomes trace sand at 4-ft bgs		GS S-2	6		
5.0							
7.5				GS S-3	6		

Boring terminated at 7.5 feet
 No groundwater observed

Operator: Central Geotechnical Services	Logged By: Ruslan Pavlenko	Remarks:
Drilling Method: 3-inch Hand Auger	Checked By: Blayne Sandau	
Equipment: Hand Auger	Approximate Location Coordinates: Lat: Long:	


PLASTICITY CHART



Symbol	Boring Number	Depth (feet)	Moisture Content (%)	Liquid Limit (%)	Plasticity Index (%)	Soil Description
■	HA-2	7	30.0	36	27.	Silt (ML)

Atterberg Limits Test Results

Frog Pond West Neighborhood Park
Wilsonville, Oregon



CENTRAL
GEOTECHNICAL SERVICES

Figure A-8

Note: This report may not be reproduced, except in full, without written approval of Central Geotechnical Services, LLC. Test results are applicable only to the specific sample on which they were performed and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes. The liquid limit and plasticity index were obtained in general accordance with ASTM D 4318.



PRELIMINARY REPORT

In response to the application for a policy of title insurance referenced herein Ticor Title Company of Oregon hereby reports that it is prepared to issue, or cause to be issued, as of the specified date, a policy or policies of title insurance describing the land and the estate or interest hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an exception herein or not excluded from coverage pursuant to the printed Schedules or Conditions of said policy forms.

The printed Exceptions and Exclusions from the coverage of said policy or policies are set forth in Exhibit One. Copies of the policy forms should be read. They are available from the office which issued this report.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby.

The policy(s) of title insurance to be issued hereunder will be policy(s) of Chicago Title Insurance Company, a/an Florida corporation.

Please read the exceptions shown or referred to herein and the Exceptions and Exclusions set forth in Exhibit One of this report carefully. The Exceptions and Exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects and encumbrances affecting title to the land.

This preliminary report is for the exclusive use of the parties to the contemplated transaction, and the Company does not have any liability to any third parties nor any liability until the full premium is paid and a policy is issued. Until all necessary documents are placed of record, the Company reserves the right to amend or supplement this preliminary report.

Countersigned

A handwritten signature in black ink, appearing to read 'Dana Freitas', written over a horizontal line.

Dana Freitas



111 SW Columbia St., Ste 1000, Portland, OR 97201
(503)242-1210 FAX (503)242-0770

PRELIMINARY REPORT

ESCROW OFFICER: Candice Weischedel
Candice.Weischedel@TicorTitle.com
503-219-1112

ORDER NO.: 36262303686
Supplement 1: Date Down/
REVISED LEGAL * Add exceptions
#17 and #18

TITLE OFFICER: Erich Telford

TO: Ticor Title Company of Oregon
111 SW Columbia St., Ste 1000
Portland, OR 97201

ESCROW LICENSE NO.: EA850600240

OWNER/SELLER: Clackamas County School District 3, West Linn-Wilsonville School District 3JT, an Oregon non profit public benefit corporation

BUYER/BORROWER: City of Wilsonville, an Oregon municipal corporation

PROPERTY ADDRESS: 7035 SW Boeckman Road, Wilsonville, OR 97070

EFFECTIVE DATE: November 30, 2023, 08:00 AM

1. THE POLICY AND ENDORSEMENTS TO BE ISSUED AND THE RELATED CHARGES ARE:

	<u>AMOUNT</u>	<u>PREMIUM</u>
ALTA Owner's Policy 2021	\$ 1,387,200.00	\$ 2,682.00
OTIRO Endorsement No. 110		\$ 0.00
ALTA Loan Policy 2021	\$ TBD	\$ TBD
Government Lien Search		\$ 35.00

2. THE ESTATE OR INTEREST IN THE LAND HEREINAFTER DESCRIBED OR REFERRED TO COVERED BY THIS REPORT IS:

A Fee

3. TITLE TO SAID ESTATE OR INTEREST AT THE DATE HEREOF IS VESTED IN:

Clackamas County School District 3, West Linn-Wilsonville School District 3JT, an Oregon non profit public benefit corporation

4. THE LAND REFERRED TO IN THIS REPORT IS SITUATED IN THE CITY OF WILSONVILLE, COUNTY OF CLACKAMAS, STATE OF OREGON, AND IS DESCRIBED AS FOLLOWS:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

EXHIBIT "A"
[Legal Description](#)

(REVISED)

Parcel 4, PARTITION PLAT NO. 2023-051, in the City of Wilsonville, Clackamas County, Oregon, according to the official plat thereof, recorded June 4, 2019, as Document Fee No. 2023-035048.

