Updated 3/31/2025 all previous version of this form are obsolete

Planning Division
Development Permit Application

29799 SW Town Center Loop E, Wilsonville, OR 97070
Phone: 503.682.4960 Fax: 503.682.7025
Web: www.wilsonvilleoregon.gov

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: Quinn A. Duffy, PE
Company: Kimley-Horn & Associates, Inc.
Mailing Address: 1 SW Columbia St. STE 650
City, State, Zip: Portland, OR 97204
Phone: 971-420-3194 Fax: _____
E-mail: quinn.duffy@kimley-horn.com

Authorized Representative:
Name: _____
Company: _____
Mailing Address: _____
City, State, Zip: _____
Phone: _____ Fax: _____
E-mail: _____

Property Owner:
Name: David Wales
Company: BARBER ST WILDCAT, LLC
Mailing Address: 27520 SW 95TH AVE
City, State, Zip: Wilsonville, OR 97070
Phone: _____ Fax: _____
E-mail: _____

Property Owner's Signature:
David Wales
Printed Name: David Wales Date: 01/07/2026

Applicant's Signature: (if different from Property Owner)
Quinn Duffy
Printed Name: Quinn A. Duffy, PE Date: 8/15/25

Site Location and Description:
Project Address if Available: 9025 SW BARBER ST, WILSONVILLE, OR, 97070 Suite/Unit _____
Project Location: Entire site of 31W14A 01400 at the address above
Tax Map #(s): 31W14A 01400 Tax Lot #(s): _____ County: ☐ Washington ■ Clackamas

Request:
Planning review for proposed development of EV charging station at the site location above.

Project Type: Class I ☐ Class II ■ Class III ☐

☐ Residential ☐ Commercial ■ Industrial ☐ Other: _____

Application Type(s):

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

City of Wilsonville
Exhibit B1 DB25-0004

February 24, 2026

City of Wilsonville
Attn: Hanna Tuia, Associate Planner
29799 SW Town Center Loop E
Wilsonville, OR 97070

RE: 9025 SW Barber St – New Electric Vehicle Charging Station and Accessory Structure on a Currently Vacant Parcel

PROPERTY DESCRIPTION

Address: 9025 SW Barber Street
Tax lot ID(s) and Lot Size: 31W14A 01400 (1.06 AC)
Base Zone: PDI - Planned Development Industrial
Overlay Zone: N/A

PROJECT DESCRIPTION

The proposed project includes the development of a new electric vehicle (EV) charging station, including a new amenity building (including restrooms and vending machines), trash enclosure, covered vehicle charging stalls, EV charging infrastructure, pet relief area, utility connections, and associated landscaping on a vacant parcel. The proposed EV charging station will include nine (9) EV chargers serving 16 EV charging stalls (including two (2) ADA compliant EV charging stalls), and will provide restroom facilities, vending machines, outdoor seating and a pet relief area for customer and public use. The proposed development will include four (4) advertising signs – two (2) canopy fascia integrated signs (one on each canopy) and two (2) painted signs on the proposed amenity building.

Pursuant to Sections 4.140 (Planned Development Regulations), 4.156.02 (Sign Review Process and General Requirements), and 4.420 (Site Design Review), the proposed development requires Planned Development Permit, Class 3 Sign Permit, and Site Design Review approval, respectively. Applicant requests combined Stages 1 and 2 Planned Development Review, and concurrent review for Site Design and Sign Permit approvals.

APPLICABLE CODE PROVISIONS

The following section details the project's compliance with the applicable provisions of the City of Wilsonville's Planning and Land Development Ordinance ("the Code").

ZONING

4.117 Standards Applying to Industrial Developments in any Zone

(.01) All industrial developments, uses, or activities are subject to performance standards. If not otherwise specified in the Planning and Development Code, industrial developments, uses, and activities shall be subject to the performance standards specified in Section 4. 135 (.05) (PDI Zone).

Applicant Response: The subject property is located within the Planned Development Industrial (PDI) zone and is subject to the performance standards in Section 4.135(.05). The proposed development complies with the relevant performance standards in this Section, as demonstrated in

the drawings and exhibits submitted with this application, and as addressed in the associated section of this narrative, below.

4.118 Standards Applying to All Planned Development Zones

(.01) Height Guidelines. In "S" overlay zones, the solar access provisions of Section 4.137 shall be used to determine maximum building heights. In cases that are subject to review by the Development Review Board, the Board may further regulate heights as follows:

Applicant Response: The subject property is not designated within an "S" overlay zone, therefore the solar access provisions in Section 4.137 do not apply. The proposed development is subject to review by the Development Review Board and the Applicant acknowledges that the Board may further regulate height, in accordance with the provisions of this section.

(.02) Underground Utilities shall be governed by Sections 4.300 to 4.320. All utilities above ground shall be located so as to minimize adverse impacts on the site and neighboring properties.

Applicant Response: All underground utilities proposed with the development will be installed and constructed to comply with Sections 4.300 to 4.320. The proposed development includes an above ground transformer and switchgear, which are sited in the central portion of the site to minimize adverse visual impacts on the site and neighboring properties while providing the necessary utility servicing access.

(.03) Notwithstanding the provisions of Section 4.140 to the contrary, the Development Review Board, in order to implement the purposes and objectives of Section 4.140, and based on findings of fact supported by the record may:

A. Waive the following typical development standards:

…

B. The following shall not be waived by the Board, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways:

…

C. The following shall not be waived by the Board, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways, and the action taken will not violate any applicable federal, state, or regional standards:

…

D. Locate individual building, accessory buildings, off-street parking and loading facilities, open space and landscaping and screening without reference to lot lines; and

E. Adopt other requirements or restrictions, inclusive of, but not limited to, the following, except that no additional requirements or restrictions can conflict with established clear and objective standards for residential development or be grounds for denying a residential development proposal when the applicant has selected the clear and objective path for approval:

Applicant Response: The proposed development is designed to comply with the development standards listed in this section, and Applicant is not requesting any waivers or variations from the

relevant standards. Compliance with the relevant provisions in Section 4.140 is addressed in the associated section of this narrative, below. Applicant acknowledges that the Development Review Board may adopt other requirements or restrictions.

(.04) The Planning Director and Development Review Board shall, in making their determination of compliance in attaching conditions, consider the effects of this action on availability and cost…

(.05) The Planning Director, Development Review Board, or on appeal, the City Council, may as a condition of approval for any development for which an application is submitted, require that portions of the tract or tracts under consideration be set aside, improved, conveyed or dedicated for the following uses:

Applicant Response: Applicant acknowledges these provisions and understands that the Development Review Board may impose conditions of approval, including those identified in these sections.

(.06) Nothing in this Code shall prevent the owner of a site that is less than two acres in size from filing an application to rezone and develop the site as a Planned Development….

(.07) Density Transfers…

(.08) Wetland Mitigation and other mitigation for lost or damaged resources…

Applicant Response: The subject property is less than two acres in size, and Applicant is requesting Planned Development Permit, Site Design Review, and Sign Permit to construct the proposed development. The proposed development does not include a request for a density transfer and there are no wetlands located on the subject property, therefore the provisions in Subsections (.07) and (.08) do not apply.

(.09) Habitat-Friendly Development Practices. To the extent practicable, development and construction activities of any lot shall consider the use of habitat-friendly development practices, which include:

Applicant Response: The subject property is undeveloped with minimal existing vegetation (primarily low grass) in the interior of the site, and some trees and shrubs located along the northern and western property boundaries. The proposed development is sited in the central portion of the site, minimizing impacts to existing shrubs and trees, and designed to minimize grading and removal of soils. The development footprint makes efficient use of the site to minimize new impervious surfaces beyond what is necessary to provide a safe, functional, and comfortable EV charging experience for customers.

4.135 PDI – Planned Development Industrial Zone

(.01) Purpose. The purpose of the PDI zone is to provide opportunities for a variety of industrial operations and associated uses.

(.02) The PDI Zone shall be governed by Section 4.140, Planned Development Regulations, and as otherwise set forth in this Code.

Applicant Response: The subject property is located within the PDI zone and is subject to the provisions of this section and the Planned Development Regulations in Section 4.140. The proposed

development complies with the applicable standards in the PDI zone and in Section 4.140, as addressed in the associated sections of this narrative, below.

(.03) Uses that are typically permitted:

O. Any use allowed in a PDC Zone, subject to the following limitations:

1. Service Commercial uses (defined as professional services that cater to daily customers such as financial, insurance, real estate, legal, medical or dental offices) not to exceed 5,000 square feet of floor area in a single building, or 20,000 square feet of combined floor area within a multi-building development.

Applicant Response: The proposed EV charging station use falls under the "Service Commercial" use category, which is permitted in the PDI zone, subject to a 5,000 square foot floor area limitation. As discussed with City staff during the preapplication conference held on July 3rd, 2025, the Service Commercial uses floor area calculation includes the EV charging parking spaces, EV charging units, and amenity building. The combined total of these areas is approximately 3,650 square feet, which is below the 5,000 square foot maximum floor area allowance for the proposed Service Commercial use in the PDI zone; therefore, the proposed use is permitted on the subject property.

(.04) Block and access standards. The PDI zone shall be subject to the same block and access standards as the PDC zone, Section 4.131(.02) and (.03).

Applicant Response: The proposed Service Commercial (<5,000 sf) is permitted in the PDI zone and is not a listed prohibited use in Section 4.131(.02), therefore the proposed development complies with this provision. Regarding the block and access standards in Section 4.131(.03), the proposed development does not include residential uses and does not constitute a mixed-use development, therefore Subsections 2 and 3 do not apply. Applicant acknowledges that the Development Review Board maintains the authority to impose conditions of approval related to pedestrian, bicycle, and/or motor vehicle connectivity.

(.05) Performance Standards. The following performance standards apply to all industrial properties and sites within the PDI Zone, and are intended to minimize the potential adverse impacts of industrial activities on the general public and on other land uses or activities. They are not intended to prevent conflicts between different uses or activities that may occur on the same property.

A. All uses and operations except storage, off-street parking, loading and unloading shall be confined, contained, and conducted wholly within completely enclosed buildings, unless outdoor activities have been approved as part of Stage II, Site Design or Administrative Review.

Applicant Response: The proposed development includes outdoor EV charging activities, which may be considered an outdoor use that is distinct from off-street parking. Accordingly, as part of the consolidated Stages 1 and 2 Planned Development Review, Applicant requests approval to conduct the proposed EV charging activities outside of an enclosed building. No other outdoor business activities are proposed.

B. Vibration. Every use shall be so operated that the ground vibration inherently and recurrently generated from equipment other than vehicles is not perceptible without instruments at any boundary line of the property on which the use is located.

Applicant Response: The proposed EV charging use will not include any activities that are anticipated to generate perceptible ground vibration, aside from the minimal impacts from the operation of motor vehicles entering and exiting the facility which this section anticipates and permits. Temporary vibrations may occur during construction, and construction activities will be conducted in

accordance with local requirements. The proposed development complies with the provisions of this section.

C. *Emission of odorous gases or other odorous matter in quantities as detectable at any point on any boundary line of the property on which the use is located shall be prohibited.*

Applicant Response: The proposed use will primarily support the charging of electric vehicles that do not emit odorous gases/matter. Vehicles and equipment on site are expected to meet emission control standards as required by the State of Oregon. There may be temporary odors and emissions associated with construction vehicles, but they too are expected to meet required emission control standards. The proposed restroom facilities are in a central portion of the site, setback from any boundary lines, and will be designed to comply with the applicable Building Code requirements. Therefore, the use is not anticipated to emit odorous gases/matter that would be perceptible offsite, in compliance with the provisions of this section.

D. *Any open storage shall comply with the provisions of Section 4.176, and this Section.*

Applicant Response: The proposed storage area for solid waste and recyclables will be contained within a walled and roofed enclosure, and the proposed development does not include any open storage; therefore, the provisions in this section do not apply.

E. *No building customarily used for night operation, such as a baker or bottling and distribution station, shall have any opening, other than stationary windows or required fire exits, within 100 feet of any residential district and any space used for loading or unloading commercial vehicles in connection with such an operation shall not be within 100 feet of any residential district.*

Applicant Response: The proposed development does not include any buildings customarily used for night operation or commercial vehicle loading/unloading areas within 100 feet for a residential district. The proposed development complies with the provisions of this section.

F. *Heat and Glare:*

1. *Operations producing heat or glare shall be conducted entirely within an enclosed building.*

2. *Exterior lighting on private property shall be screened, baffled, or directed away from adjacent residential properties. This is not intended to apply to street lighting.*

Applicant Response: The proposed development does not include any uses anticipated to produce heat or glare. Any glare produced from sunlight reflection from vehicles would be consistent with that produced from any off-street parking area and will be mitigated by the canopies over the vehicle charging stalls and site landscaping/screening. The nearest residential property is located approximately 300 feet east of the subject site and is separated by Interstate 5. The proposed exterior lighting is designed to direct light interior to the site and will not be directed towards any residential properties, as depicted in Sheet E5.0, Photometric Site Plan. The proposed development complies with the provisions of this section.

G. *Dangerous Substances. Any use which involves the presence, storage or handling of any explosive, nuclear waste product, or any other substance in a manner which would cause a health or safety hazard for any adjacent land use or site shall be prohibited.*

Applicant Response: The proposed development does not include the presence, storage or handling of any explosive, nuclear waste product, or any other substance in a manner which would

cause a health or safety hazard for any adjacent land use or site. The proposed development complies with the provisions of this section.

H. Liquid and Solid Wastes:
…

Applicant Response: The proposed development does not include any storage of waste or other materials that are expected to attract insects or rodents on site. The proposed project is expected to produce typical types and volumes of commercial waste that will be stored in an approved storage area, as shown by the attached Service Provider Letter from Republic Services. The proposed trash and recycling area will be enclosed in a covered enclosure area constructed of concrete blocks, in compliance with the requirements in Section 4.176.

Any public sewer connections and waste conveyance will be provided in compliance with applicable City or State standards. All operations will be conducted in conformance with the City's standards and ordinances applying to sanitary and storm sewer discharges – see Sheet XX, Utility Plan, for additional details on proposed sanitary and storm sewer infrastructure. The proposed development complies with the provisions of this section.

I. Noise. Noise generated by the use, with the exception of traffic noises from automobiles, trucks, and trains, shall not violate any applicable standards adopted by the Oregon Department of Environmental Quality and W.C. 6.204 governing noise control in the same or similar locations.

Applicant Response: The proposed EV charging station use is primarily intended to serve electric vehicles, which are generally quieter than internal combustion engine vehicles. This subsection anticipates some noise impacts from automobiles, which is expected to be minimal and will be mitigated by compliance with the required landscaping and buffer standards, and the siting of the vehicle charging area in the central portion of the project site. The proposed use will comply with the applicable standards adopted by the Oregon Department of Environmental Quality and W.C. 6.204 regarding noise control. The proposed development complies with the provisions of this section.

J. Electrical Disturbances. Except for electrical facilities wherein the City is preempted by other governmental entities, electrical disturbances generated by uses within the PDI zone which interfere with the normal operation of equipment or instruments within the PDI Zone are prohibited. Electrical disturbances which routinely cause interference with normal activity in abutting residential use areas are also prohibited.

Applicant Response: The proposed use of an electric vehicle charging station does not require any unusual or abnormal electrical usage, and there is no anticipated interference with the normal operation of the site or surrounding sites. The project would constitute an energy intensive use at it would provide electric vehicle charging; however, the energy usage would not be great enough to cause an electrical disturbance and electricity availability would be adequate to service the project and would not be greater than other commercial EV charging sites. The proposed development complies with the provisions of this section.

K. Discharge Standards. There shall be no emission of smoke, fallout, fly ash, dust, vapor, gases, or other forms of air pollution that may cause a nuisance or injury to human, plant, or animal life, or to property. Plans of construction and operation shall be subject to the recommendations and regulations of the State Department of Environmental Quality. All measurements of air pollution shall be by the procedures and with equipment approved by the State Department of Environmental Quality or equivalent and acceptable methods of measurement approved by the City. Persons responsible for a suspected source of air pollution upon the request of the City shall provide quantitative and qualitative information

regarding the discharge that will adequately and accurately describe operation conditions.

Applicant Response: The proposed EV charging station is not expected to create any abnormal emission of smoke, fallout, fly ash, dust, vapor, gases, or any other form of air pollution. All of the vehicles on site are expected to meet state and federal emission standards. The proposed amenity building is designed in compliance with the relevant Building Code requirements. The proposed development complies with the provisions of this section.

L. Open burning is prohibited.

Applicant Response: No open burning is proposed. The proposed development complies with the provisions of this section.

M. Storage:

1. *Outdoor storage must be maintained in an orderly manner at all times.*
2. *Outdoor storage area shall be gravel surface or better and shall be suitable for the materials being handled and stored. If a gravel surface is not sufficient to meet the performance standards for the use, the area shall be suitably paved.*
3. *Any open storage that would otherwise be visible at the property line shall be concealed from view at the abutting property line by a sight obscuring fence or planting not less than six feet in height.*

Applicant Response: The proposed development does not include open storage and the proposed trash enclosure, which includes a paved surface for placing the trash/recycling bins, screens the bins from adjacent property lines. Applicant acknowledges that the trash enclosure must be maintained in an orderly manner at all times. The proposed development complies with the provisions of this section.

N. Landscaping:

1. *Unused property, or property designated for expansion or other future use, shall be landscaped and maintained as approved by the Development Review Board. Landscaping for unused property disturbed during construction shall include such things as plantings of ornamental shrubs, lawns, native plants, and mowed, seeded fieldgrass.*

Applicant Response: As depicted on Sheet L4.1, Planting Plan, unused portions of the property are proposed to be landscaped and any unused areas disturbed during construction are proposed to include shrubs, lawns, native plants and/or seeded fieldgrass. The proposed development complies with the provisions of this section.

2. *Contiguous unused areas of undisturbed fieldgrass may be maintained in their existing state. Large stands of invasive weeds such as Himalayan blackberries, English ivy, cherry Laurel, reed canary grass or other identified invasive plants shall be removed and/or mowed at least annually to reduce fire hazard. These unused areas, located within a phased development project or a future expansion cannot be included in the area calculated to meet the landscape requirements for the initial phase(s) of the development.*
3. *Unused property shall not be left with disturbed soils that are subject to siltation and erosion. Any disturbed soil shall be seeded for complete erosion cover germination and shall be subject to applicable erosion control standards.*

Applicant Response: As depicted on Sheet L4.1, Planting Plan, any contiguous unused areas of undisturbed fieldgrass are intended to be retained in their existing state. Applicant acknowledges that large stands of invasive weeds must be removed and/or mowed at least annually. Unused property will not be left with disturbed soils; any disturbed soils will be seeded for complete erosion cover germination and will comply with the applicable erosion control standards. The proposed development complies with the provisions of these sections.

(.06) Other Standards:

A. Minimum Individual Lot Size. No limit save and except as shall be consistent with the other provisions of this Code (e.g., landscaping, parking, etc.).

B. Maximum Lot Coverage. No limit save and except as shall be consistent with the other provisions of this Code (e.g., landscaping, parking, etc.).

C. Front Yard Setback. Thirty (30) feet. Structures on corner or through lots shall observe the minimum front yard setback on both streets. Setbacks shall also be maintained from the planned rights-of-way shown on any adopted City street plan.

Applicant Response: The proposed amenity building exceeds the minimum 30-foot front yard setback from both street frontages after the required right-of-way dedication is completed (see Sheet C2.0, Site Plan). The proposed development complies with this standard.

D. Rear and Side Yard Setback. Thirty (30) feet. Structures on corner or through lots shall observe the minimum rear and side yard setbacks on both streets. Setbacks shall also be maintained from the planned rights-of-way shown on any adopted City street plan.

E. No setback is required when side or rear yards abut on a railroad siding.

Applicant Response: The proposed trash/recycling enclosure exceeds the minimum 30-foot rear and side yard setbacks and there are no planned rights-of-way shown on any adopted City street plan that would encroach further into the site along the side and rear property lines (see Sheet C2.0, Site Plan and Sheet C2.4, Garbage Disposal Plan). The proposed development complies with this standard.

F. Corner Vision: Corner lots shall have no sight obstruction to exceed the vision clearance standards of Section 4.177.

Applicant Response: The proposed development does not result in sight obstruction that exceeds the vision clearance standards of Section 4.177 (see narrative responses to Section 4.177 in the relevant section of this narrative, below). The proposed development complies with this standard.

G. Off-Street Parking and Loading: As provided in Section 4.155.

Applicant Response: The proposed development complies with the off-street parking and loading requirements in Section 4.155, as detailed in the narrative responses to this section in the relevant section of this narrative, below.

H. Signs: As provided in Sections 4.156.01 through 4.156.11.

Applicant Response: The proposed development complies with the sign requirements in Section 4.156.11, as detailed in the narrative responses to this section in the relevant section of this narrative, below.

4.140 Planned Development Regulations

(.01) Purpose:

A. The provisions of Section 4.140 shall be known as the Planned Development Regulations. The purposes of these regulations are to encourage the development of tracts of land sufficiently large to allow for comprehensive master planning, and to provide flexibility in the application of certain regulations in a manner consistent with the intent of the Comprehensive Plan and general provisions of the zoning regulations and to encourage a harmonious variety of uses through mixed use design within specific developments thereby promoting the economy of shared public services and facilities and a variety of complimentary activities consistent with the land use designation on the Comprehensive Plan and the creation of an attractive, healthful, efficient and stable environment for living, shopping or working.

Applicant Response: The subject property is a 1.06 acre site located within the Planned Development Industrial (PDI) zone. As stated in this Subsection, the regulations within this Section are intended to facilitate comprehensive master planning of large tracts of land, while also providing for flexible implementation when consistent with the Comprehensive Plan and general zoning regulations. The proposed development is designed to comply with the relevant development standards and applicable zoning regulations, which themselves are intended to effectuate the intent of the Comprehensive Plan. Additionally, as detailed in Applicant's responses below, the proposed development is consistent with the further purposes of this Section. *It is the further purpose of the following Section:*

1. To take advantage of advances in technology, architectural design, and functional land use design;

Applicant Response: EV adoption has greatly accelerated in recent years, which has increased demand for EV charging infrastructure to support this shift in vehicle technology. The proposed development is intended to provide convenient and accessible EV charging infrastructure to support the community's continued use and future adoption of EV technology.

2. To recognize the problems of population density, distribution and circulation and to allow a deviation from rigid established patterns of land uses, but controlled by defined policies and objectives detailed in the comprehensive plan;

3. To produce a comprehensive development equal to or better than that resulting from traditional lot land use development.

Applicant Response: The proposed development is designed to comply with development standards and use permissions applicable in the PDI zone and Applicant is not seeking any variance or modifications to these standards. Accordingly, the proposed development is consistent with the policies and objectives in the Comprehensive Plan, as effectuated via the Code, and is a traditional lot land use development.

4. To permit flexibility of design in the placement and uses of buildings and open spaces, circulation facilities and off-street parking areas, and to more efficiently utilize potentials of sites characterized by special features of geography, topography, size or shape or characterized by problems of flood hazard, severe soil limitations, or other hazards;

Applicant Response: The Planned Development (PD) process permits the flexibility necessary to achieve development of allowed use on the site without severely impacting the on-site natural resources and topography. The proposed development has limited impacts on the natural topography, and the flexibility provided via the PD process enables the approval of a modified

driveway location. The new driveway, as proposed, does not meet the driveway spacing standards in the City's Public Works Standards, however the City's Development Engineering Manager has reviewed the proposed driveway location and determined it to be the most appropriate access onto the site. Accordingly, Applicant requests approval to modify the applicable driveway spacing standards to permit the proposed driveway location.

5. *To permit flexibility in the height of buildings while maintaining a ratio of site area to dwelling units that is consistent with the densities established by the Comprehensive Plan and the intent of the Plan to provide open space, outdoor living area and buffering of low-density development.*

Applicant Response: The proposed project does not include any residential development; therefore, this Subsection does not apply.

6. *To allow development only where necessary and adequate services and facilities are available or provisions have been made to provide these services and facilities.*

Applicant Response: The existing electrical, stormwater, sanitary sewer, and potable water systems within proximity of the site have the capacity or can be supplemented via onsite improvements to support the proposed development. The proposed development fulfills the purpose of this Subsection.

7. *To permit mixed uses where it can clearly be demonstrated to be of benefit to the users and can be shown to be consistent with the intent of the Comprehensive Plan.*

Applicant Response: The proposed development is solely for an EV charging station and associated accessory uses, which does not constitute a mixed-use development. This Subsection does not apply to the proposed development.

8. *To allow flexibility and innovation in adapting to changes in the economic and technological climate.*

Applicant Response: The proposed development supports the local community in adapting to changes in vehicle technology by providing necessary charging infrastructure to support existing EV and future EV adoption.

(.02) Lot Qualification:

A. *Planned Development may be established on lots which are suitable for and of a size to be planned and developed in a manner consistent with the purposes and objectives of Section 4.140.*

B. *Any site designated for development in the Comprehensive Plan may be developed as a Planned Development, provided that it is zoned "PD" or specifically defined as a PD zone by this Code. All sites which are greater than two acres in size, and designated in the Comprehensive Plan for commercial, residential, or industrial use shall be developed as Planned Developments, unless approved for other uses permitted by the Development Code. Smaller sites may also be developed through the City's PD procedures, provided that the location, size, lot configuration, topography, open space and natural vegetation of the site warrant such development.*

Applicant Response: The subject property is within the PDI zone and meets the qualifications to be developed as a Planned Development.

(.03) Ownership:

A. *The tract or tracts of land included in a proposed Planned Development must be in one (1) ownership…*

B. *Unless otherwise provided as a condition for approval of a Planned Development permit, the permittee may divide and transfer units or parcels of any development…*

Applicant Response: The property is under the ownership of a single entity. The proposed project does not include land division. The proposed development meets the ownership requirements to qualify for Planned Development Permit.

(.04) Professional Design:

A. *The applicant for all proposed Planned Developments shall certify that the professional services of the appropriate professionals have been utilized in the planning process for development.*

B. *Appropriate professionals shall include, but not be limited to the following to provide the elements of the planning process set out in Section 4.139:*

1. *An architect licensed by the State of Oregon;*
2. *A landscape architect registered by the State of Oregon;*
3. *An urban planner holding full membership in the American Institute of Certified Planners, or a professional planner with prior experience representing clients before the Development Review Board, Planning Commission, or City Council; or*
4. *A registered engineer or a land surveyor licensed by the State of Oregon.*

C. *One of the professional consultants chosen by the applicant from either 1, 2, or 3, above, shall be designated to be responsible for conferring with the planning staff with respect to the concept and details of the plan.*

Applicant Response: The proposed Planned Development and improvements have been designed by a team of professionals including a licensed architect, licensed engineers, professional land use planner, and registered landscape architect. A qualified professional consultant has been designated as the party responsible for conferring with planning staff.

D. *The selection of the professional coordinator of the design team will not limit the owner or the developer in consulting with the planning staff.*

Applicant Response: The selection of the professional coordinator is not limiting the owner/developer in consulting with planning staff.

(.05) Planned Development Permit Process:

A. *All parcels of land exceeding two acres in size that are to be used for residential, commercial or industrial development, shall, prior to the issuance of any building permit:*

1. *Be zoned for planned development.*
2. *Obtain a planned development permit; and*
3. *Obtain Planning Director, Development Review Board, or, on appeal, City Council approval.*

Applicant Response: The subject property is 1.06 acres in size, which is below the two-acre size noted; however, the site is within the PDI zone and is subject to Planned Development Permit approval from the Development Review Board.

B. *Zone change and amendment to the zoning map are governed by the applicable provisions of the Zoning Sections, inclusive of Section 4.197.*

Applicant Response: No zone changes or amendments to the zoning map are proposed with this application. The property is currently zoned Planned Development Industrial (PDI).

C. Development Review Board and Planning Director approval is governed by Sections 4.400 to 4.450.

Applicant Response: Applicant acknowledges that Section 4.400 to 4.450 vest Site Design review and approval responsibilities to the Development Review Board and Planning Director, as outlined in these Sections. The proposed development complies with the design standards/criteria and solid waste and recycling standards outlined in Sections 4.421 and 4.430, respectively, as addressed in detail in the relevant sections of this narrative below.

D. All planned developments require a planned development permit. The planned development permit review and approval process consists of the following multiple stages, the last two or three of which can be combined at the request of the applicant:

1. Pre-application conference with Planning Department;

2. Preliminary (Stage I) review by the Development Review Board or the Planning Director for properties within the Coffee Creek Industrial Design Overlay District. When a zone change is necessary, application for such change shall be made simultaneously with an application for preliminary approval; and

3. Final (Stage II) review by the Development Review Board or the Planning Director for properties within the Coffee Creek Industrial Design Overlay District.

4. In the case of a zone change and zone boundary amendment…

Applicant Response: A pre-application conference was conducted with City staff on July 3, 2025 (PRE25-0006). This application seeks approval of the Stage I and Stage II Planned Development for this property. It is not located within the Coffee Creek Industrial Design Overlay District or subject to a zone change.

GENERAL DEVELOPMENT REGULATIONS

4.154 On-Site Pedestrian Access Circulation

(.01) On-site Pedestrian Access and Circulation:

A. The purpose of this section is to implement the pedestrian access and connectivity policies of the Transportation System Plan. It is intended to provide for safe, reasonably direct, and convenient pedestrian access and circulation.

B. Standards. Development shall conform to all of the following standards:

1. Continuous Pathway System. A pedestrian pathway system shall extend throughout the development site and connect to adjacent sidewalks, and to all future phases of the development, as applicable.

Applicant Response: The proposed single-phase project includes the development of a new sidewalk along SW Boones Ferry Road, which will connect to the existing sidewalk along SW Barber Street and provide continuous pedestrian access along the perimeter of the development site. Additionally, an internal sidewalk is proposed to provide direct pedestrian access from the new sidewalk along SW Boones Ferry Road to the proposed amenity building, as depicted on Sheet C2.0, Site Plan. The proposed development complies with this standard.

2. Safe, Direct, and Convenient. Pathways within developments shall provide safe, reasonably direct, and convenient connections between primary building

entrances and all adjacent parking areas, recreational areas/playgrounds, and public rights-of-way and crosswalks based on all of the following criteria:

a. Pedestrian pathways are designed primarily for pedestrian safety and convenience, meaning they are free from hazards and provide a reasonably smooth and consistent surface.

Applicant Response: The proposed pedestrian pathways on the project site have been designed to ensure the pathways are designed to be safe and convenient and free from hazards. The pathways are separated from vehicle parking by a curb and the pathways will be built with concrete. Please see Sheet C2.0, Site Plan, for the proposed pathway locations, and Sheet C6.3, Civil Details, for concrete sidewalk construction details. The proposed development complies with this criterion.

b. The pathway is reasonably direct. A pathway is reasonably direct when it follows a route between destinations that does not involve a significant amount of unnecessary out-of- direction travel.

Applicant Response: The proposed pedestrian pathway has been designed to be a direct route from SW Boones Ferry Rd right-of-way and SW Barber St right-of-way to the building and parking area on site. There is no significant unnecessary out-of-direction travel required to access the site features (see Sheet C2.0, Site Plan, for proposed pathway locations). The proposed development complies with this criterion.

c. The pathway connects to all primary building entrances and is consistent with the Americans with Disabilities Act (ADA) requirements.

Applicant Response: The proposed pedestrian path connects the public sidewalk to the main building entrance. The proposed pathway is five feet wide and constructed of paved material, consistent with all applicable ADA requirements. Please see Sheet C2.0, Site Plan, for the proposed pathway locations, and Sheet C6.3, Civil Details, for concrete sidewalk construction details. The proposed development complies with this criterion.

d. All parking lots larger than three acres in size shall provide an internal bicycle and pedestrian pathway pursuant to Section 4.155(.03)B.3.d.

Applicant Response: The proposed site does not have any parking lots larger than three acres as the project site encompasses approximately 1.06 acres. Therefore, the above criterion does not apply to this project.

3. Vehicle/Pathway Separation. Except as required for crosswalks, per subsection 4, below, where a pathway abuts a driveway or street it shall be vertically or horizontally separated from the vehicular lane. For example, a pathway may be vertically raised six inches above the abutting travel lane, or horizontally separated by a row of bollards.

Applicant Response: The pedestrian pathway proposed on the project site is located adjacent to the parking area at some points. Where this is the case, the pathway is separated from the vehicular lane by a six inch vertically raised curb (see Sheet C6.3, Civil Details, for concreate sidewalk construction details). The proposed development complies with this standard.

4. Crosswalks. Where a pathway crosses a parking area or driveway, it shall be clearly marked with contrasting paint or paving materials (e.g., pavers, light-color concrete inlay between asphalt, or similar contrast).

Applicant Response: There are no instances on the project site where the pedestrian pathway crosses a parking area or drive aisle. The proposed development complies with this standard.

5. Pathway Width and Surface. Primary pathways shall be constructed of concrete,

asphalt, brick/masonry pavers, or other durable surface, and not less than five feet wide. Secondary pathways and pedestrian trails may have an alternative surface except as otherwise required by the ADA.

Applicant Response: The proposed pedestrian pathways will be constructed of concrete and will be a minimum of five feet wide (see Sheet C6.3, Civil Details, for concreate sidewalk construction details). The proposed development complies with this standard.

6. All pathways shall be clearly marked with appropriate standard signs.

Applicant Response: Where necessary or appropriate, all pathways will be clearly marked with appropriate signage. The proposed development complies with this standard.

4.155 General Regulations – Parking, Loading, and Bicycle Parking

(.02) General Provisions:

A. When off-street parking is provided, the provision and maintenance of the 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.

Applicant Response: The proposed EV charging station use will include 16 off-street vehicle parking spaces, which are primarily intended to serve as EV charging areas. No additional off-street parking is proposed and Applicant is not requesting a variance or waiver from the applicable parking standards. Applicant acknowledges that ongoing maintenance of these EV charging spaces is a continuing obligation of the property owner. The proposed development complies with this provision.

B. No area shall be considered a parking space unless it can be shown that the area is accessible and usable for that purpose, and has maneuvering area for the vehicles, as determined by the Planning Director.

Applicant Response: The proposed EV charging parking spaces are accessible and usable for the purpose of parking, charging, and maneuvering vehicles. The site has been designed to ensure all construction and grading of the parking lot to ensure accessibility for users. The proposed development complies with this provision.

C. When calculating vehicle parking maximums or bicycle parking requirements in Table 5 for a development with multiple uses, the requirement shall be the sum of the requirements of the several uses computed separately.
D. To minimize land dedicated to parking, owners of two or more uses, structures, or lots may and are encouraged to utilize jointly the same parking area.

Applicant Response: The proposed development includes single use, and the building and property will only be occupied by the proposed EV charging station and associated accessory uses. Therefore, the above provisions do not apply to this project.

E. The conducting of any business activity shall not be permitted in parking spaces, unless a temporary use permit is approved pursuant to Section 4.163.

Applicant Response: The proposed EV charging infrastructure is itself the primary business activity intended for the proposed use. The associated parking spaces are not intended to serve as off-street parking per se, rather they are an essential means for accessing the primary EV charging infrastructure on the site. Accordingly, Applicant understands that this provision does not preclude the operation of an EV charging station use on the subject property.

F. Redevelopment of existing parking areas to other uses is allowed…

Applicant Response: The subject property is currently undeveloped and does not include any

existing parking areas. This provision does not apply to the proposed development.

G. Where the boundary of a parking lot adjoins or is within a residential district, such parking lot shall be screened by a sight-obscuring fence or planting. The screening shall be continuous along that boundary and shall be at least six feet in height.

Applicant Response: The project site is not within or adjacent to a residential district; therefore, this provision does not apply.

H. Parking spaces along the boundaries of a parking lot over 650 square feet in area, excluding access areas, shall be provided with a sturdy bumper guard or curb at least six inches high and located far enough within the boundary to prevent any portion of a car within the lot from extending over the property line or interfering with required screening or sidewalks.

Applicant Response: Sturdy bumper guards are proposed where vehicles utilizing the proposed EV charging spaces would otherwise extend over a property line, pedestrian area, or required screening (see Sheet C2.1, Enlarged Site Plan). The proposed development ensures no portion of a car extends over a pedestrian area, required screening or property line, in compliance with this provision.

I. All areas used for parking and maneuvering of cars shall be surfaced with asphalt, concrete, or other surface, such as pervious materials (i. e. pavers, concrete, asphalt) that is found by the City's authorized representative to be suitable for the purpose. In all cases, suitable drainage, meeting standards set by the City's authorized representative shall be provided.

Applicant Response: The proposed EV charging stalls and vehicle maneuvering areas will be surfaced with asphalt and will include suitable drainage meeting the City's requirements (see Sheet C2.1, Enlarged Site Plan, for parking area details).

J. Artificial lighting which may be provided shall be so limited or deflected as not to shine into adjoining structures or into the eyes of passers-by.

Applicant Response: All proposed exterior lighting has been designed to be screened and shielded from adjacent properties and the public right-of-way. Please see Sheet E5.0, Photometric Site Plan, which confirms that lighting is limited at the property lines so as not to shine into adjoining structures or into the eyes of passers-by, in compliance with this provision.

K. Up to 40 percent of the off-street spaces may be compact car spaces as identified in Section 4.001 - "Definitions," shall be appropriately identified.

Applicant Response: The proposed development does not include any off-street compact car spaces and would include 15 standard parking stalls (10' x 20') and one large parking stall for accessible parking (12' x 20'). The proposed development complies with this provision.

L. Where off-street parking areas are designed for motor vehicles to overhang beyond curbs, planting areas adjacent to said curbs shall be increased to a minimum of seven feet in depth. This standard shall apply to a double row of parking, the net effect of which shall be to create a planted area that is a minimum of seven feet in depth.

Applicant Response: The EV charging stalls are designed to avoid any potential vehicle overhang beyond curbs over planting areas. The proposed development complies with this provision.

M. Parklets are permitted within the TC Zone on up to two parking spaces per block and shall be placed in front of the business. Placement of parklet requires a temporary right-of-way use permit and approval by the City Engineer.

Applicant Response: The proposed development does not include any parklets and the subject site is not located within the TC Zone. This provision does not apply.

N. Residential garages shall meet all of the following criteria:

Applicant Response: The proposed development does not include any residential garages. This provision does not apply.

O. Public sidewalks, public sidewalk easements or other public non-vehicle pedestrian easement areas shall not be counted towards the area of parking spaces or used for parking.

Applicant Response: No public sidewalks, public sidewalk easements or other public non-vehicle pedestrian easements are proposed to be utilized for parking or to count towards the area of parking spaces (see Sheet C2.1, Enlarged Site Plan). The proposed development complies with this provision

P. Shared visitor parking in certain residential areas:

Applicant Response: The proposed development does not include any shared visitor parking and is not located within a residential area. This provision does not apply.

(.03) Off-Street Parking Requirements:

A. Parking and loading or delivery areas shall be designed with access and maneuvering area adequate to serve the functional needs of the site and shall:

1. Separate loading and delivery areas and circulation from customer and/or employee parking and pedestrian areas. Circulation patterns shall be clearly marked.
2. To the greatest extent possible, separate vehicle and pedestrian traffic.

Applicant Response: The site has been designed to ensure vehicular traffic is separated from pedestrian areas and pathways. The primary pedestrian access is a sidewalk connecting the public right-of-way on SW Boones Ferry to the primary building entrance along the northern side of the proposed building. This is separated from vehicular circulation areas by a raised curb and wheel stops in ADA spots. Please see Sheet C2.1, Enlarged Site Plan, for vehicular access and maneuvering area design details. The proposed development complies with this requirement.

B. Parking areas over 650 square feet, excluding access areas, and loading or delivery areas shall be landscaped to minimize the visual dominance of the parking or loading area, as follows:

1. General Landscaping Requirements:

- *At least 10% of each parking area shall be landscaped to ensure it is screened from view from the public right-of-way and adjacent properties.*
- *This landscaping shall count towards the 15 percent total landscaping required in Section 4.176.03 for the site development.*

Applicant Response: The proposed EV charging area, including associated drive aisles, is approximately 5,800 square feet in size and requires a minimum of 580 square feet of landscaping to meet the 10% standard. The proposed development includes a total of 762 square feet of landscaping surrounding the EV charging area. Additionally, approximately 30,262 square feet of the proposed project site would be landscaped. Please see Sheet L4.1, Planting Plan, for landscaping design details. The proposed development complies with this requirement.

2. Tree Planting Requirements:

a. Ratios:

- *For parking areas with fewer than 40 spaces, one tree shall be*

planted for every eight parking spaces.
…

b. Calculation:

- *When calculating the required number of trees based on the ratios in a., any non-whole number shall be rounded up to the nearest whole number.*

c. Landscape Tree Planting Areas:

i. Each landscape tree planting area shall have a minimum dimension of eight feet in both width and length, or provide an equivalent soil volume within the top 36 inches.

1. Root barriers must be installed for any hard surfaces located within eight feet of the center of the tree trunk.

ii. Planting areas shall be evenly spaced throughout the planting area (e.g., every 6 or 8 parking spaces depending on the ratio in a.). Planting areas are considered spaced evenly when:

- *90 percent of parking spaces are within five parking spaces of a tree; and*
- *the parking area has one 64 square-foot or greater planting area for every 6 or 8 parking spaces, depending on the ratio in a.*

Applicant Response: The proposed EV charging area is not intended for the parking of vehicles, rather it is intended for the active charging of electric vehicles, which are expected to depart the site after charging. Accordingly, Applicant understands that the associated parking lot planting standards would not apply. However, the proposed use includes space to accommodate 16 EV charging stalls, which, if viewed akin to parking, would require a total of 2 trees. The proposed development includes three trees within the EV charging planting areas, which exceeds the number of trees required for an equivalent number of parking spaces. Trees that are located within eight feet of any hard surface are provided with root barriers. The proposed trees are located within landscape tree planting areas that exceed eight feet in width and length. The EV charging area includes three planting areas greater than 64 square feet. Please see Sheet L4.1, Planting Plan, for landscaping design details. The proposed development complies with the requirements in this Section.

d. Solar Panel Installation Option:

- *For parking areas with 40 spaces or more…*

Applicant Response: The proposed EV charging area accommodates 16 EV charging stalls, therefore the requirements in this Section do not apply.

e. Tree Planting Location and Shading Requirements:

i. Required trees may be planted within the parking area or the perimeter, provided that a minimum percentage of the canopy dripline of mature perimeter trees can be expected to shade or overlap the parking area, as follows:

- *For parking areas with less than 40 spaces, 30 percent.*
- *For parking areas with 40 spaces or more not utilizing the Solar Panel Installation Option in d. above, 40*

percent.

- *For parking areas with 40 spaces utilizing the Solar Panel Installation Option in d.above, 40 percent minus 0.4 percent for each percent of parking spaces exempted from the tree-to-parking-space ratio due to solar panel installation (e.g., if a 150-space parking area has 15 parking spaces exempted, which is 10 percent of the parking spaces, the shading requirement percentage would be 36 percent).*

Applicant Response: The proposed EV charging area is not intended for the parking of vehicles, rather it is intended for the active charging of electric vehicles, which are expected to depart the site after charging. Accordingly, Applicant understands that the associated parking lot tree planting standards would not apply. Furthermore, the proposed EV charging stalls include canopies to shield the EV charging units from the elements and provide customers with a more comfortable charging experience. The proposed canopies make it infeasible to include additional trees to provide substantial tree canopy coverage over the EV charging areas. If these standards are deemed applicable to the proposed development, Applicant requests the Development Review Board provide exception to these standards considering the nature of the proposed use and associated structural canopies make compliance infeasible.

f. Clearance for Parking Trees

- *Except for trees planted for screening, all deciduous interior parking lot area trees must be suitably sized, located, and maintained to provide a branching minimum of seven feet clearance at maturity.*

Applicant Response: The proposed development does not include any deciduous interior parking lot area trees; therefore, the standards in this Section do not apply.

g. Stormwater Integration:

- *While integration of stormwater facilities into the parking area landscaping is encouraged, required parking lot trees shall not be placed in stormwater facilities designed for future soil media replacement.*

Applicant Response: The proposed development does not include any parking lot trees in stormwater facilities designed for future soil media replacement; therefore, the standards in this Section are met.

3. Coordination of Landscaping with Sign Plans:

- *Where view of signs is pertinent to landscape design, any approved or planned sign plan shall accompany the application for landscape design approval.*

4. Additional Design Standards for Large Parking Areas:

Applicant Response: The proposed EV charging area accommodates 16 EV charging stalls; therefore, the requirements in this Section do not apply.

C. Off Street Parking shall be designed for safe and convenient access that meets ADA and ODOT standards. All parking areas which contain ten (10) or more parking spaces, shall for every 50 standard spaces, provide one ADA-accessible parking space that is constructed to building code standards, Wilsonville Code 9.000.

Applicant Response: The proposed EV charging area accommodates 16 EV charging stalls, 2 of which are designed to be ADA compliant, exceeding the requirement in this Section.

D. Where possible, parking areas shall be designed to connect with parking areas on adjacent sites so as to eliminate the necessity for any mode of travel of utilizing the public street for multiple accesses or cross movements. In addition, on-site parking shall be designed for efficient on-site circulation and parking.

Applicant Response: The nature of the proposed EV charging use and that of the adjacent vehicle fueling station and electrical insulation supplies/equipment wholesaling are not expected to be synergistic uses that would benefit from connected parking areas. Additionally, creating these connections would require the removal of existing trees and vegetation, and would increase the amount of hardscape area in the proposed development. Therefore, no adjacent parking lot connections are proposed.

The proposed EV charging area is designed for efficient on-site circulation and parking, with an appropriately sized drive-aisle serving evenly distributed 90-degree EV charging stalls. The drive-aisle is slightly extended to the east to support efficient vehicle turnarounds and avoid unnecessary reverse maneuvers onsite. The proposed development complies with the requirements in this Section.

E. In all multi-family dwelling developments…

Applicant Response: The project site does not include multi-family dwellings, therefore the requirements in this Section do not apply.

F. Tables 5 shall be used to determine the parking requirements and allowances for various land uses…

TABLE 5: PARKING STANDARDS	
Use	***Parking Maximums***
Automobile service, dealerships or repair shops	*6.2 per 1,000 square feet*

Applicant Response: The proposed EV charging use is not a clearly listed use in Table 5. The most similar listed use appears to be “Automobile service, dealerships or repair shops” which establishes a maximum of 6.2 parking spaces per 1,000 square feet of floor area. The proposed development is ~3,600 square feet which would be allowed up to 22 parking spaces. The proposed development includes 16 EV charging stalls, in compliance with the Standards in this section.

G. Electrical Vehicle (EV) Charging Infrastructure Requirements:

1. Applicability:

- *The requirements apply equally whether Charging Stations are installed with the initial development of the parking area or at a later date. As such, the requirements focus on readiness for, not installation of, Charging Stations.*
- *The requirements apply to all new off-street parking areas for the multi-family and nonresidential land uses indicated in this section.*

2. Residential and Mixed-Use Development:

Applicant Response: The proposed project does not include any residential or mixed-use development. The standards in this section do not apply.

3. *Other Uses:*

    - *Private commercial and industrial parking areas must comply with minimum EV infrastructure standards set by the Building Code. EV infrastructure required by the Building Code shall also meet the Standards in Subsections 4. c. and f. below.*

Applicant Response: The proposed EV charging station development will be designed and constructed in accordance with the relevant Building Code standards and will comply with the requirements in Subsections 4.c. and 4.f. below. The proposed development complies with this section.

4. *EV Ready Requirements:*

    - *For a vehicle parking space to be considered EV Ready, and thus count towards the minimum in 3. above and meeting the requirements of 3. above, the following requirements shall be met:*

        a. *Designation of Charging Station Locations:*

            - *A location is designated for a device or multi-component facility to deliver electricity to a vehicle parked in the space.*

        b. *Sizing of Electrical Service to Site:*

            - *Electrical service to the site is sized for the cumulative number of Charging Stations and supporting electrical equipment.*

        c. *Space for On-site Electrical Equipment to Support Capacity:*

            - *Space shall be designated within a building, or elsewhere at the site where screening standards in Section 4.176 can be met, for on-site electrical equipment, including overcurrent devices, with the capacity to serve the Charging Stations.*

        d. *Conduit:*

            - *Conduit shall be installed between the Charging Stations Locations and supporting electrical service and equipment;*

            - *Conduit shall support electrical wiring for a Level 2 EV Charging Station;*

            - *Unless connected to Charging Stations during initial development, the conduit shall have labels on both ends to mark the conduit as provided for future Charging Stations.*

        e. *Coordination of Charging Stations with Other Site Elements:*

            - *The location of Charging Stations and supporting equipment shall be coordinated and placed to avoid conflicts with other site elements during site planning including landscaping, screening, stormwater facilities, and pedestrian facilities.*

5. *Modification of existing parking spaces to accommodate EV Charging Station is allowed outright.*

Applicant Response: The proposed EV charging station use will include the installation of all required EV charging infrastructure required to serve each of the 16 proposed Level 3 DCFC EV

charging stalls. The location of the proposed EV charging stations and supporting equipment are integral to the proposed EV charging station use and have been placed to avoid conflicts with other site elements, including landscaping, screening, stormwater facilities, and pedestrian facilities. Please see Sheet C2.1, Enlarged Site Plan, for specific site design elements. The proposed development complies with the standards in this Section.