AS OF THE DATE OF THIS REPORT, ITEMS TO BE CONSIDERED AND EXCEPTIONS TO COVERAGE IN ADDITION TO THE PRINTED EXCEPTIONS AND EXCLUSIONS IN THE POLICY FORM WOULD BE AS FOLLOWS:

GENERAL EXCEPTIONS:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests or claims, which are not shown by the Public Records but which could be ascertained by an inspection of the Land or which may be asserted by persons in possession thereof.
3. Easements, or claims thereof, which are not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
4. Any encroachment, encumbrance, violation, variation or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
5. Any lien, or right to a lien, for services, labor, material or equipment rental, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, heretofore or hereafter furnished, imposed by law and not shown by the Public Records.

SPECIFIC ITEMS AND EXCEPTIONS:

6. The subject property is under public, charitable, fraternal, or religious organization ownership and is exempt from ad valorem taxation. Any change in ownership prior to delivery of the assessment roll may result in tax liability.

[Tax Account No.: 00805980](#)
Map No.: 31W12DD 00400
7. [Intentionally Deleted]
8. Rights of the public to any portion of the Land lying within the area commonly known as streets, roads and highways.
9. Rights of the public and of governmental bodies in and to that portion of the premises herein described lying below the high water mark of unnamed creek.
10. [Intentionally Deleted]
11. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
Granted to: The Pacific Telephone and Telegraph Company
Purpose: Poles, with necessary wires and fixtures
Recording Date: October 1, 1913
Recording No: Book 5, Page 455 (miscellaneous records)
also disclosed by Deed
Recording Date: May 24, 1999
[Recording No: 99-052396](#)

12. Restrictions, but omitting restrictions, if any, based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said restriction is permitted by applicable law, as shown on that certain plat

Name of Plat: [Partition Plat No. 2019-047](#)

Recording Date: May 2, 2019

Recording No: 2019-030657

13. Please be advised that our search did not disclose any open Deeds of Trust of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.
14. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.

To remove this item, the Company will require an affidavit and indemnity on a form supplied by the Company.

15. Any lien or right to a lien for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

To remove this item, the Company will require an affidavit and indemnity on a form supplied by the Company.

16. Any encroachment (of existing improvements located on the subject Land onto adjoining land or of existing improvements located on adjoining land onto the subject Land), encumbrance, violation, variation or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject Land.

The Company will require an inspection of the premises, and this exception may be eliminated or limited as a result thereof.

17. Easement(s) for the purpose(s) shown below and rights incidental thereto as delineated or as offered for dedication, on the map of said [tract/plat](#);

Purpose: Public Utility Easement

Affects: North Lot Line

Name of Plat: [Partition Plat 2023-051](#)

Recording Date: September 29, 2023

Recording No: 2023-035048

18. Plat Restrictions and Notes, as shown on that certain plat

Name of Plat: [Partition Plat 2023-051](#)

Recording Date: September 29, 2023

Recording No: 2023-035048

ADDITIONAL REQUIREMENTS/NOTES:

- A. In addition to the standard policy exceptions, the exceptions enumerated above shall appear on the final ALTA Policy unless removed prior to issuance.

- B. NOTE: The following are required when a principal to the proposed transaction is an instrumentality of the state, such as a municipality, a county or other governmental body:
- Certification, with supporting documentation, that the board or other governing authority of the governmental body has approved the transaction in accordance with applicable practices, procedures, rules, ordinances and statutes.
 - Certification that a named person or persons, identified by name and position, are authorized to act on behalf of the governmental body in the proposed transaction.
 - Verification of the current legal name and good standing of the governmental body when it is a local governmental body other than a city or county.

WARNING REGARDING DEED OR CONTRACT TO TAX-EXEMPT GOVERNMENTAL TRANSFEREE. Oregon law prohibits the county recording officer from recording a deed or contract to a tax-exempt governmental transferee, unless the deed or contract is accompanied by a certificate of payment of ad valorem county taxes. The certificate must be attested by the county assessor using a form prescribed by the Oregon Department of Revenue. Failure to allow adequate time for obtaining a certificate of payment may delay recording. This requirement is contained in Chapter 96, Oregon Laws 2015, effective Oct. 5, 2015.