H. Motorcycle parking…

Applicant Response: The proposed development does not include any motorcycle parking stalls; therefore, the standards in this Section do not apply.

(.04) Bicycle Parking:

A. Required Bicycle Parking—General Provisions:
…

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.

B. Standards for Required Bicycle Parking…

C. Long-term Bicycle Parking…

Applicant Response: The proposed amenity building is intended to serve accessory functions in support of the proposed primary EV charging station (Service Commercial) use. The proposed primary EV charging station use is not listed as requiring bicycle parking in Table 5; therefore, no bicycle parking is required to support the primary use or accessory building. The proposed development complies with the requirements in this section.

(.05) Minimum Off-Street Loading Requirements:

A. Every building that is erected or structurally altered to increase the floor area, and which will require the receipt or distribution of materials or merchandise by truck or similar vehicle, shall provide off-street loading berths on the basis of minimum requirements as follows:

2. Commercial, industrial, and public utility uses which have a gross floor area of 5,000 square feet or more, shall provide truck loading or unloading berths in accordance with the following tables:

Square feet of Floor Area	*Number of Berths Required*
Less than 5,000	*0*

…

Applicant Response: The proposed development has a floor area that is less than 5,000 square feet, therefore no off-street loading berth is required. The proposed development complies with the standards in this section.

(.06) Carpool and Vanpool Parking Requirements:
…

Applicant Response: The proposed development is a new commercial use with fewer than 75 parking spaces, therefore no carpool or vanpool spaces are required per this section. The proposed development complies with the standards in this section.

4.156.01 Sign Regulations Purpose and Objectives

…

Applicant Response: The proposed development will include four (4) advertising signs – two (2) canopy fascia integrated signs (one on each canopy) and two (2) painted signs on the proposed amenity building. Applicant acknowledges the sign regulations' purpose and objectives, as operationalized in the associated sign standards, and all signs are designed to comply with the relevant standards, as detailed below.

4.156.02 Sign Review 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.

Applicant Response: The proposed development includes three new signs – two canopy fascia integrated signs (one on each canopy) and one painted sign on the accessory structure. Applicant is requesting a sign permit for the proposed signs, which are designed to comply with the relevant standards, as detailed below.

(.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.

Applicant Response: Applicant is unaware of any existing sign permits or Master Sign Plan for the subject property. The proposed signs are in conjunction with new development located outside of the Coffee Creek Industrial Design Overlay District, and therefore a Class III Sign Permit is required.

(.03) Classes of Sign Permits, Master Sign Plans, and Review Process…

(.04) Class I Sign Permit…

Applicant Response: The proposed signs are in conjunction with new development located outside of the Coffee Creek Industrial Design Overlay District, and therefore a Class III Sign Permit is required. Therefore, the Class I submittal requirements, review criteria, and minor adjustments process are not applicable to the proposed development.

(.05) Class II Sign Permit…

Applicant Response: The proposed signs are in conjunction with new development located outside of the Coffee Creek Industrial Design Overlay District, and therefore a Class III Sign Permit is required. Pursuant to Subsections 4.156.02(.06) A. & B., Class III Sign Permits are subject to the review criteria and submittal requirements for Class II Sign Permits (plus waiver or variance criteria, if applicable). The Class II Sign Permit review criteria and submittal requirements are listed and addressed below, demonstrating that the proposed development complies with the applicable Sign Permit review criteria.

…

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.*

Applicant Response: The required application materials have been provided in support of this application, as required in this Section and in Subsection 4.156.02(.06) A.

F. *Class II Sign Permit Review Criteria. Class II Sign Permits shall satisfactory 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;*

Applicant Response: The proposed development includes three proposed signs, designed in compliance with the applicable sign regulations in the PDI zone, which are numbered on Figure 1 and described individually below. As detailed in the below findings, each sign is designed to be compatible with uses permitted in the zone in terms of design, materials used, color schemes, proportionality, and location, and do not interfere with or detract from the visual appearance of surrounding development. The proposed signs comply with this criterion.

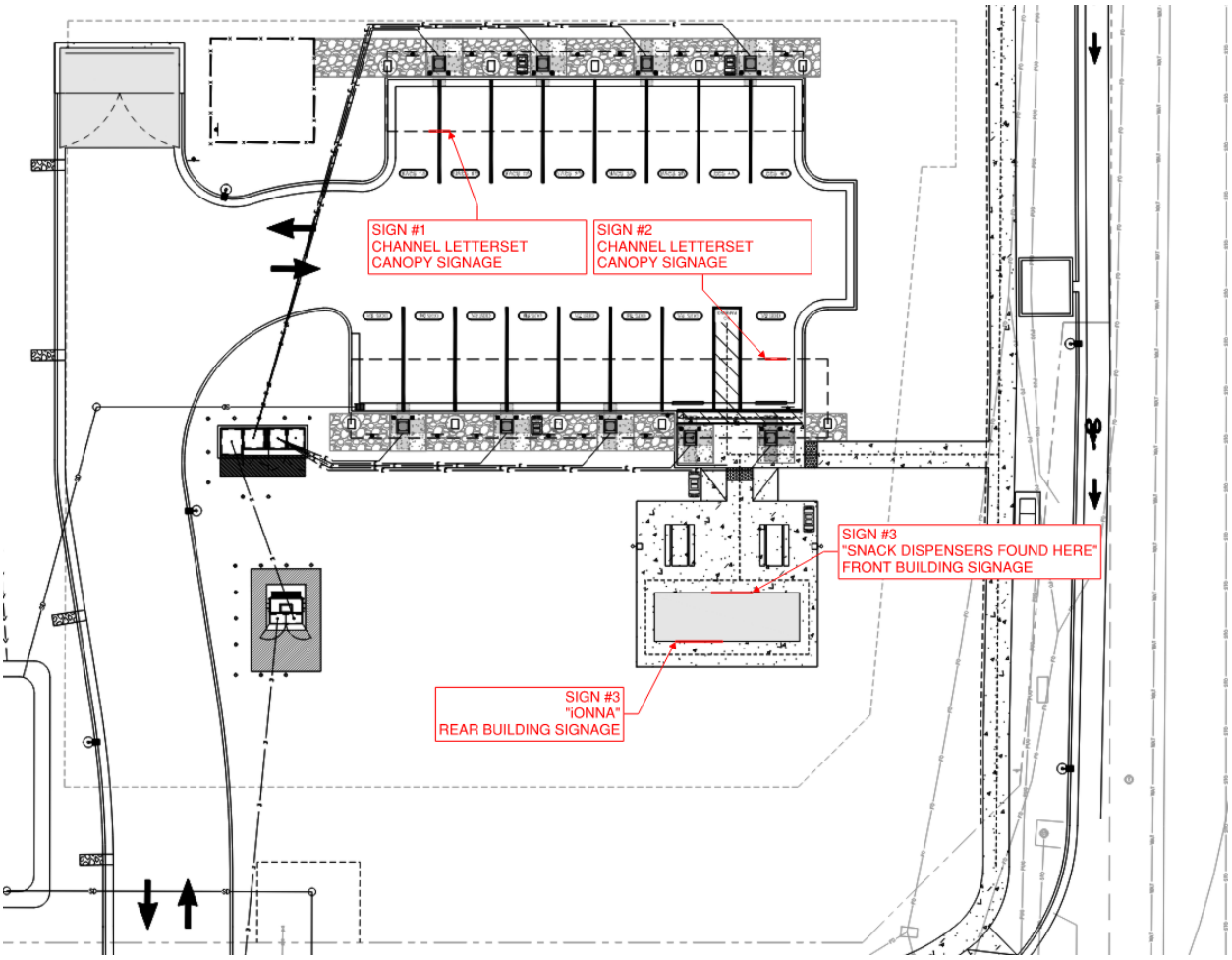


Figure 1: Overview of proposed signage

1. The northernmost EV charging canopy includes a single canopy fascia integrated sign, which is located near the southwestern corner of the canopy and is vertically oriented facing toward the internal vehicle maneuvering space and SW Barber Street. The sign is approximately 4 square feet in area and is composed of a white LED lighting system with the “iONNA” business name, utilizing a modern font to reflect the character of the proposed high-tech EV charging station use. A small vinyl sticker will be applied which will introduce an orange color to the tittle of the lowercase “i.”

   The sign is small compared to the overall canopy face and is intended to offer modest branding for iONNA to clearly identify the business while not interfering with or detracting from the visual appearance of the surrounding area and adjacent development pattern. This sign is comparable to signage typically associated with traditional vehicle fueling stations and is more understated than the large red, orange and yellow freestanding sign associated with the “Pacific Pride” fueling station to the north of the subject site. Overall, this sign is compatible with surrounding developments and is typical of similar permitted uses in the PDI zone regarding materiality, color scheme, proportionality and location. The sign does not interfere with or detract from the visual appearance of the surrounding development or adjacent development pattern. Please see Sheet C6.6, Signage Details, for a visual depiction of this proposed sign.

2. The southernmost EV charging canopy includes a single canopy fascia integrated sign, which is located near the northeastern corner of the canopy and is vertically oriented facing toward the

internal vehicle maneuvering space and the northern property boundary. The sign is approximately 4 square feet in area and is composed of a white LED lighting system with the "iONNA" business name, utilizing a modern font to reflect the character of the proposed high-tech EV charging station use. A small vinyl sticker will be applied which will introduce an orange color to the tittle of the lowercase "i."

The sign is small compared to the overall canopy face and is intended to offer modest branding for "iONNA" to clearly identify the business while not interfering with or detracting from the visual appearance of the surrounding area and adjacent development pattern. This sign is comparable to signage typically associated with traditional vehicle fueling stations and is more understated than the large red, orange and yellow freestanding sign associated with the "Pacific Pride" fueling station to the north of the subject site. Overall, this sign is compatible with surrounding developments and is typical of similar permitted uses in the PDI zone regarding materiality, color scheme, proportionality and location. The sign does not interfere with or detract from the visual appearance of the surrounding development or adjacent development pattern. Please see Sheet C6.6, Signage Details, for a visual depiction of this proposed sign.

3. The accessory amenity building includes a painted sign along its northern wall, facing the site's primary EV charging area. The sign is approximately 25.5 square feet in size, composed of Ion Orange text over a Soft Dark background. The sign is sited above the vending machine area and reads "SNACK DISPENSERS FOUND HERE." The sign utilizes a retro font and color scheme, providing a visually appealing contrast to the more modern "iONNA" logo branding signage. The sign colors are consistent with the colors provided on the amenity building and EV charging area canopies. The sign is oriented towards the EV charging area and is not intended to be visible from adjacent properties or rights-of-way.

   The sign is intended to clearly identify the vending machine area for customer use while not interfering with or detracting from the visual appearance of the surrounding area and adjacent development pattern. This sign is comparable to signage typically associated with traditional vehicle fueling stations and is more understated than the large red, orange and yellow freestanding sign associated with the "Pacific Pride" fueling station to the north of the subject site. Overall, this sign is compatible with surrounding developments and is typical of similar permitted uses in the PDI zone regarding materiality, color scheme, proportionality and location. The sign does not interfere with or detract from the visual appearance of the surrounding development or adjacent development pattern. Please see Sheet C6.6, Signage Details, for a visual depiction of this proposed sign.

4. The accessory amenity building includes a painted sign along its southern wall, facing the site's southern property line with SW Barber Street. The sign is approximately 15.5 square feet in size, composed of Soft Dark and Ion Orange lettering over the Soft Light amenity building siding. The sign is sited slightly offset from center toward the western wall of the building. The sign utilizes a modern font and color scheme, reflecting the modern nature of the business and EV charging use. The sign colors are consistent with the colors provided on the amenity building and EV charging area canopies. The sign is oriented towards the EV charging area and is not intended to be visible from adjacent properties or rights-of-way.

   The sign is intended to provide business branding on the site and identify the business to motorists traveling along SW Barber Road. This sign is comparable to signage typically associated with traditional vehicle fueling stations and is more understated than the large red, orange and yellow freestanding sign associated with the "Pacific Pride" fueling station to the north of the subject site. Overall, this sign is compatible with surrounding developments and is typical of similar permitted uses in the PDI zone regarding materiality, color scheme, proportionality and location. The sign does not interfere with or detract from the visual appearance of the surrounding development or adjacent development pattern. Please see Sheet C6.6, Signage Details, for a visual depiction of this proposed sign.

2. *The proposed signage will not create a nuisance or result in a significant reduction in the value or usefulness of surrounding development; and*

Applicant Response: The proposed signs are designed to be aesthetically pleasing, reflecting the modern nature of the proposed EV charging station use while maintaining compatibility with scale of existing signage in the surrounding area. The signs will not include any elements that could be viewed as distracting to passing motorists or pedestrians (e.g., strobing, color changing) and will therefore not create a nuisance or result in significant reduction in the value or usefulness of surrounding development. The proposed signage meets this criterion.

3. *Special attention is paid to the interface between signs and other site elements including building architecture and landscaping, including trees.*

Applicant Response: The proposed signs are sited and designed to complement the proposed site elements, with each sign intended to be seamlessly integrated into the proposed canopies and amenity building. The proposed landscaping, including tree placement, is intended to preserve signage sight lines to the adjacent public streets, where feasible. The proposed signage meets this criterion.

(.06) Class III Sign Permit. Sign permit requests shall be processed as a Class III Sign Permit when associated with new development, except as noted in Subsection 4.156.02(.05)C., or redevelopment requiring DRB review, and not requiring a Master Sign Plan; when a sign permit request is associated with a waiver or non- administrative variance; or when the sign permit request involves one or more freestanding or ground mounted signs greater than eight feet in height in a new location.

Applicant Response: Applicant is requesting Class III Sign Permit to permit the proposed signage, described in detail above.

A. *Class III Sign Permit Submission Requirements. Ten paper and electronic copies of the submission requirements for Class II Sign Permits plus information on any requested waivers or variances in addition to all required fees.*

Applicant Response: Applicant has submitted the required plans and narrative responses in support of the requested Class III Sign Permit, as required in this section.

B. *Class III Sign Permit Review Criteria: The review criteria for Class II Sign Permits plus waiver or variance criteria when applicable.*

Applicant Response: Applicant has addressed and demonstrated compliance with the applicable Class II Sign Permit review criteria (see above).

(.07) Master Sign Plans. A Master Sign Plan is required for non-residential developments with three or more tenants. In creating a Master Sign Plan thought should be given to needs of initial tenants as well as the potential needs of future tenants.
…

Applicant Response: The proposed development is intended to support a single tenant on-site; therefore, a Master Sign Plan is not required.

(.08) Waivers and Variances. Waivers and variances are similar in that they allow deviation from requirements such as area, and height from ground. They differ in that waivers are granted by the DRB as part of a comprehensive review of the design and function of an entire site to bring about an improved design and variances are granted by either the Planning Director or DRB to relieve a specific hardship caused by the regulations.
…

Applicant Response: Applicant is not requesting a waiver or variance from the applicable Sign Permit review criteria; therefore, the criteria in this section do not apply.

(.09) Temporary Sign Permits. Temporary sign permits shall be reviewed as follows:

Applicant Response: Applicant is not requesting any temporary signage; therefore, the criteria in this section do not apply.

(.010) Waiver of Documentation. The Planning Director may, in his or her discretion, waive an application document for Class I, Class II, and temporary sign permits where the required information has already been made available to the City, or where the Planning Director determines the information contained in an otherwise required document is not necessary to review the application.

Applicant Response: Applicant has provided the required applicant documents and a waiver of documentation is not required to review and approve the proposed Class III Sign Permit request.

4.156.03 Sign Measurement

Applicant Response: Applicant has measured all signs in accordance with the requirements outlined in this Section.

4.156.04 Non-Conforming Signs

(.01) Non-Conforming Signs…

Applicant Response: The proposed development does not include the retention of any non-conforming signs. The standards in this section do not apply.

4.156.05 Signs Exempt from Sign Permit Requirements

(.01) The following signs are exempt from the permit requirements of this Code and do not require sign permits…

(.02) Other Signs. No sign permit is necessary before placing, constructing or erecting the following signs…

…

C. Directional Signs. Designed for non-changing messages, directional signs facilitate the safe movement of the traveling public…

…

Applicant Response: Applicant acknowledges that any directional signs that may be included in the development site are exempt from Sign Permit requirements, subject to the standards and conditions in this section. The proposed development will include standard directional and parking signs to facilitate the safe and efficient movement of vehicles through the site, designed in compliance with the standards and conditions in this section.

4.156.06 Prohibited Signs

Applicant Response: The proposed development does not include any prohibited signs.

4.156.08 Sign Regulations in the PDC, TC, PDI, and PF Zone

(.01) Freestanding and Ground Mounted Signs:

Applicant Response: The proposed development does not include any freestanding or ground mounted signs. The standards in this Section do not apply.

(.02) Signs on Buildings:

A. Sign Eligible Facades. Building signs are allowed on a facade of a tenant space or single tenant building when one or more of the following criteria are met:

…

2. The facade faces a lot line with frontage on a street or private drive with a cross section similar to a public street, and no other buildings on the same lot obstruct the view of the building facade from the street or private drive; or

Applicant Response: The proposed development includes a painted sign along the southern wall of the proposed amenity building, which will face the southern lot line with frontage along SW Barber Street, a public street. No other buildings on the lot obstruct view of this building façade from SW Barber Street. Accordingly, this façade is sign eligible in accordance with the requirements in this Section.

3. The facade is adjacent to the primary parking area for the building or tenant.

Applicant Response: The proposed development includes two LED signs that are integrated into the proposed vehicle canopy structures and one painted sign along the northern wall of the proposed amenity building. These signs are adjacent to and directly facing the primary parking area for the development. Accordingly, the canopy facades and northern amenity building wall facing the parking area are sign eligible in accordance with the requirements in this Section.

B. Sign Area Allowed:

1. The sign area allowed for all building signs on a sign eligible façade is shown in the table below:

Linear Length of Façade (feet)	***Sign Area Allowed***
Greater than 24 to 32	*32sf*
Greater than 72	*36 sq. ft. plus 12 sq. ft. for each 24 linear feet or portion thereof greater than 72 up to a maximum of 200 sq. ft.*

Applicant Response: The proposed development includes 4 signs which are subject to the standards in this Section, each individually addressed below (see Sheet C6.6, Signage Details, for sign renderings and area calculations):

- The northern canopy fascia integrated LED sign is sited along the westernmost portion of an 80-foot-long canopy structure with a 1-foot-tall canopy face. The linear length of this façade is 80 feet, which would permit 40 square feet of sign area. The proposed “iONNA” LED sign has an area of approximately 4 square feet, in compliance with the requirements in this Section.
- The southern canopy fascia integrated LED sign is sited along the easternmost portion of an 80-foot-long canopy structure with a 1-foot-tall canopy face. The linear length of this façade is 80 feet, which would permit 40 square feet of sign area. The proposed “iONNA” LED sign has an area of approximately 4 square feet, in compliance with the requirements in this Section.
- The painted sign on the northern wall of the amenity building is sited in the center of an approximately 26-foot-long façade. This would permit 32 square feet of sign area. The proposed “Snack Dispensers Found Here” painted sign has an area of approximately 25.5 square feet, in compliance with the requirements in this Section.
- The painted sign on the southern wall of the amenity building is sited slightly offset from center toward the western wall of the building and is on an approximately 26-foot-long façade. This would permit 32 square feet of sign area. The proposed “iONNA™” painted

sign has an area of approximately 15.5 square feet, in compliance with the requirements in this section.

2. *The sign area allowed for facades with a primary public entrance or with a frontage along a public street dominated by windows or glazing may be increased by transferring to the façade up to one-half the sign area allowed for adjacent facades up to 50 square feet. In no case shall the allowed sign area exceed an area equal to the linear length of the façade.*

3. *The sign area allowed is increased as follows for signs at separate building entrances…*

Applicant Response: The applicant is not requesting an increase to the sign area allowed.

4. *For businesses occupying multiple buildings in a campus setting, sign area shall be limited to that allowed for the largest building. which may then be distributed throughout the campus.*

Applicant Response: There is only one building proposed on the project site. Therefore, the above standard does not apply to this project.

5. *If a façade otherwise not sign eligible faces a lot line with frontage on Interstate 5…*

Applicant Response: As described above, all four proposed signs are located on sign eligible façades; therefore, the provisions in this Section do not apply.

6. *Calculating linear length of a façade for the purpose of determining maximum sign area allowed. For facades of a single tenant building the length the facade measured at the building line…*

Applicant Response: All four proposed signs are located on rectangular buildings or structures along straight-line facades, which were measured in accordance with the requirements in this Section.

C. *The length of individual tenant signs shall not exceed 75 percent of the length of the facade of the tenant space.*

Applicant Response: No proposed signs exceed 75 percent of the length of the façade of the tenant space. The proposed signs comply with the standards in this Section.

D. *The height of building signs shall be within a definable sign band, fascia, or architectural feature and allow a definable space between the sign and the top and bottom of the sign band, fascia, or architectural feature.*

Applicant Response: The height of both painted signs is within a definable sign band, fascia, or architectural feature, allowing definable space between the signs and the top and bottom of the sign band, fascia, or architectural feature. The proposed signs comply with the standards in this Section.

E. *Types of signs permitted on buildings include wall flat, fascia, projecting, blade, marquee and awning signs. Roof-top signs are prohibited.*

Applicant Response: The proposed signs are all permitted sign types and no roof-top signs are proposed. The proposed signs comply with the standards in this Section.

4.156.09 Temporary Signs in all Zones

Applicant Response: The proposed development does not include any temporary signs; therefore, the standards in this section do not apply.

4.156.10 Signs on City and ODOT Right-of-Way

Applicant Response: The proposed development does not include any signs on City or ODOT right-of-way; therefore, the standards in this section do not apply.

4.156.11 Sign Enforcement

Applicant Response: Applicant acknowledges the sign enforcement processes and procedures noted in this Section.

4.169 General Regulations – Double Frontage Lots

(.01) Buildings on double frontage lots (i.e., through lots) and corner lots must meet the front yard setback for principal buildings on both streets or tracts with a private drive.

Applicant Response: The subject property is a corner lot with frontage on two public rights-of-way. The proposed structures comply with applicable setbacks along each frontage. The proposed development complies with this Section.

(.02) Given that double-frontage lots tend to have one end that is regarded as a rear yard by the owner, the Development Review Board may establish special maintenance conditions to apply to such areas. Such conditions may include the requirement that the subject homeowners association, if any, be responsible for the on-going maintenance of the street frontage areas of double-frontage lots.

Applicant Response: The subject property is a corner lot and neither frontage would reasonably be considered or treated as a rear yard. Applicant acknowledges that the Development Review Board maintains the authority to establish special maintenance conditions, if it deems such conditions necessary.

4.171 General Regulations – Protection of Natural Features and Other Resources

(.02) General Terrain Preparation:

A. All developments shall be planned, designed, constructed and maintained with maximum regard to natural terrain features and topography, especially hillside areas, floodplains, and other significant landforms.

Applicant Response: The site does not include any hillside areas, floodplains, or other significant landforms and the proposed development has been planned and designed to minimize site grading and changes to the site's natural features. Applicant acknowledges that the development must be constructed and maintained in accordance with the provisions of this Section. The proposed development complies with this Section.

B. All grading, filling and excavating done in connection with any development shall be in accordance with the Uniform Building Code.

Applicant Response: All proposed grading, filing, and excavation will be done in accordance with all applicable codes, including the Uniform Building Code. Please see Sheet C4.0, Grading Plan, proposed grading details.

C. In addition to any permits required under the Uniform Building Code, all developments shall be planned, designed, constructed and maintained so as to:

1. Limit the extent of disturbance of soils and site by grading, excavation and other land alterations.

2. *Avoid substantial probabilities of: (l) accelerated erosion; (2) pollution, contamination, or siltation of lakes, rivers, streams and wetlands; (3) damage to vegetation; (4) injury to wildlife and fish habitats*

3. *Minimize the removal of trees and other native vegetation that stabilize hillsides, retain moisture, reduce erosion, siltation and nutrient runoff, and preserve the natural scenic character.*

Applicant Response: The project team has been sensitive to minimize impacts to the site while balancing the competing interest of developing this property with a use allowed in the zoning designation. The plans and studies provided with this application have all been prepared in support of this objective. Any areas that are not developed on site will either remain in their natural state after the removal of non-native and invasive plants or professionally landscaped.

(.03) Hillsides. All developments proposed on slopes greater than 25 percent shall be limited to the extent that…

Applicant Response: There are no hillsides of a slope greater than 25 percent located on the subject property; therefore, the standards in this Section do not apply.

(.04) Trees and Wooded Areas:

A. All developments shall be planned, designed, constructed and maintained so that:

1. *Existing vegetation is not disturbed, injured, or removed prior to site development and prior to an approved plan for circulation, parking and structure location.*

2. *Existing wooded areas, significant clumps/groves of trees and vegetation, and all trees with a diameter at breast height of six inches or greater shall be incorporated into the development plan and protected wherever feasible.*

3. *Existing trees are preserved within any right-of-way when such trees are suitably located, healthy, and when approved grading allows.*

B. Trees and woodland areas to be retained shall be protected during site preparation and construction according to City Public Works design specifications, by:

C. Avoiding disturbance of the roots by grading and/or compacting activity.

1. *Providing for drainage and water and air filtration to the roots of trees which will be covered with impermeable surfaces.*

2. *Requiring, if necessary, the advisory expertise of a registered arborist/horticulturist both during and after site preparation.*

3. *Requiring, if necessary, a special maintenance, Management program to insure survival of specific woodland areas of specimen trees or individual heritage status trees.*

Applicant Response: To the maximum extent possible, existing trees on the project site are being retained and protected through construction. The proposed development complies with the provisions in this Section.

(.05) High Voltage Powerline Easements and Right-of-Way and Petroleum Pipeline Easements…

Applicant Response: The subject site does not include any existing or proposed high voltage powerline easements; therefore, the standards in this Section do not apply.

(.06) Hazards to Safety: Purpose.

A. *To protect lives and property from natural or human-induced geologic or hydrologic hazards and disasters.*

B. *To protect lives and property from damage due to soil hazards.*

C. *To protect lives and property from forest and brush fires.*

D. *To avoid financial loss resulting from development in hazard areas.*

(.07) Standards for Earth Movement Hazard Areas…

(.08) Standards for Soil Hazard Areas…

Applicant Response: The proposed development has been designed by a team of qualified professionals and informed with reports that have comprehensively analyzed the site to ensure the site's suitability to safely support the proposed development. This includes conducting a detailed geotechnical analysis, which did not indicate any Earth Movement Hazards or Soil Hazard Areas on the subject site. Accordingly, the standards in these Sections do not apply. Please see the provided Geotechnical Engineering Report for additional information.

(.09) Historic Protection: Purpose…

(.010) Alteration and Development Criteria…

(.011) Cultural Resource Designation Criteria…

Applicant Response: The subject site is currently vacant and does not include any existing development of historic, cultural, or archaeological significance; therefore, the standards in these Sections do not apply.

4.175 Public Safety and Crime Prevention

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

Applicant Response: The proposed development is designed to meet the relevant Code standards related to landscaping, lighting, and vehicle and pedestrian access, which are intended, in part, to ensure convenient and safe site design. Proposed buildings and other site elements are designed to provide safe and efficient access throughout the development, with lighting provided to ensure adequate visibility across the site. Pedestrian pathways are designed to minimize blind corners and maintain long sight distances. Restroom facilities are designed to comply with the relevant Building Code standards and will include digital terminals for patrons to utilize to access the facilities, mitigating the risks of criminal activity occurring at the facility. The proposed development complies with this Section.

(.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.

Applicant Response: The proposed development includes only a couple of building structures, specifically the trash enclosure and the amenity building, which are sited and designed to be easily accessible and identifiable by the general public and emergency response personnel. Applicable addressing requirements for the development will be at the instruction of the Fire Department during the Building Permitting process. The proposed development complies with this Section.

(.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.

Applicant Response: The proposed development is designed to meet the relevant Code standards related to landscaping, lighting, and vehicle and pedestrian access, which are intended, in part, to

ensure convenient and safe site design. Proposed buildings and other site elements are designed to provide safe and efficient access throughout the development, with lighting provided to ensure adequate visibility across the site. Pedestrian pathways are designed to minimize blind corners and maintain long sight distances. Parking and loading areas are easily accessible to vehicles and pedestrians, well lit, and designed for easy access by police in the course of routine patrol duties. The proposed development complies with this Section.

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

Applicant Response: Exterior lighting is provided on the project site to ensure safety of the pedestrian pathways, parking lot, trash enclosure, and amenity building. Please see Sheet E5.0, Photometric Site Plan, for specific lighting details. The proposed development complies with this Section.

4.176 Landscaping, Screening, and Buffering

(.02) Landscaping and Screening Standards:

A. Subsections "C" through "I," below, state the different landscaping and screening standards to be applied throughout the City. The locations where the landscaping and screening are required and the depth of the landscaping and screening is stated in various places in the Code.

B. All landscaping and screening required by this Code must comply with all of the provisions of this Section, unless specifically waived or granted a Variance as otherwise provided in the Code. The landscaping standards are minimum requirements; higher standards can be substituted as long as fence and vegetation-height limitations are met. Where the standards set a minimum based on square footage or linear footage, they shall be interpreted as applying to each complete or partial increment of area or length (e.g., a landscaped area of between 800 and 1,600 square feet shall have two trees if the standard calls for one tree per 800 square feet.

Applicant Response: Applicant acknowledges that the proposed development is subject to the landscaping and screening standards in this and other relevant Sections of the Code. The proposed development is designed to comply with all applicable landscaping and screening standards in this Section, as addressed below.

C. General Landscaping Standard:

1. Intent. The General Landscaping Standard is a landscape treatment for areas that are generally open. It is intended to be applied in situations where distance is used as the principal means of separating uses or developments and landscaping is required to enhance the intervening space. Landscaping may include a mixture of ground cover, evergreen and deciduous shrubs, and coniferous and deciduous trees.

Applicant Response: The proposed development is designed to include landscaping with a mixture of ground cover, shrubs and trees, as required in this and other relevant Sections of the Code.

2. Required materials. Shrubs and trees, other than street trees, may be grouped. Ground cover plants must fully cover the remainder of the landscaped area (see Figure 21: General Landscaping). The General Landscaping Standard has two different requirements for trees and shrubs:

a. Where the landscaped area is less than 30 feet deep, one tree is required for every 30 linear feet.

b. Where the landscaped area is 30 feet deep or greater, one tree is required for every 800 square feet and two high shrubs or three low shrubs are required for every 400 square feet.

Applicant Response: As depicted in Sheet L4.1, Planting Plan, the proposed development includes the required trees, shrubs, and continuous ground cover, in accordance with the requirements in this Section. The subject site is approximately 46,000 square feet, and the proposed development includes approximately 30,262 square feet of landscaped area (~65.5% of the total site area). The proposed landscaping includes 40 trees, 258 high shrubs, 391 low shrubs, and 343 ground cover plants with the remainder of the landscaped area composed of drought tolerant grass, in accordance with the requirements in this Section (see Sheet L4.1, Planting Plan, for landscaping details). The proposed development complies with the standards in this Section.

D. Low Screen Landscaping Standard:

1. Intent. The Low Screen Landscaping Standard is a landscape treatment that uses a combination of distance and low screening to separate uses or developments. It is intended to be applied in situations where low screening is adequate to soften the impact of one use or development on another, or where visibility between areas is more important than a total visual screen. The Low Screen Landscaping Standard is usually applied along street lot lines or in the area separating parking lots from street rights-of-way.

2. Required materials. The Low Screen Landscaping Standard requires sufficient low shrubs to form a continuous screen three feet high and 95 percent opaque, year-round. In addition, one tree is required for every 30 linear feet of landscaped area, or as otherwise required to provide a tree canopy over the landscaped area. Ground cover plants must fully cover the remainder of the landscaped area. A three foot high masonry wall or a berm may be substituted for the shrubs, but the trees and ground cover plants are still required. When applied along street lot lines, the screen or wall is to be placed along the interior side of the landscaped area. (See Figure 22: Low Screen Landscaping).

Applicant Response: As depicted in Sheet L4.1, Planting Plan, the proposed development includes approximately 391 low shrubs, 40 trees, 258 high shrubs, 343 ground cover plants, and drought tolerant grass which is designed in accordance with the height and opacity requirements in this Section located around the perimeter of the proposed vehicle charging and maneuvering area. The proposed development complies with the standards in this Section.

E. Low Berm Landscaping Standard…

F. High Screen Landscaping Standard…

G. High Wall Standard…

H. High Berm Standard…

I. Partially Sight-Obscuring Fence Standard…

J. Fully Sight-Obscuring Fence Standard…

Applicant Response: The above Sections are not applicable to the proposed development.

(.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).

Applicant Response: The project site is approximately 46,001 square feet in size, requiring a minimum of 6,901 square feet of landscaping to comply with the 15% requirement. The proposed development includes approximately 30,262 square feet of landscaped area (~65.5% of the total site area), exceeding the minimum requirement. Excepting the proposed sidewalk and vehicle access, the proposed development includes continuous landscaping along both frontages. Additionally, significant landscape areas are included adjacent to the proposed structures and between the development area and the property lines with adjacent parcels. Plantings along the public right-of-way and property lines provide screening of the site. Various planting material, tree, and shrub species are proposed to provide various plant forms, textures, and heights. Please see Sheet L4.1, Planting Plan, for landscaping details. The proposed development complies with the standards in this Section.

(.04) Buffering and Screening. Additional to the standards of this subsection, the requirements of the Section 4.137.5 (Screening and Buffering Overlay Zone) shall also be applied, where applicable.

A. All intensive or higher density developments shall be screened and buffered from less intense or lower density developments.

Applicant Response: The subject site is not located within the Screening and Buffering Overlay Zone, therefore the provisions in Section 4.137.5 do not apply. The proposed single-tenant development is consistent with the intensity and density of surrounding development; however, landscaped screening is provided along both interior property lines to provide screening from adjacent development. Landscaping, including street trees, is also provided along both street frontages, in compliance with the applicable landscaping requirements, which soften the visual impacts from the development on adjacent rights-of-way. The proposed development complies with the standards in this Section.

B. Activity areas on commercial and industrial sites shall be buffered and screened from adjacent residential areas. Multi-family developments shall be screened and buffered from single-family areas.

Applicant Response: The subject property is surrounded by industrial zoned property and there are no adjacent residential areas. As noted previously, the proposed development provides screening along both interior property lines and landscaping along both street frontages, which soften the visual impacts from the development on adjacent properties and rights-of-way.

C. All exterior, roof and ground mounted, mechanical and utility equipment shall be screened from ground level off-site view from adjacent streets or properties.

Applicant Response: The proposed development includes new ground mounted utility equipment, which is necessary to provide adequate utility service to support the proposed EV charging station use. The equipment is located in the central portion of the site, adjacent to the proposed driveway, and is screened from adjacent properties by the interior landscaping screening and from the adjacent rights-of-way by Low Screen landscaping along the southern and eastern sides of the utility equipment. The proposed development complies with the standards in this Section.

D. All outdoor storage areas shall be screened from public view, unless visible storage has been approved for the site by the Development Review Board or Planning Director acting on a development permit.

Applicant Response: The proposed trash enclosure is screened on its eastern, western, and northern sides by landscaping. The southern side of the enclosure includes a gate to provide access into the enclosure and to screen the receptacles from public view. The proposed development

complies with the standards of this Section.

E. In all cases other than for industrial uses in industrial zones, landscaping shall be designed to screen loading areas and docks, and truck parking.

Applicant Response: The proposed EV charging station use is classified as a Service Commercial use and is not industrial in nature. Additionally, the proposed development does not include or require loading areas, docks or truck parking. The standards in this section do not apply.

F. In any zone any fence over six feet high measured from soil surface at the outside of fence line shall require Development Review Board approval.

Applicant Response: The proposed development does not include any fencing over six feet high. Applicant acknowledges that such fencing would require Development Review Board approval.

(.05) Sight-Obscuring Fence or Planting. The use for which a sight-obscuring fence or planting is required shall not begin operation until the fence or planting is erected or in place and approved by the City. A temporary occupancy permit may be issued upon a posting of a bond or other security equal to 110 percent of the cost of such fence or planting and its installation. (See Sections 4.400 to 4.470 for additional requirements.)

Applicant Response: Applicant will ensure required screening plantings are in place prior to occupancy or will seek a temporary occupancy permit, pursuant to the requirements outlined in this Section, as required to comply with this Section.

(.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.

Applicant Response: The proposed planting plan includes various shrub species, which have been selected and will be installed in compliance with the requirements in this Section. Please see Sheet L4.1, Planting Plan, for landscaping details.

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 inches 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.

Applicant Response: The proposed planting plan includes significant ground cover, which has been selected and will be installed in compliance with the requirements in this Section. Applicant acknowledges that annual re-seeding may be included as a condition of approval, if the City deems it appropriate. Please see Sheet L4.1, Planting Plan, for landscaping details.

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.

Applicant Response: The proposed landscaping plan includes 580 square feet of lawn, specifically buffalo grass, which represents approximately 1.9% of the total landscaped area. Please see Sheet L4.1, Planting Plan, for landscaping details. The proposed development complies with the standards in this Section.

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.*

Applicant Response: The proposed planting plan includes appropriate plant materials beneath the canopies of trees and large shrubs to avoid the appearance of bare ground. Please see Sheet L4.1, Planting Plan, for landscaping details. The proposed development complies with the standards in this Section.

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.*

Applicant Response: The proposed landscaping will integrate compost-amended topsoil, in compliance with the requirements of this Section. See Sheet L2.0, Soil Plan, for further details regarding compost amended topsoil.

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 Honey locust, 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.*

Applicant Response: The project would introduce approximately 40 trees on-site which would consist of October Glory Red Maples, Kousa Dogwoods, Golden Rain Tree's, Gum Drop Tupelo's, Douglas Fir's, and Bay Laurel's. The trees would be well branched and would be balled and burlapped. All deciduous trees planted would have a minimum 2" caliper and large confier trees would have a minimum height of 8' in compliance with the requirements of this Section.

C. *Where a proposed development includes buildings larger than 24 feet in height or greater than 50,000 square feet in footprint area…*

Applicant Response: The proposed development does not include any buildings taller than 24 feet or greater than 50,000 square in footprint area; therefore, the standards in this section do not apply.

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 Macrophylum (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 (Pin Oak), 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.

Applicant Response: The proposed development includes the retention of existing street trees and planting of additional street trees along SW Boones Ferry Road, in accordance with the requirements in this Section. SW Boones Ferry Road and SW Barber Street are both classified as Collectors adjacent to the subject site, therefore street tree shall be planted at a two-inch minimum caliper. Please see Sheet L4.1, Planting Plan, for landscaping details, including the proposed street tree location and species. No new trees are proposed along SW Barber Street due to underground utility conflicts; however, existing trees will be preserved, and shrub landscaping will be utilized.

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.

Applicant Response: The proposed development would not retain existing landscaping apart from existing trees near the perimeter of the site. The remainer of the project site consists of non-native

grasses which would be removed to introduce landscaping and impermeable surfaces. See Sheet L4.0, Planting Schedule, for further details.

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.*

Applicant Response: The proposed development has utilized recommended plants from the City and has created a comprehensive landscape plan which would introduce 258 high shrubs, 391 low shrubs, 343 ground cover plants, 40 trees, and 580 square feet of drought tolerant grass. The plants selected are appropriate for the Wilsonville environment and would be compatible with surrounding vegetation and low water usage. See Sheet L4.1, Planting Plan, for further details.

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.*

Applicant Response: The proposed landscaping plan includes only plant materials that Applicant understands to be permitted and does not incorporate any plant materials that Applicant understands to be prohibited. Please see Sheet L4.1, Planting Plan, for landscaping details, including plant material species. The proposed development complies with this Standard.

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):*

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.*

Applicant Response: Existing trees are proposed to be preserved and have been incorporated into the proposed landscape plan. Those trees have been surveyed, their health analyzed by a certified arborist, and proposed for protection utilizing fencing to identify and protect trees during construction. Applicant acknowledges their responsibility in maintaining preserved trees and, if required by the City within five years of occupancy, replacing any preserved tree that cannot be maintained. The proposed development complies with this Standard.

G. *Exceeding Standards. Landscape materials that exceed the minimum standards of this Section are encouraged, provided that height and vision clearance requirements are met.*

Applicant Response: The proposed development exceeds the minimum standards of this Section and complies with the relevant height and vision clearance requirements in the Code.

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.

Applicant Response: Applicant has provided written findings in this narrative to detail the proposed development's compliance with the Standards in this Section, as depicted in Sheet L4.1, Planting Plan.

(.07) Installation and Maintenance:

A. Installation. Plant materials shall be installed to current industry standards and shall be properly staked to assure survival. Support devices (guy wires, etc.) shall not be allowed to interfere with normal pedestrian or vehicular movement.

Applicant Response: All proposed plant material will be installed to current industry standards and will be properly staked to assure survival. No support devices will be placed in a manner that will interfere with normal pedestrian or vehicular movements. The proposed development will comply with the standards in this Section.

B. Maintenance. Maintenance of landscaped areas is the on-going responsibility of the property owner. Any landscaping installed to meet the requirements of this Code, or any condition of approval established by a City decision-making body acting on an application, shall be continuously maintained in a healthy, vital and acceptable manner. Plants that die are to be replaced in kind, within one growing season, unless appropriate substitute species are approved by the City. Failure to maintain landscaping as required in this Section shall constitute a violation of this Code for which appropriate legal remedies, including the revocation of any applicable land development permits, may result.

Applicant Response: Applicant acknowledges that ongoing maintenance of landscaped areas is the property owner's responsibility and will ensure landscaping is maintained in compliance with the requirements in this Section.

C. Irrigation. The intent of this standard is to assure that plants will survive the critical establishment period when they are most vulnerable due to a lack of watering and also to assure that water is not wasted through unnecessary or inefficient irrigation. Approved irrigation system plans shall specify one of the following:

1. A permanent, built-in, irrigation system with an automatic controller. Either a spray or drip irrigation system, or a combination of the two, may be specified.

2. A permanent or temporary system designed by a landscape architect licensed to practice in the State of Oregon, sufficient to assure that the plants will become established and drought-tolerant.

3. Other irrigation system specified by a licensed professional in the field of landscape architecture or irrigation system design.

4. A temporary permit issued for a period of one year, after which an inspection shall be conducted to assure that the plants have become established. Any plants that have died, or that appear to the Planning Director to not be thriving, shall be appropriately replaced within one growing season. An inspection fee and a maintenance bond or other security sufficient to cover all costs of replacing the plant materials shall be provided, to the satisfaction of the Community Development Director. Additionally, the applicant shall provide the City with a written license or easement to enter the property and cause any failing plant materials to be replaced.

Applicant Response: The proposed development includes a permanent, built-in irrigation system with automatic controls, which has been designed by a licensed landscape architect. Please see Sheets

L3.0, Irrigation Schedules and Notes, and L3.1, Irrigation Plan, for details on the proposed irrigation system. The proposed development complies with the standards in this Section.

D. Protection. All required landscape areas, including all trees and shrubs, shall be protected from potential damage by conflicting uses or activities including vehicle parking and the storage of materials.

Applicant Response: The proposed landscaping has been designed by a professional licensed landscape architect to ensure there is no conflict between adjacent uses or activities, including vehicle parking. Applicant acknowledges that landscaping protection is an ongoing requirement. The proposed development complies with the standards in this Section.

(.08) *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.*

Applicant Response: The proposed landscaping maintains compliance with the vision clearance standards of Section 4.177. The proposed development does not require high screening that would otherwise bring the project out of compliance with the vision clearance requirements; therefore, no low screening substitution is required. The proposed development complies with the standards in this Section

(.09) Landscape Plans. Landscape plans shall be submitted showing all existing and proposed landscape areas. Plans must be drawn to scale and show the type, installation size, number and placement of materials. Plans shall include a plant material list. Plants are to be identified by both their scientific and common names. The condition of any existing plants and the proposed method of irrigation are also to be indicated. Landscape plans shall divide all landscape areas into the following categories based on projected water consumption for irrigation:

A. High water usage areas (± two inches per week): small convoluted lawns, lawns under existing trees, annual and perennial flower beds, and temperamental shrubs;

B. Moderate water usage areas (± one inch per week): large lawn areas, average water-using shrubs, and trees;

C. Low water usage areas (Less than one inch per week, or gallons per hour): seeded fieldgrass, swales, native plantings, drought-tolerant shrubs, and ornamental grasses or drip irrigated areas.

D. Interim or unique water usage areas: areas with temporary seeding, aquatic plants, erosion control areas, areas with temporary irrigation systems, and areas with special water-saving features or water harvesting irrigation capabilities. These categories shall be noted in general on the plan and on the plant material list.

Applicant Response: The proposed landscape plans include all existing and proposed landscape areas, are drawn to scale and include the details required in this Section.

(.010) Completion of Landscaping. The installation of plant materials may be deferred for a period of time specified by the Board or Planning Director acting on an application, in order to avoid hot summer or cold winter periods, or in response to water shortages. In these cases, a temporary permit shall be issued, following the same procedures specified in subsection (.07)(C)(3), above, regarding temporary irrigation systems. No final Certificate of Occupancy shall be granted until an adequate bond or other security is posted for the completion of the landscaping, and the City is given written authorization to enter the property and install the required landscaping, in the event that the required landscaping has not been installed. The form of such written authorization shall be submitted to the City Attorney for review.

Applicant Response: Applicant acknowledges that landscaping must be completed prior to issuance of final Certificate of Occupancy, unless deferred by the Board or Planning Director and subject to the requirements in this Section. Applicant is not currently requesting deferral and intends to complete landscaping as generally required.

(.011) Street Trees Not Typically Part of Site Landscaping. Street trees are not subject to the requirements of this Section and are not counted toward the required standards of this Section. Except, however, that the Development Review Board may, by granting a waiver or variance, allow for special landscaping within the right-of-way to compensate for a lack of appropriate on-site locations for landscaping. See subsection (.06), above, regarding street trees.

Applicant Response: The proposed landscaping has been designed to comply with the relevant requirements without counting street trees towards the site's compliance with required standards. Accordingly, Applicant is not seeking waiver or variance to include right-of-way landscaping for the purposes of complying with the relevant landscaping requirements.

(.012) Mitigation and Restoration Plantings…

Applicant Response: The proposed development does it include the destruction, damage, or removal of existing native plants; therefore, no mitigation plan is required and the standards in this Section do not apply.

4.177 Street Improvement Standards

(.01) Development and related public facility improvements shall comply with the standards in this section, the Wilsonville Public Works Standards, and the Transportation System Plan, in rough proportion to the potential impacts of the development. Such improvements shall be constructed at the time of development or as provided by Section 4.140, except as modified or waived by the City Engineer for reasons of safety or traffic operations.

(.02) Street Design Standards:

A. All street improvements and intersections shall provide for the continuation of streets through specific developments to adjoining properties or subdivisions…

B. The City Engineer shall make the final determination regarding right-of-way and street element widths using the ranges provided in Chapter 3 of the Transportation System Plan and the additional street design standards in the Public Works Standards.

C. Rights-of-way…

D. Dead-end Streets…

Applicant Response: The subject site maintains frontage on SW Barber Street and SW Boones Ferry Road and the proposed development is designed to take access from SW Barber Street via a new driveway into the site. No new streets are proposed, and the proposed driveway is intended for exclusive use with no access shared with adjacent sites; therefore, no access easements are required.

In accordance with the applicable Transportation System Plan provisions and Public Works Standards, the proposed development includes the installation of a curb ramp at the corner of SW Barber Street and SW Boones Ferry Road, a bike line and sidewalk along SW Boones Ferry Road, and dedication of the associated right-of-way along SW Boones Ferry Road. Please see Sheet C2.1, Enlarged Site Plan, for additional details on the proposed street improvements and right-of-way dedication. The proposed development complies with the standards in this Section.

E. Corner or clear vision area…

Applicant Response: The proposed development is designed to maintain clear vision areas that comply with the associated Public Works Standards, in accordance with the requirements in this Section.

F. Vertical clearance. A minimum clearance of 12 feet above the pavement surface shall be maintained over all streets and access drives.

Applicant Response: The proposed development is designed to maintain the minimum 12 foot vertical clearance above the proposed access drive, in accordance with the requirements in this Section.

G. Interim improvement standard…

Applicant Response: The proposed development includes the required street improvements along its SW Boones Ferry Road frontage, and Applicant will comply with the associated Public Works Standards and City Engineer's requirements regarding the construction of these improvements. The proposed development complies with the standards in this Section.