- C. The Land described herein is included within a project area of the Redevelopment Agency shown below, and that proceedings for the redevelopment of said project have been instituted under the Redevelopment Law (such redevelopment to proceed only after the adoption of the Redevelopment Plan) as disclosed by a document.
Redevelopment Agency: The Urban Renewal Agency of the City of Wilsonville
- D. Note: There are NO conveyances affecting said Land recorded within 24 months of the date of this report.
- E. Note: No utility search has been made or will be made for water, sewer or storm drainage charges unless the City/Service District claims them as liens (i.e. foreclosable) and reflects them on its lien docket as of the date of closing. Buyers should check with the appropriate city bureau or water service district and obtain a billing cutoff. Such charges must be adjusted outside of escrow.
- F. Note: Effective January 1, 2008, Oregon law (ORS 314.258) mandates withholding of Oregon income taxes from sellers who do not continue to be Oregon residents or qualify for an exemption. Please contact your Escrow Closer for further information.
- G. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, processing, manufacture, sale, dispensing or use of marijuana and psilocybin, the Company is not able to close or insure any transaction involving Land associated with these activities.

H. Recording Charge (Per Document) is the following:

County	First Page	Each Additional Page
Multnomah	\$86.00	\$5.00
Washington	\$81.00	\$5.00
Clackamas	\$93.00	\$5.00

Note: When possible the company will record electronically. An additional charge of \$5.00 applies to each document which is recorded electronically.

Note: Please send any documents for recording to the following address:

Portland Title Group
Attn: Recorder
1455 SW Broadway, Suite 1450
Portland, OR. 97201

I. THE FOLLOWING NOTICE IS REQUIRED BY STATE LAW: YOU WILL BE REVIEWING, APPROVING AND SIGNING IMPORTANT DOCUMENTS AT CLOSING. LEGAL CONSEQUENCES FOLLOW FROM THE SELECTION AND USE OF THESE DOCUMENTS. YOU MAY CONSULT AN ATTORNEY ABOUT THESE DOCUMENTS. YOU SHOULD CONSULT AN ATTORNEY IF YOU HAVE QUESTIONS OR CONCERNS ABOUT THE TRANSACTION OR ABOUT THE DOCUMENTS. IF YOU WISH TO REVIEW TRANSACTION DOCUMENTS THAT YOU HAVE NOT SEEN, PLEASE CONTACT THE ESCROW AGENT.

J. Note: This [map/plat](#) is being furnished as an aid in locating the herein described Land in relation to adjoining streets, natural boundaries and other land. Except to the extent a policy of title insurance is expressly modified by endorsement, if any, the Company does not insure dimensions, distances or acreage shown thereon.

K. NOTE: IMPORTANT INFORMATION REGARDING PROPERTY TAX PAYMENTS

Fiscal Year:	July 1 st through June 30 th
Taxes become a lien on real property, but are not yet payable:	July 1 st
Taxes become certified and payable (approximately on this date):	October 15 th
First one third payment of taxes is due:	November 15 th
Second one third payment of taxes is due:	February 15 th
Final payment of taxes is due:	May 15 th

Discounts: If two thirds are paid by November 15th, a 2% discount will apply.
If the full amount of the taxes are paid by November 15th, a 3% discount will apply.

Interest: Interest accrues as of the 15th of each month based on any amount that is unpaid by the due date. No interest is charged if the minimum amount is paid according to the above mentioned payment schedule.

L. Note: If an Owner's Title Insurance Policy is requested, the State of Oregon requires every ALTA Owner's Policy (07-01-2021) to include the OTIRO 110 Endorsement as a supplement to the definition of Insured in said Owner's Policy's Conditions to confirm coverage is the same for an Oregon Registered Domestic Partner as it is for a Spouse.

EXHIBIT ONE
2021 AMERICAN LAND TITLE ASSOCIATION LOAN POLICY (07-01-2021)
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. a. any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) that restricts, regulates, prohibits, or relates to:
 - i. the occupancy, use, or enjoyment of the Land;
 - ii. the character, dimensions, or location of any improvement on the Land;
 - iii. the subdivision of land; or
 - iv. environmental remediation or protection.
 - b. any governmental forfeiture, police, regulatory, or national security power.
 - c. the effect of a violation or enforcement of any matter excluded under Exclusion 1.a. or 1.b.
2. Any power of eminent domain. Exclusion 2 does not modify or limit the coverage provided under Covered Risk 7.
 3. Any defect, lien, encumbrance, adverse claim, or other matter:
 - a. created, suffered, assumed, or agreed to by the Insured Claimant;
 - b. not Known to the Company, not recorded in the Public Records at the Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - c. resulting in no loss or damage to the Insured Claimant;
 - d. attaching or created subsequent to the Date of Policy (Exclusion 3.d. does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or

- e. resulting in loss or damage that would not have been sustained if consideration sufficient to qualify the Insured named in Schedule A as a bona fide purchaser or encumbrancer had been given for the Insured Mortgage at the Date of Policy.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business law.
 5. Invalidity or unenforceability of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or Consumer Protection Law.
 6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights law, that the transaction creating the lien of the Insured Mortgage is a:
 - a. fraudulent conveyance or fraudulent transfer;
 - b. voidable transfer under the Uniform Voidable Transactions Act; or
 - c. preferential transfer:
 - i. to the extent the Insured Mortgage is not a transfer made as a contemporaneous exchange for new value; or
 - ii. for any reason not stated in the Covered Risk 13.b
 7. Any claim of a PACA-PSA Trust. Exclusion 7 does not modify or limit the coverage provided under Covered Risk 8.
 8. Any lien on the Title for real estate taxes or assessments imposed by a governmental authority and created or attaching between the Date of Policy and the date of recording of the Insured Mortgage in the Public Records. Exclusion 8 does not modify or limit the coverage provided under Covered Risk 2.b. or 11.b.
 9. Any discrepancy in the quantity of the area, square footage, or acreage of the Land or of any improvement to the Land.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage.

SCHEDULE B - GENERAL EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Facts, rights, interests or claims which are not shown by the Public Records but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.
3. Easements, or claims of easement, not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
5. Any lien for services, labor or material heretofore or hereafter furnished, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, imposed by law and not shown by the Public Records.

2021 AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY (07-01-2021)
EXCLUSIONS FROM COVERAGE

The following matters are excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses that arise by reason of:

1. a. any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) that restricts, regulates, prohibits, or relates to:
 - i. the occupancy, use, or enjoyment of the Land;
 - ii. the character, dimensions or location of any improvement on the Land;
 - iii. the subdivision of land; or
 - iv. environmental remediation or protection;
 - b. any governmental forfeiture, police, regulatory, or national security power
 - c. the effect of a violation or enforcement of any matter excluded under Exclusion 1.a. or 1.b.
- Exclusion 1 does not modify or limit the coverage provided under Covered Risk 5 or 6.
2. Any power of eminent domain. Exclusion 2 does not modify or limit the coverage provided under Covered Risk 7.
 3. Any defect, lien, encumbrance, adverse claim, or other matter:
 - a. created, suffered, assumed or agreed to by the Insured Claimant;
 - b. not known to the Company, not recorded in the Public Records at the Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - c. resulting in no loss or damage to the Insured Claimant;

- d. attaching or created subsequent to the Date of Policy (Exclusion 3.d. does not modify or limit the coverage provided under Covered Risk 9 or 10); or
 - e. resulting in loss or damage that would not have been sustained if consideration sufficient to qualify the Insured named in Schedule A as a bona fide purchaser had been given for the Title at the Date of Policy.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights law, that the transaction vesting the Title as shown in Schedule A is a:
 - a. fraudulent conveyance or fraudulent transfer, or
 - b. voidable transfer under the Uniform Voidable Transactions Act; or
 - c. preferential transfer:
 - i. to the extent the instrument of transfer vesting the Title as shown in Schedule A is not a transfer made as a contemporaneous exchange for new value; or
 - ii. for any other reason not stated in Covered Risk 9.b.
 5. Any claim of a PACA-PSA Trust. Exclusion 5 does not modify or limit the coverage provided under Covered Risk 8.
 6. Any lien on the Title for real estate taxes or assessments imposed or collected by a governmental authority that becomes due and payable after the Date of Policy. Exclusion 6 does not modify or limit the coverage provided under Covered Risk 2.b.
 7. Any discrepancy in the quantity of the area, square footage, or acreage of the Land or of any improvement to the Land.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage.