(.03) Sidewalks. Sidewalks shall be provided on the public street frontage of all development. Sidewalks shall generally be constructed within the dedicated public right-of-way, but may be located outside of the right-of-way within a public easement with the approval of the City Engineer.

A. Sidewalk widths shall include a minimum through zone of at least five feet. The through zone may be reduced pursuant to variance procedures in Section 4.196, a waiver pursuant to Section 4.118, or by authority of the City Engineer for reasons of traffic operations, efficiency, or safety.

B. Within a Planned Development, the Development Review Board may approve a sidewalk on only one side. If the sidewalk is permitted on just one side of the street, the owners will be required to sign an agreement to an assessment in the future to construct the other sidewalk if the City Council decides it is necessary.

Applicant Response: The proposed development includes the retention of the existing sidewalk along SW Barber Street and a new five-foot wide sidewalk along the site's SW Boones Ferry Road frontage. The associated right-of-way will be dedicated, which will ensure that the new sidewalk is located within the SW Boones Ferry Road right-of-way. The proposed development complies with the standards in this Section.

(.04) Bicycle Facilities. Bicycle facilities shall be provided to implement the Transportation System Plan, and may include on-street and off-street bike lanes, shared lanes, bike boulevards, and cycle tracks. The design of on-street bicycle facilities will vary according to the functional classification and the average daily traffic of the facility.

Applicant Response: The City of Wilsonville's Transportation System Plan (Figure 3-5) includes bike lanes along the site's frontage with both SW Barber Street and SW Boones Ferry Road. The site's SW Barber Street frontage includes an existing bike lane in the right-of-way, which will be retained. The proposed development includes a new bike lane along the site's SW Boones Ferry Road frontage and the associated right-of-way dedication to ensure the new bike lane is located within the public right-of-way. The proposed development complies with the standards in this Section.

(.05) Multiuse Pathways…

Applicant Response: The proposed development does not include any multiuse pathways in addition to or in lieu of a public street. The standards in this Section do not apply.

(.06) Transit Improvements. Development on sites that are adjacent to or incorporate major transit streets shall…

Applicant Response: The subject site is not located adjacent to nor does the proposed development incorporate a major transit street; therefore, the standards in this Section do not apply.

(.07) Residential Private Access Drives…

Applicant Response: The proposed development does not include any residential private access drives; therefore, the standards in this Section do not apply.

(.08) Access Drive and Driveway Approach Development Standards.

A. An access drive to any proposed development shall be designed to provide a clear travel lane free from any obstructions.

Applicant Response: There is one access drive connecting the site to SW Barber Street which has been designed to be free of obstruction. The proposed development complies with the standards in this Section.

B. Access drive travel lanes shall be constructed with a hard surface capable of carrying a 23-ton load.

Applicant Response: The proposed access drive travel lane has been designed by a professional licensed engineer to be a hard surface (asphalt pavement) and capable of carrying a 23-ton load (see Sheet 2.1, Enlarged Site Plan, for details). The proposed development complies with the standards in this Section.

C. Where emergency vehicle access is required, approaches and driveways shall be designed and constructed to accommodate emergency vehicle apparatus and shall conform to applicable fire protection requirements. The City may restrict parking, require signage, or require other public safety improvements pursuant to the recommendations of an emergency service provider.

D. Secondary or emergency access lanes may be improved to a minimum 12 feet with an all-weather surface as approved by the Fire District. All fire lanes shall be dedicated easements.

Applicant Response: The site includes an emergency vehicle access/fire lane that serves the entire site and allows for emergency vehicles to access and maneuver. The access is constructed of an approved surface, is over 12 feet wide, and has been approved by TV F&R. Please see the attached approval from the fire department and driveway design details on Sheets 2.1, Enlarged Site Plan, and C6.3, Civil Details. The proposed development complies with the standards in these Section

E. Minimum access requirements shall be adjusted commensurate with the intended function of the site based on vehicle types and traffic generation.

F. The number of approaches on higher classification streets (e.g., collector and arterial streets) shall be minimized; where practicable, access shall be taken first from a lower classification street.

G. The City may limit the number or location of connections to a street or impose access restrictions where the roadway authority requires mitigation to alleviate safety or traffic operations concerns.

Applicant Response: The proposed development includes one new driveway which will provide site access from SW Barber Street, a collector. Both adjacent streets are designated as collectors, and therefore access cannot be taken from a lower classification street. The proposed development includes only a single access point, which is required to provide vehicular access to the EV charging use. The City has agreed that the proposed driveway location is the most appropriate means of access for the proposed development (see attached correspondence with City of Wilsonville Development Engineering Manager). The proposed development complies with the standards in these Sections.

H. *The City may require a driveway to extend to one or more edges of a lot and be designed to allow for future extension and inter-lot circulation as adjacent properties develop. The City may also require the owner(s) of the subject site to record an access easement for future joint use of the approach and driveway as the adjacent property(ies) develop(s).*

Applicant Response: The proposed driveway is designed to provide access to onsite development only. The adjacent parcels to the north and west are currently developed and maintain their own access points to existing rights-of-way, without a clear need or benefit from shared access over the subject site. Applicant acknowledges that the City reserves the authority to require the proposed driveway to be extended and/or access easements recorded, pursuant to the provisions in this Section.

I. *Driveways shall accommodate all projected vehicular traffic on-site without vehicles stacking or backing up onto a street.*

J. *Driveways shall be designed so that vehicle areas, including but not limited to drive-up and drive- through facilities and vehicle storage and service areas, do not obstruct any public right-of-way.*

Applicant Response: The driveway includes a vehicle turnaround area to ensure no reverse maneuvering is required onto SW Barber Street and is of a sufficient length so that any queuing can be managed onsite with no stacking onto SW Barber Street. Please see Sheet 2.1, Enlarged Site Plan, for driveway design details. The proposed driveway complies with the requirements in these Sections.

K. *Approaches and driveways shall not be wider than necessary to safely accommodate projected peak hour trips and turning movements, and shall be designed to minimize crossing distances for pedestrians.*

Applicant Response: The driveway and approach are proposed to be 24 feet wide, which provides the width necessary to safely accommodate projected peak hour trips and turning movements, while minimizing crossing distances for pedestrians along SW Barber Street. Please see Sheet 2.1, Enlarged Site Plan, for driveway design details.

L. *As it deems necessary for pedestrian safety, the City, in consultation with the roadway authority, may require traffic-calming features, such as speed tables, textured driveway surfaces, curb extensions, signage or traffic control devices, or other features, be installed on or in the vicinity of a site.*

Applicant Response: Applicant acknowledges that the City reserves the authority to require traffic-calming features, if it deems such elements necessary for pedestrian safety.

M. *Approaches and driveways shall be located and designed to allow for safe maneuvering in and around loading areas, while avoiding conflicts with pedestrians, parking, landscaping, and buildings.*

Applicant Response: The proposed development does not include nor is it required to provide loading areas to support the proposed Service Commercial use; therefore, the standards in this Section do not apply.

N. *Where a proposed driveway crosses a culvert or drainage ditch, the City may require the developer to install a culvert extending under and beyond the edges of the driveway on both sides of it, pursuant applicable Public Works standards.*

Applicant Response: The proposed driveway does not cross a culvert or ditch; therefore, the standards in this Section do not apply.

O. *Except as otherwise required by the applicable roadway authority or waived by the City*

Engineer, temporary driveways providing access to a construction site or staging area shall be paved or graveled to prevent tracking of mud onto adjacent paved streets.

Applicant Response: Any temporary construction driveways will be graveled and include the associated wheel wash, as required in the City's Public Works Standards, to prevent tracking of mud onto adjacent paved streets. Please see Sheet 6.4, Civil Details, for associated details. The proposed development complies with the standards in this Section.

P. Unless constrained by topography, natural resources, rail lines, freeways, existing or planned or approved development, or easements or covenants, driveways proposed as part of a residential or mixed-use development shall meet local street spacing standards and shall be constructed to align with existing or planned streets, if the driveway…

Applicant Response: The proposed development is not a residential or mixed-use development; therefore, the standards in this Section do not apply.

(.09) Minimum street intersection spacing standards…

Applicant Response: The proposed development does not include any new streets; therefore, the standards in this Section do not apply.

(.010) Exceptions and Adjustments…

Applicant Response: The proposed driveway does not comply with the City's Public Works Standards, specifically the access spacing standards in Table 2.12. Applicant is proposing to utilize the site's existing curb cut along SW Barber Road, which does not meet the minimum 100-foot access spacing standards from the existing driveway to the west of the project site. Applicant has reviewed the proposed driveway location with the City's Development Engineering Manager, who determined that the proposed location is the most appropriate means of accessing the subject property. Applicant requests that the City approve an exception to the Public Works Standard's access spacing requirements in Table 2.12 to permit the driveway in the proposed location.

4.179 Mixed Solid Waste and Recyclables Storage in Non-Residential Buildings

(.01) All site plans for multi-family residential and non-residential buildings submitted to the Wilsonville Development Review Board for approval shall include adequate storage space for mixed solid waste and source separated recyclables.

Applicant Response: The proposed development includes an approximately 23 foot by 9 foot (approximately 200 square feet) covered enclosure for solid waste and recycling storage bins. The enclosure is walled on the western, northern, and eastern sides with a gate located along the southern side to provide access to the enclosure from the drive aisle. The proposed development complies with the standards in this Section.

(.02) The floor area of an interior or exterior storage area shall be excluded from the calculation of building floor area for purposes of determining minimum storage requirements.

Applicant Response: The floor area of the proposed approximately 200 square foot enclosure is not included in the calculation used to determine the minimum storage requirements, per the standards in this Section.

(.03) The storage area requirement shall be based on the predominant use(s) of the building. If a building has more than one of the uses listed herein and that use occupies 20 percent or less of the floor area of the building, the floor area occupied by that use shall be counted toward the floor area of the predominant use(s). If a building has more than one of the uses listed herein and that use occupies more than 20 percent of the floor area of the building, then the storage area requirement for the whole building shall be the sum of the requirement for the area of each use.

(.04) Storage areas for multiple uses on a single site may be combined and shared.

Applicant Response: The development is intended to support a single EV charging station use. The only proposed structure, excluding the enclosure, is the proposed accessory amenity structure, which is approximately 260 square feet. The overall use area, which includes the proposed EV charging stall, EV charging units, and accessory amenity building, is approximately 4,600 square feet.

(.05) The specific requirements are based on an assumed storage height of four feet for solid waste/recyclables. Vertical storage higher than four feet but no higher than seven feet may be used to accommodate the same volume of storage in a reduced floor space. Where vertical or stacked storage is proposed, the site plan shall include drawings to illustrate the layout of the storage area and dimensions for the containers.

Applicant Response: The proposed enclosure is not intended to support vertical storage higher than four feet and no stacked storage is proposed.

(.06) The specific requirements for storage area are as follows:

A. Multi-family residential buildings […]
B. Non-residential buildings shall provide a minimum storage area of ten square feet, plus:

1. Office: Four square feet per 1,000 square feet gross floor area (GFA);
2. Retail: Ten square feet per 1,000 square feet GFA;
3. Wholesale/Warehouse/Manufacturing: Six square feet per 1,000 square feet GFA; and
4. Other: Four square feet per 1,000 square feet GFA.

Applicant Response: The proposed EV charging station use is considered a Service Commercial use, therefore the "Other" category applies for the purposes of this Section. The proposed 260 square foot amenity building would require a 12 square foot storage area and if the approximately 4,600 square foot overall EV charging use (including amenity building) is included in the calculation, then this would require a 29 square foot storage area. The proposed enclosure is approximately 200 square feet, which exceeds the minimum requirement for either the building area or the overall EV charging station use area. The proposed development complies with the standards in this Section.

(.07) The applicant shall work with the City's franchised garbage hauler to ensure that site plans provide adequate access for the hauler's equipment and that storage area is adequate for the anticipated volumes, level of service and any other special circumstances which may result in the storage area exceeding its capacity. The hauler shall notify the City by letter of their review of site plans and make recommendations for changes in those plans pursuant to the other provisions of this section.

Applicant Response: Applicant has received a Service Provider Letter from Republic Services, which confirms that the proposed enclosure design is designed to provide adequate clearance and includes the appropriate gate design for trucks to service trash and recycling receptacles located within the enclosure. Please see the provided Service Provider Letter, dated November 13, 2025, which is included in the application materials. The proposed development complies with the standards in this Section.

(.08) Existing multi-family residential and non-residential developments…

Applicant Response: There is no existing development on the project site; therefore, the standards in this Section do not apply.

(.09) When applicable, the applicant must comply with Wilsonville Code Section 8.010.

Applicant Response: Applicant has designed solid waste and recycling facilities to comply with the

relevant design standards in the Code and to ensure the design meets the hauler's requirements to adequately service the site. Applicant will comply with any other applicable City ordinances related to disposal and hauling of solid waste and recyclable materials. Applicant does not intend to lease or provide space to a Covered Business (as defined in Metro Administrative Rule 5.10-4010); therefore, Applicant is not required to allow or facilitate the provision of food waste collection for any Covered Business pursuant to Wilsonville Code Section 8.005 (Solid Waste Management).

4.199.30 Lighting Overlay Zones

(.02) The Lighting Zones Shall be:

…

B. 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.

Response: As depicted in Figure 30 of the Code (included for reference below), the subject property is located within Lighting Zone (LZ) 2 and is subject to the standards applicable in LZ 2. The proposed development complies with the applicable standards in LZ 2, as depicted on Sheet E5.0, Photometric Site Plan, and detailed in Applicant's responses in the following section.

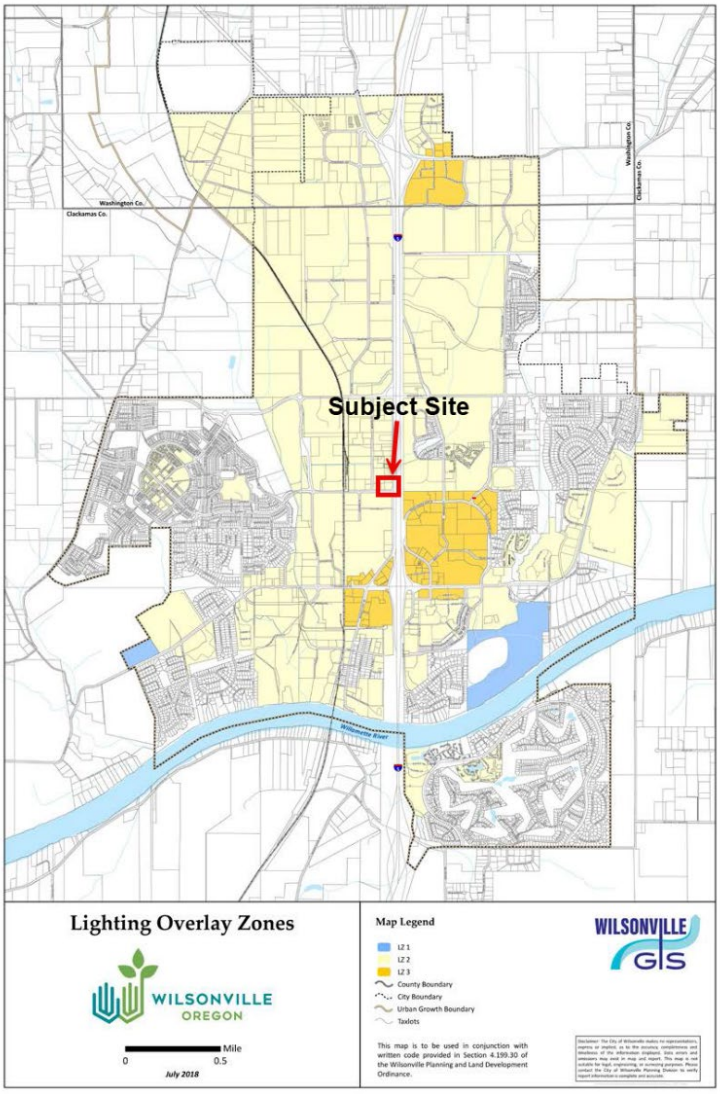


Figure 2: Lighting Overlay Zone Map, Code Figure 30 (subject site identified in LZ 2)

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.

Applicant Response: The proposed lighting complies with the Prescriptive Option standards, as detailed below. Please see Sheet E5.0, Photometric Site Plan, and E5.1, Photometric Details, for additional details.

B. Prescriptive Option. If the lighting is to comply with this Prescriptive Option, the installed lighting shall meet all of the following requirements according to the designated Lighting Zone.

1. The maximum luminaire lamp wattage and shielding shall comply with Table 7.

Applicant Response: The fully shielded lights in use are 71 Watts and below the 100 Watt maximum in Table 7. The proposed lighting complies with the standard in this Section. Please see Sheet E5.0, Photometric Site Plan, and E5.1, Photometric Details, for additional details.

2. *Except for those exemptions listed in Section 4.199.20(.02), the exterior lighting for the site shall comply with the Oregon Energy Efficiency Specialty Code, Exterior Lighting.*

Applicant Response: All exterior site lighting is compliant with the Oregon Energy Efficiency Specialty Code. Site lighting that is excluded from this Code and is present on the site: Interior lighting, Internally illuminated signs, Landscape lighting, and Public street lights. The proposed lighting complies with the standard in this Section. Please see Sheet E5.0, Photometric Site Plan, and E5.1, Photometric Details, for additional details.

3. *The maximum pole or mounting height shall be consistent with Table 8.*

Applicant Response: Site light poles are mounted no more than 40 feet in the air, the maximum height set forth in table 8. Lights are mounted at 30, 11, and 10 feet high on the site. The proposed lighting complies with the standard in this Section. Please see Sheet E5.0, Photometric Site Plan, and E5.1, Photometric Details, for additional details.

4. *Each luminaire shall be set back from all property lines at least three times the mounting height of the luminaire:*

    a. *Exception 1: If the subject property abuts a property with the same base and lighting zone, no setback from the common lot lines is required.*

    b. *Exception 2: If the subject property abuts a property which is zoned (base and lighting) other than the subject parcel, the luminaire shall be setback three times the mounting height of the luminaire, measured from the abutting parcel's setback line. (Any variance or waiver to the abutting property's setback shall not be considered in the distance calculation).*

    c. *Exception 3: If the luminaire is used for the purpose of street, parking lot or public utility easement illumination and is located less than three mounting heights from the property line, the luminaire shall include a house side shield to protect adjoining property.*

    d. *Exception 4: If the subject property includes an exterior column, wall or abutment within 25 feet of the property line, a luminaire partly shielded or better and not exceeding 60 lamp watts may be mounted onto the exterior column, wall or abutment or under or within an overhang or canopy attached thereto.*

    e. *Exception 5: Lighting adjacent to SROZ areas shall be set back three times the mounting height of the luminaire, or shall employ a house side shield to protect the natural resource area.*

Applicant Response: All site lighting is set back from the property edge by at least three times the mounting height. No luminaire is within a 33 foot buffer of the site property line, three times the tallest pole mounted light. Luminaires used for street illumination are except from this set back under exception 3. Street lighting will be fitted with house side shields. The proposed lighting complies with the standard in this Section. Please see Sheet E5.0, Photometric Site Plan, and E5.1, Photometric Details, for additional details.

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: [...]*

Applicant Response: The proposed lighting on the project site complies with the above Prescriptive Option standards and has been designed by a professional lighting engineer; therefore, the Performance Option criteria do not apply. Please see Sheet E5.0, Photometric Site Plan, and E5.1, Photometric Details, for additional details.

D. Curfew. All prescriptive or performance based exterior lighting systems shall be controlled by automatic device(s) or system(s) that:

1. Initiate operation at dusk and either extinguish lighting one hour after close or at the curfew times according to Table 10; or

2. Reduce lighting intensity one hour after close or at the curfew time to not more than 50 percent of the requirements set forth in the Oregon Energy Efficiency Specialty Code unless waived by the DRB due to special circumstances; and

3. Extinguish or reduce lighting consistent with 1. and 2. above on Holidays. The following are exceptions to curfew:

a. Exception 1: Building Code required lighting.

b. Exception 2: Lighting for pedestrian ramps, steps and stairs.

c. Exception 3: Businesses that operate continuously or periodically after curfew.

Applicant Response: The proposed EV charging station use is intended to operate continuously after curfew; therefore, no such automatic system is required.

UNDERGROUND UTILITIES

4.320 Requirements

(.01) The developer or subdivider shall be responsible for and make all necessary arrangements with the serving utility to provide the underground services (including cost of rearranging any existing overhead facilities). All such underground facilities as described shall be constructed in compliance with the rules and regulations of the Public Utility Commission of the State of Oregon relating to the installation and safety of underground lines, plant, system, equipment and apparatus.

Applicant Response: Applicant has coordinated utility service in compliance with the rules and regulations of the Public Utility Commission of the State of Oregon and under Wilsonville Code Ordinances Section 4.300 through 4.320. As shown on Sheet C4.0, Utility Plan, the project would make necessary arrangements for all underground services and work to be performed. Utilities would also be installed in compliance with relevant regulations.

(.02) The location of the buried facilities shall conform to standards supplied to the subdivider by the City. The City also reserves the right to approve location of all surface-mounted transformers.

Applicant Response: Buried facilities will conform to standards provided by the City under Wilsonville Code of Ordinances Section 4.320 and will abide by recommendations provided by the City regarding the location of the transformer. Please see Sheet C4.0, Utility Plan, for further detail.

(.03) Interior easements (back lot lines) will only be used for storm or sanitary sewers, and front easements will be used for other utilities unless different locations are approved by the City Engineer. Easements satisfactory to the serving utilities shall be provided by the developer and shall be set forth on the plat.

Applicant Response: The project will abide by utility easement requirements outlined in Section 4.320 by utilizing interior easements only for storm and sanitary sewer and the front easement for other utilities. Please see Sheet C4.0, Utility Plan, for further detail.

SITE DESIGN REVIEW

4.400 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.

Applicant Response*:* The project will be consistent with Section 4.135 Performance Standards to ensure compliance with industrial and commercial site development standards. Section 4.135 regulates items such as noise, emissions, open storage, and landscaping to maintain desirability of the City. The proposed development is designed in compliance with the Performance Standards in Section 4.135. Additionally, the proposed development is designed to provide modern and aesthetically pleasing architectural features, surrounded by thoughtfully designed and Code compliant landscaping. The proposed development meets the intent of this purpose statement.

(.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 ensures 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;

Applicant Response: The development team – which includes civil engineers, architects, landscape architects, and planners – worked to create an original design for the site that prioritizes functionality of the EV charging station for employees and customers, while ensuring a visual aesthetic building and protection of public infrastructure. Please see the attached plan set for details on the proposed site and building design.

C. Discourage monotonous, drab, unsightly, dreary and inharmonious developments;

Applicant Response: The proposed development is not anticipated to be unsightly or inharmonious with the surrounding developments. The development is setback towards the rear of the property, and ample landscaping will be provided to ensure visually aesthetic views from the public right-of-way. Please see the attached plan set for details on the proposed site and building design.

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;

Applicant Response: To the maximum extent possible, the existing landscaping is proposed to be preserved on the project site, and replacement planting will be provided where required. The proposed building has been designed by a licensed and professional architect and engineer to comply with the general development in the area and ensure appropriate grading occurs.

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;

Applicant Response: The proposed use of an EV charging station is a permitted Service Commercial use within the PDI zoning district and complies with the City's desire for specific businesses for the property.

F. Stabilize and improve property values and prevent blighted areas and, thus, increase tax revenues;

Applicant Response: The project site is currently undeveloped, and the proposed EV charging station will positively contribute to the aesthetic of the area and the City's 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.

Applicant Response: All required utilities are proposed to be provided to serve the project site. These have been designed by a licensed and professional engineer in compliance with all applicable City standards and will be placed underground, including the sanitary line, storm line, and water line, and no adverse impact is anticipated. Please see the utility plan on Sheet C4.0 of the plan set for details.

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;

Applicant Response: The site has been thoughtfully designed by professional and licensed architects and engineers to provide a functional layout that prioritizes public safety and easy surveillance of the site. This includes pedestrian walkways connecting the building to the public right-of-way and lighting within the parking lot and around the site.

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;

Applicant Response: The project site is currently a vacant and previously disturbed property within the City limits and the urban growth boundary that is zoned appropriately as Planned Development Industrial. The proposed EV charging station will improve the use of the site by improving underutilized land for EV charging, adding additional landscaped area, and providing revenue generating opportunities in the community as well as access to zero emission transportation.

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.

Applicant Response: The proposed development would contribute to the welfare of the City as it would introduce reliable and fast electric vehicle charging. This would increase comfort for residents and visitors enjoying the favorable environment of the City as additional charging would be available for electric vehicle users.