SCHEDULE B - GENERAL EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Facts, rights, interests or claims which are not shown by the Public Records but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.
3. Easements, or claims of easement, not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
5. Any lien for services, labor or material heretofore or hereafter furnished, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, imposed by law and not shown by the Public Records.

EXHIBIT ONE

2006 AMERICAN LAND TITLE ASSOCIATION LOAN POLICY (06-17-06) EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses that arise by reason of:

- (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning) restricting, regulating, prohibiting or relating to
 - the occupancy, use, or enjoyment of the Land;
 - the character, dimensions or location of any improvement erected on the land;
 - the subdivision of land; or
 - environmental protection;or the effect of any violation of these laws, ordinances or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
- Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
- Defects, liens, encumbrances, adverse claims, or other matters
 - created, suffered, assumed or agreed to by the Insured Claimant;
 - not known to the Company, not recorded in the Public Records at Date of Policy, but known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;

- resulting in no loss or damage to the Insured Claimant;
 - attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
 - resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
- Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with the applicable doing-business laws of the state where the Land is situated.
 - Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
 - Any claim, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
 - a fraudulent conveyance or fraudulent transfer, or
 - a preferential transfer for any reason not stated in the Covered Risk 13(b) of this policy.
 - Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage.

SCHEDULE B - GENERAL EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

- Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
- Facts, rights, interests or claims which are not shown by the Public Records but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.
- Easements, or claims of easement, not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.
- Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
- Any lien for services, labor or material heretofore or hereafter furnished, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, imposed by law and not shown by the Public Records.

2006 AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY (06-17-06) EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses that arise by reason of:

- (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning) restricting, regulating, prohibiting or relating to
 - the occupancy, use, or enjoyment of the Land;
 - the character, dimensions or location of any improvement erected on the land;
 - the subdivision of land; or
 - environmental protection;or the effect of any violation of these laws, ordinances or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
- Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
- Defects, liens, encumbrances, adverse claims, or other matters
 - created, suffered, assumed or agreed to by the Insured Claimant;

- not known to the Company, not recorded in the Public Records at Date of Policy, but known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - resulting in no loss or damage to the Insured Claimant;
 - attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
 - resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
- Any claim, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
 - a fraudulent conveyance or fraudulent transfer, or
 - a preferential transfer for any reason not stated in the Covered Risk 9 of this policy.
 - Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage.

SCHEDULE B - GENERAL EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

- Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
- Facts, rights, interests or claims which are not shown by the Public Records but which could be ascertained by an inspection of the Land or by making inquiry of persons in possession thereof.
- Easements, or claims of easement, not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.
- Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
- Any lien for services, labor or material heretofore or hereafter furnished, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, imposed by law and not shown by the Public Records.



Inquire before you wire!

WIRE FRAUD ALERT

This Notice is not intended to provide legal or professional advice.
If you have any questions, please consult with a lawyer.

All parties to a real estate transaction are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification. **If funds are to be wired in conjunction with this real estate transaction, we strongly recommend verbal verification of wire instructions through a known, trusted phone number prior to sending funds.**

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.

- **NEVER RELY** on emails purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.
- **ALWAYS VERIFY** wire instructions, specifically the ABA routing number and account number, by calling the party who sent the instructions to you. DO NOT use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **Obtain the number of relevant parties to the transaction as soon as an escrow account is opened.** DO NOT send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.
- **USE COMPLEX EMAIL PASSWORDS** that employ a combination of mixed case, numbers, and symbols. Make your passwords greater than eight (8) characters. Also, change your password often and do NOT reuse the same password for other online accounts.
- **USE MULTI-FACTOR AUTHENTICATION** for email accounts. Your email provider or IT staff may have specific instructions on how to implement this feature.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation:

<http://www.fbi.gov>

Internet Crime Complaint Center:

<http://www.ic3.gov>

FIDELITY NATIONAL FINANCIAL PRIVACY NOTICE

Effective January 1, 2023

Fidelity National Financial, Inc. and its majority-owned subsidiary companies (collectively, "FNF," "our," or "we") respect and are committed to protecting your privacy. This Privacy Notice explains how we collect, use, and protect personal information, when and to whom we disclose such information, and the choices you have about the use and disclosure of that information.

A limited number of FNF subsidiaries have their own privacy notices. If a subsidiary has its own privacy notice, the privacy notice will be available on the subsidiary's website and this Privacy Notice does not apply.

Collection of Personal Information

FNF may collect the following categories of Personal Information:

- contact information (e.g., name, address, phone number, email address);
- demographic information (e.g., date of birth, gender, marital status);
- identity information (e.g. Social Security Number, driver's license, passport, or other government ID number);
- financial account information (e.g. loan or bank account information); and
- other personal information necessary to provide products or services to you.

We may collect Personal Information about you from:

- information we receive from you or your agent;
- information about your transactions with FNF, our affiliates, or others; and
- information we receive from consumer reporting agencies and/or governmental entities, either directly from these entities or through others.

Collection of Browsing Information

FNF automatically collects the following types of Browsing Information when you access an FNF website, online service, or application (each an "FNF Website") from your Internet browser, computer, and/or device:

- Internet Protocol (IP) address and operating system;
- browser version, language, and type;
- domain name system requests; and
- browsing history on the FNF Website, such as date and time of your visit to the FNF Website and visits to the pages within the FNF Website.

Like most websites, our servers automatically log each visitor to the FNF Website and may collect the Browsing Information described above. We use Browsing Information for system administration, troubleshooting, fraud investigation, and to improve our websites. Browsing Information generally does not reveal anything personal about you, though if you have created a user account for an FNF Website and are logged into that account, the FNF Website may be able to link certain browsing activity to your user account.

Other Online Specifics

Cookies. When you visit an FNF Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. Information gathered using cookies helps us improve your user experience. For example, a cookie can help the website load properly or can customize the display page based on your browser type and user preferences. You can choose whether or not to accept cookies by changing your Internet browser settings. Be aware that doing so may impair or limit some functionality of the FNF Website.

Web Beacons. We use web beacons to determine when and how many times a page has been viewed. This information is used to improve our websites.

Do Not Track. Currently our FNF Websites do not respond to "Do Not Track" features enabled through your browser.

Links to Other Sites. FNF Websites may contain links to unaffiliated third-party websites. FNF is not responsible for the privacy practices or content of those websites. We recommend that you read the privacy policy of every website you visit.

Use of Personal Information

FNF uses Personal Information for three main purposes:

- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you about our, our affiliates', and others' products and services, jointly or independently.

When Information Is Disclosed

We may disclose your Personal Information and Browsing Information in the following circumstances:

- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to affiliated or nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;
- to affiliated or nonaffiliated third parties with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;
- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or
- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of bankruptcy, reorganization, insolvency, receivership, or an assignment for the benefit of creditors. By submitting Personal Information and/or Browsing Information to FNF, you expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings.

Security of Your Information

We maintain physical, electronic, and procedural safeguards to protect your Personal Information.

Choices With Your Information

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you.

For California Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties, except as permitted by California law. For additional information about your California privacy rights, please visit the "California Privacy" link on our website (<https://fnf.com/pages/californiaprivacy.aspx>) or call (888) 413-1748.

For Nevada Residents: We are providing this notice pursuant to state law. You may be placed on our internal Do Not Call List by calling FNF Privacy at (888) 714-2710 or by contacting us via the information set forth at the end of this Privacy Notice. For further information concerning Nevada's telephone solicitation law, you may contact: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: aginquiries@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not disclose information about your creditworthiness to our affiliates and will not disclose your personal information, financial information, credit report, or health information to nonaffiliated third parties to market to you, other than as permitted by Vermont law, unless you authorize us to make those disclosures.

For Virginia Residents: For additional information about your Virginia privacy rights, please email privacy@fnf.com or call (888) 714-2710.

Information From Children

The FNF Websites are not intended or designed to attract persons under the age of eighteen (18). We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian.

International Users

FNF's headquarters is located within the United States. If you reside outside the United States and choose to provide Personal Information or Browsing Information to us, please note that we may transfer that information outside of your country of residence. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection, transfer, and use of such information in accordance with this Privacy Notice.