4.420 Review Authority for Site Design Review

(.01) Application of Section.

A. Unless exempt as noted in 1.—2. below, no building permit shall be issued for a new building or major exterior remodeling of an existing building unless the building architecture and siting is approved by the Development Review Board (Board) through

Site Design Review.

…

Applicant Response: The proposed development does not meet any of the exemption criteria noted in this Section and is subject to Site Design Review and approval from the Development Review Board.

(.02) Unless exempt as noted in 1.—2. below, no building permit within an area covered by a Stage II Planned Development, or PDP in the Village Zone, shall be granted unless landscaping plans are reviewed and approved by the Board through Site Design review, or FDP in the Village Zone.

…

Applicant Response: Applicant has prepared and submitted landscaping plans with this application, in support of the requested Stage II Planned Development approval. Associated landscaping plans can be found in Sheets L0.0 through L5.1.

(.03) No Sign Permit, except as permitted in Sections 4.156.02 and 4.156.05, shall be issued for the erection or construction of a sign relating to such new building or major remodeling, until the plans, drawings, sketches and other documents required for a Sign Permit application have been reviewed and approved by the Board.

Applicant Response: Applicant has provided the required signage exhibits and narrative responses in support of the requested Class III Sign Permit.

4.421 Criteria and Application of Design 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 tyles 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.

Applicant Response: In compliance with Section 4.176, the site has been designed to preserve existing landscape where possible. Landscaping removal and grading impacts will be limited to where improvements are proposed on the site, including the building and vehicle parking and maneuvering areas. Existing landscaping, including trees, near the limits of grading and improvements will be protected in compliance with this code. No trees are currently being proposed to be removed. See Sheet C4.0 Grading Plan, Sheet L0.0 through Sheet L5.1 for landscape details.

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.

Applicant Response: In compliance with Section 4.171, the project site has been designed to accommodate natural features as the driveway location, and parking lot location have been selected based on minimal impacts to topography and existing vegetation. The project would include adequate

screening in compliance with Section 4.176 as shown on Sheet L4.1 of the landscape plan. As such, minimal impacts to existing vegetation and infrastructure would occur and a proper relationship between existing uses and the proposed project would be established.

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.*

Applicant Response: The parking lot, including vehicular parking and circulation and pedestrian access, has been designed by a professional and licensed engineer to ensure the safety of pedestrian access. All applicable development standards are met, including providing curbs and wheel stops, where necessary, and minimum drive aisle widths. Additionally, requirements introduced under Ordinance No. 899 would be included to ensure compliance with updated City regulations. Please see Sheet C2.1 for further details and Section 4.155 and 4.167 of this narrative for details on proposed on-site circulation.

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.*

Applicant Response: Surface water drainage has been designed to prevent any adverse effects to neighboring properties. The site is sloped down from north to south and will allow for stormwater to outfall at the existing stormwater ditch in the southwest corner of the property. Additionally, the trash enclosure would be hydrologically separated from the drainage on the remainder of the site to prevent sanitary sewer contamination. See the Stormwater Management Plan for further detail on the management of stormwater.

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.*

Applicant Response: All proposed utilities have been designed by a licensed and professional engineer in compliance with all applicable City standards and will be placed underground, including the sanitary line, storm line, and water line. The only utility proposed above ground is the required stormwater planters. Please see the attached utility plan on Sheet C4.0 for details.

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.*

Applicant Response: The project will comply with relevant City sign regulations and follow criteria outlined in Section 4.156. The size, location, design, color, and texture are described in the submittal materials for the project.

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.*

Applicant Response: The project will incorporate screening, as shown in the Landscape Plan, to ensure screening of the dumpsters in the trash enclosure, and for the electrical transformer required

for the project. Screening will be installed in compliance with Section 4.176. All required screening and setbacks for buildings and other standard features, such as parking lots and waste storage, are met with the proposed site design.

(.02) The standards of review outlined in Sections (a) through (g) above shall also apply to all accessory buildings, structures, exterior signs and other site features, however related to the major buildings or structures.

Applicant Response: All site elements, including the accessory building, trash enclosure, signage, and other site features are designed to comply with the standards of review above. The proposed development complies with this criterion.

(.03) The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards.

Applicant Response: The project would abide by the purpose discussed in Section 4.400 to ensure the goals of the City are met by creating a high quality and purposeful design on a currently vacant parcel.

(.04) Conditional application. The Planning Director, Planning Commission, Development Review Board or City Council may, as a Condition of Approval for a zone change, subdivision, land partition, variance, conditional use, or other land use action, require conformance to the site development standards set forth in this Section.

Applicant Response: Applicant acknowledges that the Development Review Board reserves the authority to require conformance to the site development standards set forth in this Section as a condition of approval.

(.05) The Board may attach certain development or use conditions in granting an approval that are determined necessary to insure the proper and efficient functioning of the development, consistent with the intent of the Comprehensive Plan, allowed densities and the requirements of this Code. In making this determination of compliance and attaching conditions, the Board shall, however, consider the effects of this action on the availability and cost of needed housing. The provisions of this section shall not be used in such a manner that additional conditions either singularly or accumulatively have the effect of unnecessarily increasing the cost of housing or effectively excluding a needed housing type.

Applicant Response: Potential application of Conditions of Approval is acknowledged. The Project would be consistent with Comprehensive Plan land use designations and with the adopted zoning code.

(.06) The Board or Planning Director may require that certain paints or colors of materials be used in approving applications. Such requirements shall only be applied when site development or other land use applications are being reviewed by the City.

A. Where the conditions of approval for a development permit specify that certain paints or colors of materials be used, the use of those paints or colors shall be binding upon the applicant. No Certificate of Occupancy shall be granted until compliance with such conditions has been verified.

Applicant Response: Should certain paints, colors, or materials be required for use, the project would comply and utilize only approved design elements.

B. Subsequent changes to the color of a structure shall not be subject to City review unless the conditions of approval under which the original colors were set included a condition requiring a subsequent review before the colors could be changed.

Applicant Response: The project would utilize only approved colors should that be a condition of

approval.

4.430 Location, Design, and Access Standards for Mixed Solid Waste and Recycling

(.01) The following locations, design and access standards for mixed solid waste and recycling storage areas shall be applicable to the requirements of Section 4.179 of the Wilsonville City Code.

Applicant Response*:* The location and access standards for recycling and solid waste storage outlined in Section 4.179 would be adhered to. Additionally, the project has received approval from the local waste management provider regarding the location, size, and access standards of the trash enclosure. See Sheet C2.4 Garbage Disposal Plan for details.

(.02) Location Standards:

A. To encourage its use, the storage area for source separated recyclables shall be co-located with the storage area for residual mixed solid waste.

Applicant Response: The proposed storage area on the project site has been designed to co-locate both recycling and solid waste. Please see the attached plan on Sheet C2.4 for details on the location of the trash and recycling storage on site.

B. Indoor and outdoor storage areas shall comply with Uniform Building and Fire Code requirements.

Applicant Response: The site has been designed by a professional licensed engineer to comply with all applicable Uniform Building and Fire Code requirements in mind and has received approval from the waste management provider as shown in the Service Provider Letter from Republic Services. The proposed trash enclosure would be screened and covered with a roof that complies with the Uniform Building and Fire Code. Please see the Garbage Disposal Plan on Sheet C2.4.

C. Storage area space requirements can be satisfied with a single location or multiple locations and can combine with both interior and exterior locations.

Applicant Response: The storage area space would be designed in accordance with Section 4.179 of the Wilsonville Code of Ordinances and would include one exterior storage location that is adequately sized. See Sheet C2.4 for further details.

D. Exterior storage areas can be located within interior side yard or rear yard areas. Minimum setback shall be three feet. Exterior storage areas shall not be located within a required front yard setback, including double frontage lots.

Applicant Response: The proposed exterior storage area is more than 3 feet from the interior side and rear property lines and is not sited within the required front yard setback areas, in compliance with the standards in this Section. Please see Sheet C2.4 for details on the location of the trash and recycling storage on site.

E. Exterior storage areas shall be located in central and visible locations on a site to enhance security for users.

Applicant Response: The trash enclosure will be located in a central and highly visible portion of the Project site. See Sheet C2.4 for further details.

F. Exterior storage areas can be located in a parking area. Storage areas shall be appropriately screened according to the provisions of Section 4.430(.03), below.

Applicant Response: The trash enclosure is located adjacent to the proposed parking area and is screened in accordance with the applicable screening provisions. See Sheets C2.4 and L4.1 for further details on trash enclosure location and associated screening.

G. *The storage area shall be accessible for collection vehicles and located so that the storage area will not obstruct pedestrian or vehicle traffic movement on the site or on public streets adjacent to the site.*

Applicant Response: The storage area has adequate accessibility for collection vehicles, as determined by the Republic Services Service Provider Letter. The separated and roofed enclosure would be located at the end of a dedicated truck turnaround to prevent collection trucks from backing into public streets and to keep pedestrian and passenger vehicle traffic separate from the enclosure area. See Sheet C2.4 for further details.

(.03) Design Standards:

A. *The dimensions of the storage area shall accommodate containers consistent with current methods of local collection.*

Applicant Response: As determined by the Republic Services Service Provider Letter, the proposed storage area will be adequately sized to accommodate the collection containers. See Sheet C2.4 for further details. The proposed development complies with this standard.

B. *Storage containers shall meet Uniform Fire Code standards and be made of or covered with waterproof materials or situated in a covered area.*

Applicant Response: The containers utilized will meet Uniform Fire Code and Republic Servies standards for material requirements. The proposed development complies with this standard.

C. *Exterior storage areas shall be enclosed by a sight obscuring fence, wall or hedge at least six feet in height. Gate openings for haulers shall be a minimum of ten feet wide and shall be capable of being secured in a closed or open position. In no case shall exterior storage areas be located in conflict with the vision clearance requirements of Section 4.177.*

Applicant Response: The proposed development includes a walled storage enclosure, which is surrounded by the required screening landscaping. The enclosure includes gates that exceed 10 feet in width, open 120 degrees, and have wind pins to securely open and close gates. The enclosure is located in the central portion of the project site and does not conflict with applicable vision clearance requirements. See Sheet C2.4 for further details.

D. *Storage area(s) and containers shall be clearly labeled to indicate the type of materials accepted.*

Applicant Response: Storage containers will be clearly labeled and color coded for easy identification. The proposed development complies with this standard.

(.04) Access Standards:

A. *Access to storage areas can be limited for security reasons. However, the storage area shall be accessible to users at convenient times of the day and to collect service personnel on the day and approximate time they are scheduled to provide collection service.*

Applicant Response: The storage area will be accessible at all times to allow for trash disposal and access from service personnel. A no parking sign would be located within the truck turnaround area to ensure the trash collection site is accessible to be serviced. See Sheet C2.4 for further details. The proposed development complies with this standard.

B. *Storage areas shall be designed to be easily accessible to collection trucks and equipment, considering paving, grade and vehicle access. A minimum of ten feet horizontal clearance and eight feet of vertical clearance is required if the storage area is covered.*

Applicant Response: The proposed enclosure meets the minimum sizing requirements, horizontal

and vertical clearances, and accessibility requirements for collection trucks and equipment as determined by the Republic Services Service Provider Letter (provided with application materials). See Sheet C2.4 for further details. The proposed development complies with this standard.

C. *Storage areas shall be accessible to collection vehicles without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius shall be provided to allow collection vehicles to safely exit the site in a forward motion.*

Applicant Response: The proposed development includes adequate truck turnaround space to ensure that collection vehicles have adequate turning radius to safely exit the site in a forward motion. See the Republic Services Service Provider Letter and Sheet C2.4. The proposed development complies with this standard.

4.440 Procedure

(.01) *Submission of Documents. A prospective applicant for a building or other permit who is subject to site design review shall submit to the Planning Department, in addition to the requirements of Section 4.035, the following:*

A. *A site plan, drawn to scale, showing the proposed layout of all structures and other improvements including, where appropriate, driveways, pedestrian walks, landscaped areas, fences, walls, off- street parking and loading areas, and railroad tracks. The site plan shall indicate the location of entrances and exits and 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. The site plan shall indicate how utility service and drainage are to be provided.*

Applicant Response: Please see Sheet C2.0 and Sheet C2.1 for the project site plan and all associated information.

B. *A Landscape Plan, drawn to scale, showing the location and design of landscaped areas, the variety and sizes of trees and plant materials to be planted on the site, the location and design of landscaped areas, the varieties, by scientific and common name, and sizes of trees and plant materials to be retained or planted on the site, other pertinent landscape features, and irrigation systems required to maintain trees and plant materials. An inventory, drawn at the same scale as the Site Plan, of existing trees of four inch caliper or more is required. However, when large areas of trees are proposed to be retained undisturbed, only a survey identifying the location and size of all perimeter trees in the mass in necessary.*

Applicant Response: The requirements of a landscape plan have been satisfied. Please see Sheets L0.0 through L5.1 for landscaping details.

C. *Architectural drawings or sketches, drawn to scale, including floor plans, in sufficient detail to permit computation of yard requirements and showing all elevations of the proposed structures and other improvements as they will appear on completion of construction. Floor plans shall also be provided in sufficient detail to permit computation of yard requirements based on the relationship of indoor versus outdoor living area, and to evaluate the floor plan's effect on the exterior design of the building through the placement and configuration of windows and doors.*

Applicant Response: Architectural information has been provided and submitted.

D. *A Color Board displaying specifications as to type, color, and texture of exterior surfaces of proposed structures. Also, a phased development schedule if the development is constructed in stages.*

Applicant Response: The required color board is included with the proposed building and signage details.

E. A Sign Plan, drawn to scale, showing the location, size, design, material, color and methods of illumination of all exterior signs.

Applicant Response: A sign plan, which includes the location, size, design, material, color and methods of illumination for all exterior signs, has been submitted with this application.

F. The required application fee.

Applicant Response: Required application fees of $20,677 have been paid.

(.02) As soon as possible after the preparation of a staff report, a public hearing shall be scheduled before the Development Review Board. In accordance with the procedures set forth in Section 4.010(2) and 4.012, the Development Review Board shall review and approve, approve with conditions, or deny the proposed architectural, site development, landscaping or sign plans of the applicant. If the Board finds that additional information or time are necessary to render a decision, the matter may be continued to a date certain. The applicant shall be immediately notified in writing of any such continuation or delay together with the scheduled date of review.

Applicant Response: Applicant acknowledges that a public hearing before the Development Review Board will be required, in accordance with the procedures noted in this Section.

4.450 Installation of Landscaping

(.01) All landscaping required by this section and approved by the Board shall be installed prior to issuance of occupancy permits, unless security equal to 110 percent of the cost of the landscaping as determined by the Planning Director is filed with the City assuring such installation within six months of occupancy. "Security" is cash, certified check, time certificates of deposit, assignment of a savings account or such other assurance of completion as shall meet with the approval of the City Attorney. In such cases the developer shall also provide written authorization, to the satisfaction of the City Attorney, for the City or its designees to enter the property and complete the landscaping as approved. If the installation of the landscaping is not completed within the six-month period, or within an extension of time authorized by the Board, the security may be used by the City to complete the installation. Upon completion of the installation, any portion of the remaining security deposited with the City shall be returned to the applicant.

Applicant Response*:* Landscaping will be implemented prior to issuance of occupancy permits.

(.02) Action by the City approving a proposed landscape plan shall be binding upon the applicant. Substitution of plant materials, irrigation systems, or other aspects of an approved landscape plan shall not be made without official action of the Planning Director or Development Review Board, as specified in this Code.

Applicant Response*:* The landscape plan, once approved, would be binding and adhered to for installation. See Sheet L4.1 for planting details.

(.03) All landscaping shall be continually maintained, including necessary watering, weeding, pruning, and replacing, in a substantially similar manner as originally approved by the Board, unless altered with Board approval.

Applicant Response*:* Landscaping would be continually maintained to ensure compliance with the approved landscape plan. See Sheets L3.0 through L4.0 for further maintenance details.

(.04) If a property owner wishes to add landscaping for an existing development, in an effort to beautify the property, the Landscape Standards set forth in Section 4.176 shall not apply and no Plan approval or permit shall be required. If the owner wishes to modify or remove landscaping that

has been accepted or approved through the City's development review process, that removal or modification must first be approved through the procedures of Section 4.010.

Applicant Response: Acknowledged. Any alterations to the originally approved landscaping would be approved through the City's development review process.

TREE PRESERVATION AND PROTECTION

4.600 Purpose and Declaration

(.01) Rapid growth, the spread of development, need for water and increasing demands upon natural resources have the effect of encroaching upon, despoiling, or eliminating many of the trees, other forms of vegetation, and natural resources and processes associated therewith which, if preserved and maintained in an undisturbed and natural condition, constitute important physical, aesthetic, recreational and economic assets to existing and future residents of the City of Wilsonville.

Applicant Response: The impact of increasing urbanization and value of natural lands is acknowledged.

(.02) Specifically, the City Council finds that:

A. Woodland growth protects public health through the absorption of air pollutants and contamination, through the reduction of excessive noise and mental and physical damage related to noise pollution, and through its cooling effect in the summer months, and insulating effects in winter;

B. Woodlands provide for public safety through the prevention of erosion, siltation, and flooding; and

C. Trees make a positive contribution to water quality and water supply by absorbing rainfall, controlling surface water run-off, and filtering and assisting in ground water recharge; and

D. Trees and woodland growth are an essential component of the general welfare of the City of Wilsonville by producing play areas for children and natural beauty, recreation for all ages and an irreplaceable heritage for existing and future City residents.

Applicant Response (A-D): The importance of woodlands is acknowledged and would be supported through the Landscape Plan of the project.

(.03) Therefore, the purposes of this subchapter are:

A. To preserve Significant Resource Overlay Zone areas, recognizing that development can and will occur.

B. To provide for the protection, preservation, proper maintenance and use of trees and woodlands in order to protect natural habitat and prevent erosion.

C. To protect trees and other wooded areas for their economic contribution to local property values when preserved, and for their natural beauty and ecological or historical significance.

D. To protect water quality, control surface water run-off, and protect ground water recharge.

E. To reflect the public concern for these natural resources in the interest of health,

safety and general welfare of Wilsonville residents.

F. To encourage replanting where trees are removed.

Applicant Response: Acknowledged. The proposed development would not require the removal of existing trees; therefore, a Tree Removal Permit would not be required or requested. The proposed development would not be required to apply for a Type A, B, C, or D Tree Removal Permit and would not require tree relocation, replacement, or mitigation as no trees would be removed. Existing trees would be preserved during construction through avoidance measures, and an additional 40 trees would be planted as part of the project. The project would support woodland growth and preservation in the City by increasing irrigated landscaped area.

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.

Applicant Response: All trees onsite would be preserved and would be marked during construction to emphasize protection (see note on Sheet L0.1, Tree Inventory Plan, which states that all existing trees are to be protected in compliance with the City's tree protection requirements). The demolition plan on Sheet C3.0 shows the avoidance of trees during construction. Additionally, the irrigation details on Sheet L5.0 and L5.1 show how existing and new landscaping would be maintained. The proposed development complies with the standards in this Section.

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.

Applicant Response: The applicant will not place construction materials near trees nor attach anything to trees during construction on the project site. Please see the demolition plan on Sheet C3.0 and the planting plan on Sheet L4.1 for further details.

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.

Response: The applicant is proposing tree preservation during on-site construction that includes tree protection fencing, tree protection signage, erosion control, and prevention of protection zone impacts. The proposed tree protection fencing will be 2.5 feet in height, secured with metal stakes, and installed flushed to the ground.

4.620.20 Maintenance and Protection Standards

(.01) The following standards apply to all activities affecting trees, including, but not limited to, tree protection as required by a condition of approval on a site development application brought under this Chapter or as required by an approved Tree Maintenance and Protection Plan.

A. Pruning activities shall be guided by the most recent version of the ANSI 300 Standards for Tree, Shrub, and Other Woody Plant Maintenance. Information on these standards shall be available upon request from the Planning Department.

Response: Pruning would and additional plant maintenance would be conducted in compliance with ANSI 300 standards.

B. Topping is prohibited.

1. Exception from this section may be granted under a Tree Removal Permit if necessary for utility work or public safety.

Response: No tree topping is proposed on the project site, and any pruning activity done will be in compliance with the most recent version of the ANSI 300 Standards for Tree, Shrub, and Other Woody Plant Maintenance. Please see Sheet L5.0 and Sheet L5.1 for further maintenance details.

CONCLUSION

The proposed development would improve a vacant and previously disturbed site within the City in a manner consistent with the Comprehensive Plan Land Use Designation by implementing an innovative land use which includes EV charging, a public amenity center, and landscaping. This written statement evaluates how the proposed development would be consistent with zoning regulations, general development regulations, and site design review requirements. The written statement has determined that the proposed development would be consistent with design standards, including landscaping, signage, lighting, and accessibility. Additionally, the proposed development would not have a significant impact regarding areas of environmental concern including noise, vibration, emissions, heat and glare, hazardous materials, and utilities.

As discussed in the written statement, the proposed development would be consistent with requirements determined by the City of Wilsonville and would result in the development of a project envisioned under the Wilsonville Comprehensive Plan. Therefore, Applicant is requesting a Planned Development Permit (Stages 1 & 2), Class 3 Sign Permit, and Site Design Review approval.

GEOTECHNICAL ENGINEERING REPORT

Ionna Proposed EV Charging Station
9045 SW Barber St.
Wilsonville, Oregon
PSI Project No. 07041598

PREPARED FOR:

Kimley-Horn and Associates, Inc.
4201 Winfield Road, Suite 600
Warrenville, IL 60555

November 26, 2025

BY:

PROFESSIONAL SERVICE INDUSTRIES, INC.
6032 N. Cutter Circle, Suite 480
Portland, OR 97217
Phone: (503) 289–1778

Professional Services Industries, Inc.
6032 N. Cutter Circle, Suite 480
Portland, OR, 97217
Office – (503) 289-1778

November 26, 2025

Kimley-Horn and Associates, Inc.
4201 Winfield Rd., Suite 600
Warrenville, IL 60555

Attn: Mr. Quinn Duffy
(971) 420-3194
Quinn.Duffy@kimley-horn.com

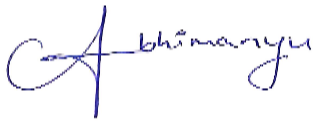
Re: **Geotechnical Engineering Report**
IONNA PROPOSED EV CHARGING STATION
9045 SW BARBER ST.
WILSONVILLE, OREGON
PSI Project No. 07041598

Professional Service Industries, Inc. (PSI), an Intertek company, is pleased to submit this geotechnical engineering report for the above-referenced project. This report includes the results from the field exploration and laboratory testing along with recommendations for use in preparation of the appropriate design and construction documents for this project.

PSI appreciates the opportunity to provide this geotechnical engineering report and looks forward to continuing participation during the design and construction phases of this project. PSI also has great interest in providing materials testing and inspection services during the construction of this project and will be glad to meet with you to further discuss how we can be of assistance as the project advances.

If there are questions pertaining to this report, or if PSI may be of further service, please contact us at your convenience.

Respectfully submitted,
Professional Services Industries, Inc.



Abhimanyu Patel
Staff Engineer
Abhimanyu.patel@intertek.com

Dana Biggerstaff, PE.
Senior Geotechnical Engineer
dana.biggerstaff@intertek.com

PC review by Philip Johnson

TABLE OF CONTENTS

Electronic Navigation: The TOC below and Keywords are hyperlinked to sections of relevance. The Symbol will return the reader to the TOC.

Page No.

INDEX OF TABLES

Page No.

1.0 PROJECT INFORMATION

1.1 PROJECT AUTHORIZATION

Professional Service Industries, Inc. (PSI), an Intertek company, has completed a field exploration and geotechnical evaluation for the Ionna Proposed EV Charging Station project. Mr. Bryce Christensen, representing Kimley-Horn and Associates, Inc., authorized PSI's services on November 19th, by signing the subconsultant agreement titled "PSI – Subconsultant Agreement Wilsonville OR_111925".

1.2 PROJECT DESCRIPTION

Based on information provided by the Client, a summary of our understanding of the proposed project is provided below.

Ionna is planning to construct EV charging stations at 9045 SW Barber St., Wilsonville, Oregon. The proposed construction will consist of the installation of EV chargers and a structural canopy and freestanding pre-engineered metal building (PEMB) with outdoor seating. We anticipate the canopy will be wood or steel-framed structures with relatively light structural loading transferred to isolated columns on the order of 1 to 2 kips. We also expect structural loading for the PEMB will be relatively light with isolated columns supporting 25 to 50 kips and continuous bearing walls supporting 1 to 2 kips per foot.