FNF Website Services for Mortgage Loans

Certain FNF companies provide services to mortgage loan servicers, including hosting websites that collect customer information on behalf of mortgage loan servicers (the "Service Websites"). The Service Websites may contain links to both this Privacy Notice and the mortgage loan servicer or lender's privacy notice. The sections of this Privacy Notice titled When Information is Disclosed, Choices with Your Information, and Accessing and Correcting Information do not apply to the Service Websites. The mortgage loan servicer or lender's privacy notice governs use, disclosure, and access to your Personal Information. FNF does not share Personal Information collected through the Service Websites, except as required or authorized by contract with the mortgage loan servicer or lender, or as required by law or in the good-faith belief that such disclosure is necessary: to comply with a legal process or applicable law, to enforce this Privacy Notice, or to protect the rights, property, or safety of FNF or the public.

Your Consent To This Privacy Notice; Notice Changes

By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information in accordance with this Privacy Notice. We may change this Privacy Notice at any time. The Privacy Notice's effective date will show the last date changes were made. If you provide information to us following any change of the Privacy Notice, that signifies your assent to and acceptance of the changes to the Privacy Notice.

Accessing and Correcting Information; Contact Us

If you have questions or would like to correct your Personal Information, visit FNF's [Privacy Inquiry Website](#) or contact us by phone at (888) 714-2710, by email at privacy@fnf.com, or by mail to:

Fidelity National Financial, Inc.
601 Riverside Avenue,
Jacksonville, Florida 32204
Attn: Chief Privacy Officer

1536

AFTER RECORDING RETURN TO:
West Linn/Wilsonville Sch. Dist

PO Box 35
West Linn OR 97068

Until a change is requested all tax statements shall be sent to the following address:

PO Box 35
West Linn OR 97068

Escrow No: 4200-27182-SB
Order No: 201430

WARRANTY DEED - STATUTORY FORM
(INDIVIDUAL or CORPORATION)

201430
CHICAGO TITLE INSURANCE COMPANY

THOMAS C. SCOTT and CHARLOTTE F. SCOTT, Trustees, Thomas C. Scott Trust u/a/d February 11, 1994, an one-half undivided interest; and CHARLOTTE F. SCOTT and THOMAS C. SCOTT, Trustees, Charlotte F. Scott Trust u/a/d February 11, 1994 an one-half undivided interest, as tenants in common

Grantor, conveys and warrants to Clackamas County School District 3, West Linn-Wilsonville School District 3JT

Grantee, the following described real property free of encumbrances except as specifically set forth herein:

(Continued)

This instrument will not allow use of the property described in this instrument in violation of applicable land use laws and regulations. Before signing or accepting this instrument, the person acquiring fee title to the property should check with the appropriate city or county planning department to verify approved uses and to determine any limits on lawsuits against farming or forest practices as defined in ORS 30.930.

ENCUMBRANCES:

Rights of the public and of governmental bodies in and to that portion of the premises herein described lying below the high water mark of an unnamed creek. (Affects Parcel II)

(Continued)

The true consideration for this conveyance is \$1,225,000.00 a portion of which will be paid to an accommodator as part of a 1031 tax deferred exchange.

Dated May 20, 1999; if a corporate grantor, it has caused its name to be signed by order of its board of directors.

Thomas C. Scott, TRUSTEE
Thomas C. Scott, Trustee of the Thomas C. Scott Trust

Charlotte F. Scott, Trustee
Charlotte F. Scott, Trustee of the Thomas C. Scott Trust

Thomas C. Scott, TRUSTEE
Thomas C. Scott, Trustee of the Charlotte F. Scott Trust

Charlotte F. Scott, Trustee
Charlotte F. Scott, Trustee of the Charlotte F. Scott Trust

99-052396

STATE OF OREGON, County of Clackamas) ss.
This instrument was acknowledged before me on May 20, 19 99
by Thomas C. & Charlotte F. Scott, Trustees
This instrument was acknowledged before me on May 20, 19 99
by Thomas C. & Charlotte F. Scott, Trustees as _____
of _____

[Signature]
Notary Public for Oregon
My commission expires: Nov. 6, 1999



LEGAL DESCRIPTION

PARCEL I:

A tract of land situated in the Southeast one-quarter of Section 12, Township 3 South, Range 1 West of the Willamette Meridian, in the County of Clackamas and State of Oregon, more particularly described as follows:

Commencing at a stone in a monument box at the Southeast corner of said Section 12; thence tracing the South line of said Section 12 and the centerline of Boeckman Road South 89°46'58" West 1,519.10 feet; thence North 0°02'40" East 30.00 feet to a 5/8" iron rod on the North right-of-way line of Boeckman Road and the true point of beginning of this description; thence continuing North 0°02'40" East 828.00 feet to a 5/8" iron rod; thence South 89°46'58" West 511.16 feet; thence South 0°02'40" West 828.00 feet to the North right-of-way line of said Boeckman Road; thence along said North right-of-way line North 89°46'58" East 511.16 feet to the true point of beginning.

Bearings in this description are based on 'LP 064' (Clackamas County Restoration Survey).

PARCEL II:

A tract of land situated in the Southeast one-quarter of Section 12, Township 3 South, Range 1 West of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

BEGINNING at stone in monument box at the Southeast corner of said Section 12; thence tracing the South line of said Section 12 and the center line of Boeckman Road South 89°46'58" West 925.63 feet to the Southwest corner of a tract of land conveyed by Theodore C. Hopper to Walter O. and Doris A. Wehler recorded as Recorder's Fee No. 73-35929, Clackamas County Records (found 5/8-inch iron rod bears North 00°02'40" East 30.21 feet); thence continuing South 89°46'58" West 33.00 feet; thence North 00°02'40" East (parallel to the East line of the Southeast one-quarter of said Section 12) 30.00 feet to a point on the North right-of-way line of Boeckman Road (5/8-inch iron rod set by L. S. 475 bears South 63° East 0.13 feet); thence continuing North 00°02'40" East along the West line of a tract of land described in Warranty Deed from James A. Hathaway to Dale I. Kreilkamp, recorded as Recorder's Fee No. 86-01354, Clackamas County Records, North 00°02'40" East 422.00 feet to the true point of beginning of this description; thence South 89°46'58" West 540.47 feet; thence South 00°20'40" West 422.00 feet to a point on the North right-of-way line of said Boeckman Road (30.00 feet North of center line); thence tracing said North line South 89°46'58" West 20.00 feet; thence North 00°02'40" East 828.00 feet to a point on the South line of a tract of land described in Warranty Deed from Hubert Hutchcroft and Gladys B. Hutchcroft to Robert Coats, recorded in Book 641, Page 199, June 9, 1964, Clackamas County Deed Records; thence along said South line and also the South line of a tract of land conveyed by Berry K. Fuller and Stanley Kruse, co-executors of the estate of Mary W. Kruse to Ernest R. and Pauline V. Russel, recorded as Recorder's Fee No. 74-5153, Clackamas County Records, North 89°46'58" East 560.47 feet to the Northwest corner of the Kreilkamp Tract described in said Recorder's Fee No. 86-01354, Clackamas County Records; thence along the West line of said Kreilkamp Tract South 00°02'40" West 406.00 feet to the true point of beginning of this description. Bearings in this description are based on 'LP 064' (Clackamas County Restoration Survey).

EXCEPTING THEREFROM that portion thereof contained in Deed to Louie M. Pike, et ux, recorded February 9, 1989, Recorder's Fee No. 89 06039, Clackamas County Records.

Encumbrances, continued

An easement created by instrument, including terms and provisions thereof;

Dated: July 6, 1907
Recorded: July 8, 1907
Book: 99
Page: 520
In Favor Of: Portland Railway, Light and Power Company
For: Transmission lines
Affects: The Southerly portion

An easement created by instrument, including terms and provisions thereof;

Dated: July 6, 1907
Recorded: July 8, 1907
Book: 99
Page: 520
In Favor Of: Portland Railway, Light and Power Company
For: Tree trimming and removal
Affects: The Southerly portion

An easement created by instrument, including terms and provisions thereof;

Dated: July 23, 1913
Recorded: October 1, 1913
Book: 5
Page: 455, Miscellaneous Records
In Favor Of: The Pacific Telephone and Telegraph Company
For: Poles and wires
Affects: Exact location not disclosed

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STATE OF OREGON 99-052398
CLACKAMAS COUNTY
Received and placed in the public
records of Clackamas County
RECEIPT# AND FEE: 63878 925.00
DATE AND TIME: 05/24/99 01:52 PM
JOHN KAUFFMAN, COUNTY CLERK