The geotechnical recommendations presented in this report are based on the available project information, structure locations, and the subsurface materials encountered during the field investigation. Should any of the above information or design basis made by PSI be inconsistent with the planned construction, it is requested that you contact us immediately to allow us to make any necessary modifications to this report. PSI will not be held responsible for changes to the project if not provided the opportunity to review the information and provide modifications to our recommendations.

Specifically, this report addresses the following:

- Soil and groundwater conditions.
- Geologic hazards assessment.
- Seismic site class per the current International Building Code (IBC).
- Foundation support.
- Floor slabs.
- Excavations.
- Slopes.
- Drainage.
- Flatwork.
- Site preparation and grading.
- Structural fill and overexcavations.
- Utilities.
- Obstructions.
- Wet weather and wet conditions considerations.

2.0 SITE AND SUBSURFACE CONDITIONS

2.1 SITE DESCRIPTION

Currently the site consists of an undeveloped parcel at 9045 Southwest Barber Street in Wilsonville, Oregon. The approximate site location is shown on Figure 1. Based on a review of Google Earth aerial imagery, the site consists of an undeveloped parcel with minimal vegetation. The property is bounded by Southwest Boones Ferry Road to the east, Southwest Barber Street to the south, and commercial buildings to the north and west. Vegetation at the site consists primarily of grass and weeds with some small- to medium-sized trees located along the site's northern and western perimeters. Based on the National USGS topographic map, the site is generally flat with an elevation of approximately 175 feet above mean sea level.

2.2 SITE GEOLOGY

Based on a review of the *Geology and Geologic Hazards of Northwest Clackamas County* by H.G. Schlicker and C.T. Finlayson (1979), PSI anticipates the site to be underlain by lacustrine deposits of the Willamette Silt Formation (Qws), consisting of unconsolidated fine sandy silt and clay deposited by late Pleistocene glacial floods. These sediments typically occur along valleys of the Tualatin and other tributaries of the Willamette River, with bed thicknesses varying from a few inches to several feet and total thicknesses up to 100 feet. The upper silt deposits observed in the CPTs and geoprobe are generally consistent with this mapped description.

2.3 SUBSURFACE CONDITIONS

To evaluate soil conditions at the subject site, PSI advanced four CPT soundings and one Geoprobe. The geoprobe and CPT soundings were drilled by a track-mounted Geoprobe 6622CPT drill rig, and were advanced with direct push methodology. CPT-1, CPT-1a, CPT-2 and CPT-2a were advanced in the general area of the proposed structure to termination depths of approximately 10 feet below the ground surface (bgs) where the probe met refusal in the underlying, very dense gravel formation. CPTs 1a and 2a were performed due to early refusal on CPTs 1 and 2. The geoprobe was advanced to a depth of approximately 20 feet bgs. Locations of the soil explorations are shown on Figure 2.

The geoprobe and CPT locations were selected by PSI personnel and located in the field using a recreational-grade GPS system. However, elevations of the ground surface at the exploration locations were not provided and should be surveyed by others prior to construction. The references to elevations of various subsurface strata are based on depths below existing grade at the time of drilling. The approximate exploration locations are depicted on the Exploration Location Plan provided in the Figures.

The results of the field and laboratory testing have been used to generalize a subsurface profile at the project site. The following subsurface descriptions provide a highlighted generalization of the major subsurface stratification features and material characteristics.

TABLE 2.1: GENERALIZED SOIL PROFILE

Stratum	Top (ft)	Bottom (ft)	Description
1	0	10	Stiff to Very Stiff SILT (ML)
2	10	Bottom	Very Dense silty GRAVEL with sand (GM)

The Geoprobe and CPT Logs included in Appendix A should be reviewed for specific information at individual test locations. The Geoprobe and CPT logs include continuous soil samples obtained from the Geoprobe, soil behavior types interpreted from CPT correlations, stratifications, sample locations, and available field and laboratory test data. The descriptions provided on the logs only represent the conditions at that actual exploration location; the stratifications represent the approximate boundaries between subsurface materials. The actual transitions between strata may be more gradual and less distinct. Variations will occur and should be expected across the site.

Soil samples collected using the Geoprobe® direct-push system generally correspond to the functional intent of ASTM D1587 and ASTM D3550 sampling methods, although direct-push tools do not meet the exact geometric and energy requirements of these standards. Complete field exploration methodologies are presented in Appendix A. Samples were identified in the field, placed in sealed containers, and transported to the laboratory for further classification and testing. At the completion of drilling, the geoprobe was backfilled with bentonite to match the ground surface.

PSI supplemented the field exploration with a laboratory testing program to determine additional engineering characteristics of the subsurface soils encountered. The laboratory testing program was conducted in general accordance with applicable ASTM Test Methods, and is included in Appendix A. Portions of samples not altered or consumed by laboratory testing will be discarded 30 days from the date shown on this report.

2.4 GROUNDWATER INFORMATION

Groundwater was not encountered during our subsurface investigations. Based on our review of nearby well logs, groundwater is estimated to be approximately 50 feet bgs. As such, groundwater is not expected to impact the proposed construction. It is possible, however, that transient, saturated ground conditions at shallower depths could develop at a later time during periods of heavy precipitation, landscape watering, leaking water lines, or other unforeseen causes. Variations in groundwater levels should be expected seasonally, annually, and from location to location.

The groundwater levels presented in this report were measured at the time of PSI field activities. The contractor should determine the actual groundwater levels at the site before construction activities.

3.0 GEOTECHNICAL CONCLUSIONS AND RECOMMENDATIONS

3.1 GEOTECHNICAL DISCUSSION

The primary geotechnical consideration at this site is the upper strata of silt encountered at all of the CPT sounding locations. Unsuitable soils including loose silts should be replaced by compacted fill for foundation and paving support. Should changes in the project criteria occur, a review must be made by PSI to determine if modifications to our recommendations will be required.

The following geotechnical design recommendations have been developed based on the previously described project characteristics and subsurface conditions encountered. The proposed construction should be performed in accordance with these recommendations and the applicable building code, and local governmental standards which have jurisdiction over this project. If there are changes in the project criteria, PSI should be retained to determine if modifications in the recommendations will be required. The findings of such a review would be presented in a supplemental report. Once final design plans and specifications are available, a general review by PSI is recommended to confirm that the conditions anticipated in preparing this geotechnical report are consistent with the earthwork and foundation recommendations contained within the construction documents.

3.2 GEOLOGIC HAZARD AREAS

The City of Wilsonville and Clackamas County do not explicitly define geologic hazards. However, we have evaluated the site for the presence of erosion, landslide, and seismic hazards in the following sections.

3.2.1 EROSION HAZARD AREAS

The soils onsite are classified as Willamette Silt Loam, 3 to 7 percent slopes (88B), and Woodburn Silt Loam, 0 to 3 percent (91A), by the United States Department of Agriculture Natural Resources Conservation Service (NRCS). These mapped soils are rated as having a slight to moderate susceptibility to erosion when exposed over existing site grades. Therefore, it is our opinion that an erosion hazard area does not exist at the site.

However, some amount of susceptibility to erosion when exposed during construction is anticipated. Therefore, it is our opinion that proper implementation and maintenance of Best Management Practices (BMPs) for erosion prevention and sediment control would sufficiently mitigate the potential for erosion within the planned development area. Erosion control measures as outlined by the City of Wilsonville should be in place prior to and during construction activities at the site.

3.2.2 LANDSLIDE HAZARD AREAS

Topography across the site is relatively flat with no obvious signs of sloping. Moreover, the site is not mapped with either deep or shallow susceptibility to landsliding as shown on the Oregon Department of Geology and Mineral Industries (DOGAMI) HazVu map. Therefore, it is our opinion that a landslide hazard area does not exist at the site.

3.2.3 Seismic Hazard Areas

Soil liquefaction and seismically induced settlements typically occur in saturated loose to medium dense cohesionless soils; and in clays and silts with low plasticity indexes and with moistures near their liquid limits, due to cyclic softening where the groundwater is relatively shallow (within 50 feet of the ground surface). During an earthquake, ground shaking causes a rapid increase in the porewater pressure within the soil mass under undrained conditions. The generation of excess porewater pressures causes a corresponding decrease in the soil's effective stress, which can result in a sudden loss of soil bearing strength and ground surface settlement within the liquefied (and softened) soil layers. Soil liquefaction potential is generally affected by soil types, mineral contents, ground acceleration, duration of shaking, and frequency content of the earthquake ground motion, among other factors.

Based on the HazVu liquefaction susceptibility mapping, the site is considered to have a moderate to high susceptibility to liquefaction. However, based on the soil and groundwater conditions observed, it is our opinion that the risks for impacts related to soil liquefaction are negligible. The upper strata consist predominantly of cohesive soils, which possess sufficient shear strength to withstand cyclical loading without significant degradation. Beneath these layers, the subsurface profile transitions to gravel deposits characterized by high permeability. This permeability allows rapid dissipation of pore pressures during seismic shaking, further reducing the potential for liquefaction. Together, the cohesive upper materials and the well-drained gravel layers below provide a ground profile that is highly resistant to cyclic loading effects, resulting in low liquefaction risk.

Additionally, no known Quaternary faults traverse the property. The nearest mapped fault is the Canby–Molalla Fault (QFFD Fault No. 716), which lies approximately 4 miles to the east of the site. According to the United States Geologic Survey (USGS) Quaternary Fault and Fold Database, this fault is classified as Class A, indicating geologic evidence of Quaternary activity. Accordingly, the potential for ground rupture at the site is low, in our opinion.

3.3 Seismic Design Parameters

We understand that the project is governed by the current International Building Code (IBC). As part of this code, the design of structures must consider dynamic forces resulting from seismic events. These forces are dependent upon the magnitude of the earthquake event as well as the properties of the soils that underlie the site.

As part of the procedure to evaluate seismic forces, the code requires the evaluation of the Seismic Site Class, which categorizes the site based upon the characteristics of the subsurface profile within the upper 100 feet of the ground surface. Our CPT soundings extended to depths of 9.8 to 11.3 feet bgs, and geoprobe exploration extended to a depth of 20 feet bgs; however, to define the Site Class for this project, we have interpreted the results of the explorations drilled within the project site and estimated appropriate soil properties below the base of the explorations to a depth of 100 feet as permitted by the code. The estimated soil properties were based upon the soils encountered at the site, data available in published geologic reports, and our experience with subsurface conditions in the general site area.

Based upon our evaluation and the NEHRP site class map, the subsurface conditions at the site are consistent with the characteristics of a **Site Class "D"** as defined in Chapter 20.3.3 of the ASCE 7-16. This site classification may be used to determine seismic design forces.

3.4 FOUNDATIONS

In our opinion, the structural loads of the proposed development can be supported on conventional spread footing foundations constructed in accordance with the following design criteria. Additionally, PSI recommends that foundation type and bearing strata be consistent throughout a structure.

3.4.1 SHALLOW FOUNDATIONS

Shallow spread and continuous footings founded on native stiff silt or structural fill at a depth of at least 12 inches below lowest adjacent finished grade can be designed for a maximum net allowable soil bearing pressure of 2,000 pounds per square foot (psf) and a modulus of subgrade reaction (k) of 130 pounds per cubic inch (pci). The above recommended allowable soil bearing pressure may be increased by one third (⅓) for short term wind and/or seismic loads.

If unsuitable soils are encountered at footing excavation bottoms, the unsuitable material should be over excavated to suitable subgrade material and replaced with granular structural fill, with a minimum over-excavation depth of 12 inches. The lateral extent of the over excavation area beneath the design footing elevation should increase by 1-foot for each foot of over-excavation. The over excavated areas should be backfilled with structural fill or clean crushed rock and compacted in accordance with the *Structural Fill Materials* section of this report.

Based on the assumed loads and the recommended site preparation, we estimate that post-construction total settlement will be less than 1 inch. Differential settlement is estimated to be less than ½ inch over a 40-foot span. These magnitudes of estimated settlements are assumed to be within tolerable limits but should be confirmed by the project architect and structural engineer.

We recommend the use of a smooth-edged excavator to establish footing excavations. The foundation excavations should be observed by a representative of PSI prior to steel or concrete placement to assess that the foundation materials can support the design loads and are consistent with the materials and recommendations discussed in this report.

The base frictional resistance and the passive soil resistance will counteract the horizontal loads on shallow foundations. Footings cast against natural competent soil or compacted soil may be designed using a frictional coefficient between the concrete and soil of 0.30. An ultimate equivalent fluid pressure of 300 pounds per cubic foot (pcf) may be used to compute the ultimate passive resistance. This assumes footings are cast neat against native silt or backfilled with granular structural fill.

Passive resistance within the upper 1.5 feet of soil should be neglected if the footings are placed using form boards. If the footings are cast against competent natural soils or properly compacted fill soils and the soils above the footings are paved or consist of concrete floor slabs, the passive resistance within the upper 1.5 feet can be taken into account. The passive resistance of any un-compacted fill material or loose natural soils should be neglected. It is recommended that the overturning moments on the foundations be resisted by the weight of the foundation system. A minimum factor of safety of 2 should be used for sliding resistance.

The uplift resistance of a shallow foundation formed in an open excavation will be limited to the weight of the foundation concrete and the soil above it and any sustained dead load. The ultimate uplift resistance may be based on unit weights of 100 pounds per cubic foot (pcf) for silt soils and 150 pcf for concrete. This value should then be reduced by an appropriate factor of safety to arrive at the allowable uplift load. If there is a chance of submergence, the buoyant unit weights should be used.

After opening, footing excavations should be observed, and concrete should be placed as quickly as possible to avoid exposure of the excavations to wetting and drying. Surface run-off water should be drained away from the excavations and not be allowed to pond within 20 feet of the open excavation during or after construction. When possible, the foundation concrete should be placed during the same day the foundation excavation is made. If it is required that footing excavations be left open for more than one day, they should be protected to reduce moisture loss or gain.

PSI should be consulted during the design of the foundation pad to verify that the appropriate parameters are utilized. PSI should provide periodic observation during construction of the foundation pad to verify that the design parameters and the soil materials used during construction correspond.

3.5 FLOOR SLABS

To limit the settlement due to presence of soft soil at the surface, PSI recommends that the soils within the building footprint be over-excavated to a depth of at least 1 foot below new slabs-on-grade and capillary break material (pad grade) and replaced by Structural fill as described in *Structural Fill* Section.

Based on the near surface soil encountered in the probes, PSI estimates that a unit modulus of subgrade reaction (K_1) of 150 pounds per square inch per inch (psi/in) is suitable for concrete slab sections supported by compacted sandy silt. The coefficient of subgrade reaction (K_s) is the unit pressure required to produce a unit settlement in soils. The general equations to account for the effect of width of foundations in soils is given by:

$$K_s = K_1 \left(\frac{B+1}{2B}\right)^2 \qquad For\ cohesinless\ Soil$$

$$K_s = \frac{K_1}{B} \qquad For\ Cohesive\ Soil$$

where, B= Width of foundation in feet.

K_1 = Unit modulus of subgrade reaction for a one-foot square footing.

In areas that will have moisture-sensitive floor coverings will be placed directly on the floor, PSI recommends that the slabs-on-grade be underlain by a minimum 8 inches of sand or rounded aggregate base to provide a capillary break. A durable vapor-retarding membrane could be installed beneath the slab-on-grade to reduce the risks of damp floors. The vapor-retarding membrane should be installed in accordance with the manufacturer's recommendations.

3.6 EXCAVATIONS

Excavations associated with confined spaces, such as those for utility construction, must be completed in accordance with local, state, or federal requirements. Safety regulations for excavations in Oregon are governed by Oregon OSHA, Division 3, Subdivision P – Excavations. This document was issued to better ensure the safety of workmen entering trenches or excavations. It is mandated by this federal regulation that excavations, whether they be utility trenches, basement excavation or footing excavations, be constructed in accordance with the new OSHA guidelines. It is our understanding that these regulations are being strictly enforced and if they are not closely followed the owner and the contractor could be liable for substantial penalties.

In accordance with the State of Oregon OSHA requirements, the upper stiff to very stiff silt soils would be classified as Type B soils and the lower very dense gravel soils would be classified as Type C soils. Accordingly, temporary excavations in Type C soils should have their slopes laid back at an inclination of

1.5:1 (Horizontal: Vertical) or flatter, from the toe to the crest of the slope. Temporary excavations in Type B soils should have their slopes laid back at an inclination of 1:1 or flatter. If there is insufficient space to complete the excavations in this manner, or if excavations greater than 20 feet in depth are planned, then temporary shoring to support the excavations may be required. Properly designed and installed shoring trench boxes can be used to support utility trench excavations where required.

All exposed temporary slope faces that will remain open for an extended period of time should be covered with a durable reinforced plastic membrane during construction to prevent slope raveling and rutting during periods of precipitation.

The contractor is solely responsible for designing and constructing stable excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability. The contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations.

We are providing this information solely as a service to our client. PSI does not assume responsibility for construction site safety or other parties' compliance with local, state, and federal safety or other regulations.

3.7 SLOPES

Any permanent cut or fill slopes should not exceed a 4:1 inclination. Excavations extending below a 1:1 plane extending down from any adjacent footings should be shored for safety. All excavations should be inspected by a representative of the geotechnical engineer during construction to allow any modifications to be made due to variation in the soil types. All work should be performed in accordance with Oregon OSHA guidelines as described in the previous section.

3.8 DRAINAGE CONSIDERATIONS

Site grading should be carefully planned to promote positive drainage away from structures and to divert surface water away from or into stormwater systems. Water should not be allowed to collect near the structures either during or after construction.

Pavement surfaces and open space areas should be sloped such that surface water runoff is collected and routed to suitable discharge points.

Any utility trench that enters the perimeter of a structure should be excavated with a slight slope down and away from the perimeter of the structure.

3.9 FLATWORK

For sidewalks or other flatwork located adjacent to grade-supported foundations, the undercutting and select fill placement operations for the building should extend beyond the perimeter of the building and pavements to at least the width of the adjacent sidewalk or flatwork.

Any other sidewalks or flatworks not adjacent to buildings should be placed on an improved subgrade meeting or exceeding the pavement subgrade improvement methods recommended below. If the sidewalk subgrade consists of material with a plasticity index of 25 or greater, a 12-inch-thick layer of material satisfying the requirements of select fill provided in the *STRUCTURAL FILL* section must be placed below the sidewalk. The material should be compacted to 95% or greater than the maximum dry unit weight and contain a moisture content between -1 and +3% optimum moisture content.

Proper drainage around grade-supported sidewalks and flatwork is also very important to reduce potential movements. Elevating the sidewalks where possible and providing rapid, positive drainage away from them will reduce moisture variations within the underlying soils and will therefore provide valuable benefit in reducing the full magnitude of potential movements from being realized.

4.0 CONSTRUCTION CONSIDERATIONS AND RECOMMENDATIONS

4.1 SITE PREPARATION

The proposed parking areas should be stripped and grubbed of any construction debris, trash, vegetation, organic laden materials, and other structures in conflict with the proposed construction a minimum 5 feet outside the structural and pavement limits. We expect topsoil depths of approximately three to six inches will need to be stripped and removed from the site. Depressions or low areas resulting from stripping and grubbing should be backfilled with approved soil and compacted in accordance with the recommendations presented in this report.

During and following stripping and excavation, the contractor must take care to protect the subgrade from disturbance by construction traffic. The use of trackhoes equipped with smooth-edged buckets in lieu of scrapers for excavation tends to minimize the potential of subgrade disturbance. Also, the contractor should plan the earthwork operations such that heavy construction traffic is not permitted on the exposed fine-grained subgrade. Placement of structural fill concurrently with excavation is appropriate for this purpose. Exposed soils should be periodically evaluated by a geotechnical engineer during earthwork to detect any loose, soft, or disturbed areas that will require over excavation and replacement with structural fill.

We recommend that all construction traffic be limited to movement on granular work pads or haul roads to avoid remolding and softening the exposed fine-grained subgrade soils, especially during wet weather. Generally, 12 to 24 inches of relatively clean, fragmental rock placed over a geotextile fabric is required to protect the subgrade depending on the intensity of the construction traffic and the previous treatment of the subgrade. The use of a geotextile fabric between the granular work pad materials and underlying, untreated, subgrade soils serves as a separation filter to limit the movement of fines into the crushed rock. The use of a geotextile fabric tends to reduce maintenance of the section during construction.

4.2 STRUCTURAL FILL

4.2.1 GENERAL

All fill below foundations or within pavement, and sidewalk areas should be placed as compacted structural fill. All structural fill materials should be compacted per table below. Coarse granular fill should be compacted until fill is relatively firm and unyielding. No brush, roots, construction debris, or other deleterious material should be placed within the structural fills. The earthwork contractor's compactive effort should be evaluated based on field observations, and lift thicknesses should be adjusted accordingly to meet compaction requirements. Additional information regarding specific types of fill is provided below:

TABLE 4.1: COMPACTION CRITERIA AND TESTING FREQUENCY

Material Type	Density Test Method	Minimum Compaction (%)	Moisture Content Range (ref. to optimum moisture content)		Testing Frequency (min. 3 per lift)
			Minimum	Maximum	
Engineered Fill (fine-grained, coarse-grained/ Base Rock)	ASTM D 1557	95	-3%	+3%	1 Test per 2,500 s.f.

4.2.2 *FINE-GRAINED FILL*

The soils observed in the upper approximately 10 feet of the site would be considered fine-grained soils. Unless an admixture such as lime or cement is used, the on-site, fine-grained soils should only be used to as structural fills during the dry season. The natural moisture content of the on-site soils will likely be in excess of the optimum moisture content throughout the wet season (October through May); hence, some drying will be required to meet the above requirements for proper compaction. The required drying can best be accomplished during dry weather by spreading and aerating the material in thin lifts. Fine-grained soils should be placed in lifts less than 6 inches thick and compacted with segmented-pad rollers.

4.2.3 *TREATED SOILS*

Admixtures such as lime or cement may be mixed with fine-grained soils to treat subgrades or facilitate the construction of structural fills. The amount of admixture required depends on the moisture, clay, and organic content of the soil to be treated and needs to be determined at the time of construction; however, typically between 5% to 10% lime or cement, based on the dry weight of the treated soil, has been successfully used on similar soils in the past. Lime treatment principally serves to hydrate excessive moisture while modestly improving soil strength properties; cement treatment both hydrates excessive moisture and substantially improves the strength properties of a fine-grained subgrade or structural fill.

Treatment is accomplished by spreading measured quantities of lime or dry cement and tilling the upper 12 to 18 inches of the exposed subgrade, or into the structural fill lifts using specialized equipment. The treated soils are then compacted with segmented-pad rollers and finished with graders and smooth, steel drum, vibratory rollers. Cement-treated soils are typically given about 3 to 5 days to cure to establish the majority of their strength gain before being trafficked by equipment or placing granular base course.

4.2.4 *GRANULAR FILL*

Imported granular fill materials should consist of sand, gravel, or fragmental rock with a maximum size on the order of 4 inches and with not more than about 5% passing the No. 200 sieve (washed analysis). Material satisfying these requirements can usually be placed during periods of wet weather. The first lift of granular fill placed over a fine-grained subgrade should be about 18 in. thick and subsequent lifts about 12 inches thick when using medium- to heavy-weight vibratory rollers. Granular structural fill should be limited to a maximum size of about 1 ½ inches when compacted with hand-operated equipment. We also recommend that lift thicknesses be limited to less than 6 inches when using hand-operated vibratory plate compactors.

4.2.5 *DRAIN ROCK*

Drain rock, "capillary break" material, or "free-draining" material should have less than 2 percent passing the No. 200 (75-µm) sieve (washed analysis). Examples of these materials include ¾-inch to ¼-inch or 1½-inch to ¾-inch, or 3-inch to 1-inch crushed rock.

4.3 OVER-EXCAVATION

Due to the presence of near-surface fine-grained material, we anticipate that exposed soils in the project area will become easily disturbed. Exposed silt soils will degrade quickly under construction traffic if shallow groundwater is encountered or rainy weather occurs during site clearing and preparation. Where exposed soils become disturbed, we recommend overexcavating the disturbed areas by a depth of approximately 18 inches, placing a geotextile fabric, or geogrid, over the exposed overexcavated subgrade, and restoring grade with two- to four-inch quarry spalls. This overexcavation and replacement method can provide a stable surface for areas exposed to construction traffic.

If disturbed soils are exposed at slab-on-grade or foundation subgrades, we recommend overexcavating the loose/soft soils and replacing them with new structural fill meeting the gradation requirements outlined below. We expect overexcavation depths of no more than 12 inches. Overexcavations should be extended laterally by one foot for each foot of overexcavation depth. The lateral extent and depth of the overexcavations should be determined in the field during grading.

4.4 PROOF ROLLING

Following site preparation and over-excavation, the newly exposed subgrades in site improvement areas intended for structures and pavements should be approved by the geotechnical engineer prior to fill placement. These exposed subgrades should be proof rolled with a loaded tandem axle dump truck or similar pieces of rubber-tired equipment in the presence of the geotechnical engineer's representative. The purpose of the proof rolling is to detect the existence of marginal or loose near-surface materials or unsuitable soils that may require undercutting. Areas which deflect, rut or pump excessively during proof rolling, and which cannot de densified in-place, should be undercut to suitable soils and backfilled and/or as directed by the geotechnical engineer. Proof rolling should not be performed on saturated, frozen or during wet weather conditions.

4.5 UTILITIES

Utility trenches may be backfilled with suitable onsite native soils or imported soil above the pipe zone. Trench backfill should be moisture conditioned to within 0 to 4 percent above the optimum moisture content, compacted in 6- to 8-inch lifts to a minimum of 90 percent of the maximum dry density as determined by the modified Proctor (ASTM D1557). In pavement areas, the top 12-inches of soil subgrade should reach a minimum of 95 percent of this Proctor. If rocks larger than 3-inches in maximum size are encountered, they should be removed from the backfill material prior to placement in the utility trenches. Pipe zone backfill requirements should be in conformance with the requirements of the local agencies having jurisdiction but should consist of clean granular sand material having a sand equivalent equal to or above 30. Jetting or flooding of utility backfill is not recommended. If smaller compaction equipment such as jumping jacks or plate compactors are used, thinner lifts will be required to achieve compaction. Where utilities cross building perimeters, concrete or concrete slurry should be used for backfilling around the utility to prevent moisture from migrating along the utility trench and entering the building envelope.

4.6 OBSTRUCTIONS

Subsurface conditions can be highly variable and make earthwork difficult due to the possible presence of geologic inclusions such as cobbles, boulders, glacial erratics, and/or organic debris. Moreover, on previously developed sites, buried infrastructure such as utilities or stormwater structures can be encountered during construction as the identification and location of such structures are not necessarily known prior to construction. Therefore, contractors should anticipate the possibility of encountering subsurface obstructions during the construction process and prepare appropriate mitigation measures.

4.7 WET WEATHER AND WET CONDITIONS CONSIDERATIONS

Wet weather and increased presence of moisture should be expected in the Pacific Northwest between the months of October and May, although the contractor should be prepared for wet conditions during any time of the year. The soils encountered at this site are expected to be sensitive to disturbances caused by construction traffic and changes in moisture content. During wet weather periods, increases in the moisture content of the soil can cause significant reduction in soil strength and support capabilities. In addition, soils which become wet may be slow to dry and thus significantly retard the progress of grading and compaction activities. Moreover, groundwater levels below the site could rise due to increased precipitation, resulting in heavier seepage into excavations. It will, therefore, be advantageous to perform earthwork and foundations construction activities during dry weather.

Should earthwork scheduling during inclement wet weather conditions be unavoidable, the following recommendations are provided:

- Surface grades in and surrounding the construction area should promote positive drainage to convey runoff of precipitation away from works areas and to prevent ponding of water.
- Work areas and/or slopes should be covered with durable plastic membranes when not being worked. The implementation of slopes, swales, sumps, dewatering, and additional measures should be utilized as necessary to mitigate the impact of free water on earthwork operations.
- Earthwork should be completed in manageable stages in order to minimize the site's exposure to wet conditions. The removal and replacement of, or remediation of unsuitable soils at the site in any given stage should be accomplished within the same day.
- The size of construction equipment may need to be limited in order to prevent disturbance of moisture sensitive or over-optimum soils. Excavation areas, excavation equipment, and construction traffic should be located relative to each other as to prevent disturbing exposed subgrades with construction traffic.
- Wet-weather fill material should consist of clean, well-graded sand and gravel with no more than 5 percent fines by dry weight passing the No. 200 mesh sieve, based on wet-sieving (ASTM D1140). Gravel contents should range from 20 to 50 percent retained on the No. 4 mesh sieve. Any fines should be non-plastic.
- Any exposed fill should be compacted and sealed with a smooth-drum vibratory roller on the day of its placement to seal out as much moisture as possible. Exposed foundation subgrades should be armored with a four-inch layer of crushed rock or lean-mix concrete during the same day they are exposed.
- In-situ soils or fill soils that become wet and unstable and/or too wet to suitably compact should be removed and replaced with clean, granular soil meeting the gradation requirement outlined above.
- The excavation and placement of structural fill should be observed on a full-time basis by a geotechnical engineer (or representative) experienced in wet weather/wet condition earthwork to verify that all work accomplished is in accordance with the project specifications and the recommendations outlined in this report.
- Grading and earthwork should not take place during periods of heavy, continuous rainfall.

We recommend that the above requirements for wet weather/wet conditions earthwork be incorporated into the contract specifications.

4.8 PLAN REVIEW AND CONSTRUCTION OBSERVATION

After final plans and specifications are complete, PSI should review the final design and specifications so that the earthwork and foundation recommendations are properly interpreted and implemented. It is considered imperative that the Geotechnical Engineer and/or their representative be present during earthwork operations and foundation installations to observe the field conditions with respect to the design documents and specifications. PSI will not be responsible for changes in the project design or project information it was not provided, or interpretations and field quality control observations made by others. PSI would be pleased to provide these services for this project.

5.0 GEOTECHNICAL RISK AND REPORT LIMITATIONS

The concept of risk is an important aspect of the geotechnical evaluation. The primary reason for this is that the analytical methods used to develop geotechnical recommendations do not comprise an exact science. The analytical tools which geotechnical engineers use are generally empirical and must be used in conjunction with engineering judgment and experience. Therefore, the solutions and recommendations presented in the geotechnical evaluation should not be considered risk-free and, more importantly, are not a guarantee that the interaction between the soils and the proposed structure will perform as planned. The engineering recommendations presented in the preceding sections constitute PSI's professional estimate of those measures that are necessary for the proposed structure to perform according to the proposed design based on the information generated and referenced during this evaluation, and PSI's experience in working with these conditions.

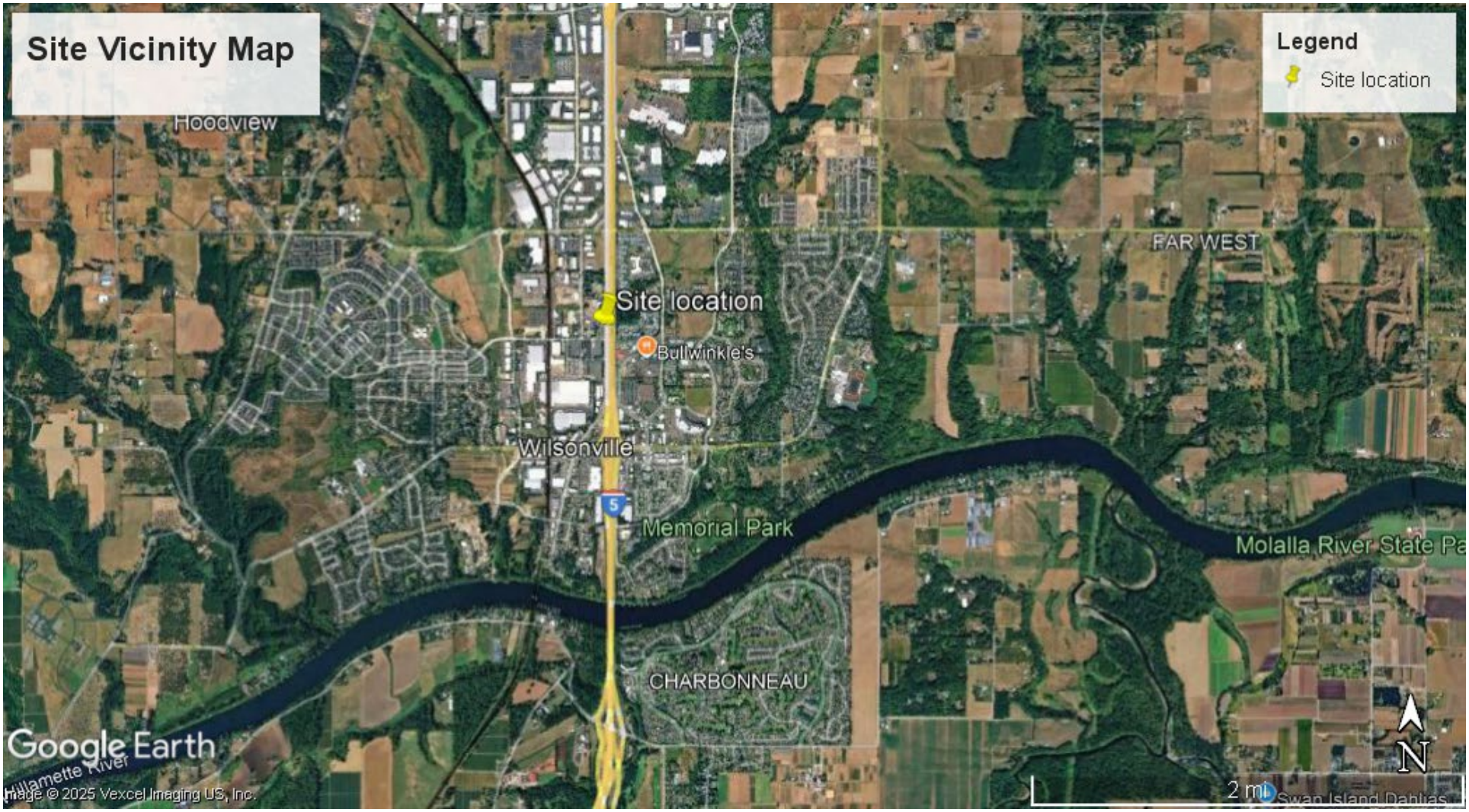
Services performed by PSI for this project have been conducted with that level of care and skill ordinarily exercised by members of the profession currently practicing in this area. No warranty, expressed or implied, is made.

The recommendations submitted are based on the available subsurface information obtained by PSI, and information provided by the client, client's representative and client's design consultants. If there are any revisions to the plans for this project or if deviations from the subsurface conditions noted in this report are encountered during construction, PSI should be notified immediately to determine if changes in the foundation and/or other recommendations are required. If PSI is not retained to perform these functions, PSI cannot be responsible for the impact of those conditions on the performance of the project.

The Geotechnical Engineer should be retained and provided the opportunity to review the final design plans and specifications to check that our engineering recommendations have been properly incorporated into the design documents. At that time, it may be necessary to submit supplementary recommendations.

This report has been prepared for the exclusive use of Client and their design consultants, for the aforementioned project parameters.

FIGURES



Professional Service Industries, Inc.
6032 N. Cutter Circle, Suite 480
Portland, OR 97217
Phone: (503) 289–1778

Site Vicinity Map
Figure 1
PSI Project No. 07041598

Ionna Proposed EV Charging Station

9045 SW Barber St
Wilsonville, Oregon

Professional Service Industries, Inc.
6032 N. Cutter Circle, Suite 480
Portland, OR 97217
Phone: (503) 289–1778

Exploration Location Plan
Figure 2
PSI Project No. 07041598

Ionna Proposed EV Charging Station

9045 SW Barber St
Wilsonville, Oregon

APPENDIX A

Field Exploration & Laboratory Testing Program

FIELD EXPLORATION PROGRAM

PSI explored subsurface conditions on November 10, 2025. The field exploration consisted of advancing one Geoprobe and two CPTu inside the parking envelope which were subcontracted to Oregon Geotechnical Explorations.

Approximate exploration locations are shown on Figure 2, Exploration Location Map. PSI notified the Oregon Utility Notification Center to indicate the approximate location of underground utilities in the vicinity of the proposed exploration locations prior to commencing field activities.

A representative from PSI's office observed the drilling and prepared a Geoprobe log of the conditions encountered. During field activities, the encountered subsurface conditions were observed, logged, and visually classified (in general accordance with ASTM D2488/D2487). Field notes were maintained to summarize soil types and descriptions, water levels, changes in subsurface conditions, and drilling conditions.

It should be noted that the subsurface conditions presented on the exploration logs are representative of the conditions at the specific locations drilled. Variations may occur and should be expected across the site. The soil morphology represents the approximate boundary between subsurface materials and the transitions may be gradual and indistinct.

Exploration Location Selection and Staking

The exploration plan was superimposed onto Google Earth™ Imagery and the latitude and longitude were recorded. The location of the explorations in the field were established by hand-held GPS using the coordinates from Google Earth™. The latitude, longitude and elevation are noted on each exploration log with the perceived accuracy unknown. If accurate locations and elevations are needed, PSI recommends the client/owner have exploration locations and elevations determined by survey methods.

Cone Penetration Test

The SCPTu is an in-situ testing method used to determine the geotechnical engineering properties of soils and delineating soil lithology. The test method consists of advancing an instrumented cone tip, mechanical or electric, through several rods and at a constant rate of 2 cm/sec. The resistance needed to penetrate the ground is measured continuously. The total force acting on the cone is called the cone resistance (qc). Measurements with an electric cone, equipped with a friction sleeve, provide the local sleeve friction (fs) which can be related to the undrained shear strength of fine-grained soils and the friction resistance of cohesion less soils. The dimensionless ratio of the friction sleeve to point bearing capacity provides an indicator of the type of soil penetrated. Measurements of pore water pressure and rates of dissipation are also made with a piezometer fitted between the cone and the sleeve. SCPTu probe testing does not allow for visual classification of the subsurface soils, but instead classifies the soil based on a correlation between tip resistance and side friction obtained in real-time during the testing. Cone penetration test logs and data are provided in this Appendix

Downhole Shear wave Velocity Measurements. Down hole shear wave velocity measurements were made while advancing each of the probes. This test consists of generating a shear wave by striking a hammer equipped with a trigger on a source beam located on the ground surface under the outrigger of the cone rig. The seismic cone consists of a piezocone unit with a receiver above it. The seismic cone penetrometer is pushed into the ground and penetration is stopped at 1-meter intervals. During the pause in penetration, a shear wave is generated at the ground surface and the time required for the shear wave to reach the seismometer in the cone penetrometer is recorded. The shear wave velocity measurements are used with elastic theory to estimate the mass density of the soil layers

Pore Pressure Dissipation Tests. Pore Pressure Dissipation Tests (PPDT's) conducted at various intervals measured hydrostatic water pressures and determined the approximate depth of the ground water table. A PPDT is conducted when the cone is halted at specific intervals determined by the field representative. The variation of the penetration pore pressure (u) with time is measured behind the tip of the cone and recorded by a computer system.

Pore pressure dissipation data can be interpreted to provide estimates of:

- Equilibrium piezometric pressure
- Phreatic Surface
- In situ horizontal coefficient of consolidation (ch)
- In situ horizontal coefficient of permeability (kh)

In order to correctly interpret the equilibrium piezometric pressure and/or the phreatic surface, the pore pressure must be monitored until such time as there is no variation in pore pressure with time. This time is commonly referred to as t_{100}, the point at which 100% of the excess pore pressure has dissipated.

The estimated Groundwater Depth at the site based on the pore pressure dissipation tests could not be determined as refusal was reached at a shallow depth.

Field Classification

Soil samples were initially classified visually in the field. Consistency, color, relative moisture, degree of plasticity, and other distinguishing characteristics of the soil samples were noted. The terminology used in the soil classifications and other modifiers are depicted in the General Notes and Soil Classification Chart.

BORING GP-1

DATE STARTED:	11/10/25	**DRILL COMPANY:**	
DATE COMPLETED:	11/10/25	**DRILLER:**	Terry Jacques
COMPLETION DEPTH	20.0 ft	**LOGGED BY:**	Abhimanyu Patel
BENCHMARK:	N/A	**DRILL RIG:**	Geoprobe 6622CPT
ELEVATION:	176 ft	**DRILLING METHOD:**	Direct Push
LATITUDE:	45.310387°	**SAMPLING METHOD:**	
LONGITUDE:	-122.77007°	**HAMMER TYPE:**	N/A
STATION:	N/A	**EFFICIENCY**	N/A
OFFSET:	N/A	**REVIEWED BY:**	DCB

Water

BORING LOCATION:

REMARKS:

Elevation (feet)	Depth, (feet)	Material Description	USCS Classification	Moisture, %	Additional Remarks
175	0	Brown SILT (Stiff to Very Stiff, moist) (lacustrine deposits)	ML	26	Fines=88.5%
170	5			35	
165	10	Brown silty GRAVEL with sand (Very Dense, moist)	GM	31	
160	15			17	Fines=27.2%
	20	Boring terminated at 20 ft bgl			

STANDARD PENETRATION TEST DATA
N in blows/ft ◎
Moisture PL LL
0 25 50
STRENGTH, tsf
Qu Qp
0 2.0 4.0

intertek psi

Professional Service Industries, Inc.
6032 N. Cutter Circle, Suite 480
Portland, OR 97219
Telephone: (503) 289-1778

PROJECT NO.: 07041598
PROJECT: Ionna Proposed EV Charging Station
LOCATION: 9045 SW Barber St
Wilsonville, OR

The stratification lines represent approximate boundaries. The transition may be gradual.

GENERAL NOTES

SAMPLE IDENTIFICATION

The Unified Soil Classification System (USCS), AASHTO 1988 and ASTM designations D2487 and D-2488 are used to identify the encountered materials unless otherwise noted. Coarse-grained soils are defined as having more than 50% of their dry weight retained on a #200 sieve (0.075mm); they are described as: boulders, cobbles, gravel or sand. Fine-grained soils have less than 50% of their dry weight retained on a #200 sieve; they are defined as silts or clay depending on their Atterberg Limit attributes. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size.

DRILLING AND SAMPLING SYMBOLS

SFA: Solid Flight Auger - typically 4" diameter flights, except where noted.
HSA: Hollow Stem Auger - typically 3¼" or 4¼ I.D. openings, except where noted.
M.R.: Mud Rotary - Uses a rotary head with Bentonite or Polymer Slurry
R.C.: Diamond Bit Core Sampler
H.A.: Hand Auger
P.A.: Power Auger - Handheld motorized auger

SS: Split-Spoon - 1 3/8" I.D., 2" O.D., except where noted.
ST: Shelby Tube - 3" O.D., except where noted.
RC: Rock Core
TC: Texas Cone
BS: Bulk Sample
PM: Pressuremeter
CPT-U: Cone Penetrometer Testing with Pore-Pressure Readings

SOIL PROPERTY SYMBOLS

N: Standard "N" penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2-inch O.D. Split-Spoon.
N_{60}: A "N" penetration value corrected to an equivalent 60% hammer energy transfer efficiency (ETR)
Q_u: Unconfined compressive strength, TSF
Q_p: Pocket penetrometer value, unconfined compressive strength, TSF
w%: Moisture/water content, %
LL: Liquid Limit, %
PL: Plastic Limit, %
PI: Plasticity Index = (LL-PL),%
DD: Dry unit weight, pcf
▼,▽,⧩ Apparent groundwater level at time noted

RELATIVE DENSITY OF COARSE-GRAINED SOILS

Relative Density	N - Blows/foot
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	50 - 80
Extremely Dense	80+

ANGULARITY OF COARSE-GRAINED PARTICLES

Description	Criteria
Angular:	Particles have sharp edges and relatively plane sides with unpolished surfaces
Subangular:	Particles are similar to angular description, but have rounded edges
Subrounded:	Particles have nearly plane sides, but have well-rounded corners and edges
Rounded:	Particles have smoothly curved sides and no edges

GRAIN-SIZE TERMINOLOGY

Component	Size Range
Boulders:	Over 300 mm (>12 in.)
Cobbles:	75 mm to 300 mm (3 in. to 12 in.)
Coarse-Grained Gravel:	19 mm to 75 mm (¾ in. to 3 in.)
Fine-Grained Gravel:	4.75 mm to 19 mm (No.4 to ¾ in.)
Coarse-Grained Sand:	2 mm to 4.75 mm (No.10 to No.4)
Medium-Grained Sand:	0.42 mm to 2 mm (No.40 to No.10)
Fine-Grained Sand:	0.075 mm to 0.42 mm (No. 200 to No.40)
Silt:	0.005 mm to 0.075 mm
Clay:	<0.005 mm

PARTICLE SHAPE

Description	Criteria
Flat:	Particles with width/thickness ratio > 3
Elongated:	Particles with length/width ratio > 3
Flat & Elongated:	Particles meet criteria for both flat and elongated

RELATIVE PROPORTIONS OF FINES

Descriptive Term	% Dry Weight
Trace:	< 5%
With:	5% to 12%
Modifier:	>12%

GENERAL NOTES

(Continued)

CONSISTENCY OF FINE-GRAINED SOILS

Q_U - TSF	N - Blows/foot	Consistency
0 - 0.25	0 - 2	Very Soft
0.25 - 0.50	2 - 4	Soft
0.50 - 1.00	4 - 8	Firm (Medium Stiff)
1.00 - 2.00	8 - 15	Stiff
2.00 - 4.00	15 - 30	Very Stiff
4.00 - 8.00	30 - 50	Hard
8.00+	50+	Very Hard

MOISTURE CONDITION DESCRIPTION

Description	Criteria
Dry:	Absence of moisture, dusty, dry to the touch
Moist:	Damp but no visible water
Wet:	Visible free water, usually soil is below water table

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term	% Dry Weight
Trace:	< 15%
With:	15% to 30%
Modifier:	>30%

STRUCTURE DESCRIPTION

Description	Criteria
Stratified:	Alternating layers of varying material or color with layers at least ¼-inch (6 mm) thick
Laminated:	Alternating layers of varying material or color with layers less than ¼-inch (6 mm) thick
Fissured:	Breaks along definite planes of fracture with little resistance to fracturing
Slickensided:	Fracture planes appear polished or glossy, sometimes striated
Blocky:	Cohesive soil that can be broken down into small angular lumps which resist further breakdown
Lensed:	Inclusion of small pockets of different soils
Layer:	Inclusion greater than 3 inches thick (75 mm)
Seam:	Inclusion 1/8-inch to 3 inches (3 to 75 mm) thick extending through the sample
Parting:	Inclusion less than 1/8-inch (3 mm) thick

SCALE OF RELATIVE ROCK HARDNESS

Q_U - TSF	Consistency
2.5 - 10	Extremely Soft
10 - 50	Very Soft
50 - 250	Soft
250 - 525	Medium Hard
525 - 1,050	Moderately Hard
1,050 - 2,600	Hard
>2,600	Very Hard

ROCK BEDDING THICKNESSES

Description	Criteria
Very Thick Bedded	Greater than 3-foot (>1.0 m)
Thick Bedded	1-foot to 3-foot (0.3 m to 1.0 m)
Medium Bedded	4-inch to 1-foot (0.1 m to 0.3 m)
Thin Bedded	1¼-inch to 4-inch (30 mm to 100 mm)
Very Thin Bedded	½-inch to 1¼-inch (10 mm to 30 mm)
Thickly Laminated	1/8-inch to ½-inch (3 mm to 10 mm)
Thinly Laminated	1/8-inch or less "paper thin" (<3 mm)

ROCK VOIDS

Voids	Void Diameter
Pit	<6 mm (<0.25 in)
Vug	6 mm to 50 mm (0.25 in to 2 in)
Cavity	50 mm to 600 mm (2 in to 24 in)
Cave	>600 mm (>24 in)

GRAIN-SIZED TERMINOLOGY

(Typically Sedimentary Rock)

Component	Size Range
Very Coarse Grained	>4.76 mm
Coarse Grained	2.0 mm - 4.76 mm
Medium Grained	0.42 mm - 2.0 mm
Fine Grained	0.075 mm - 0.42 mm
Very Fine Grained	<0.075 mm

ROCK QUALITY DESCRIPTION

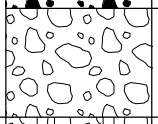
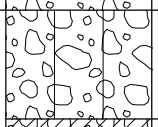
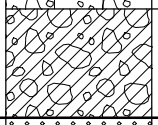
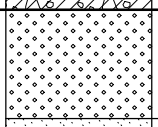
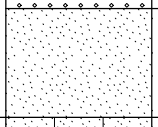
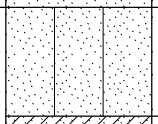
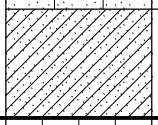
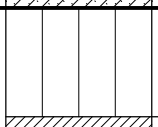
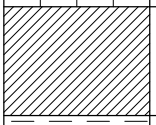
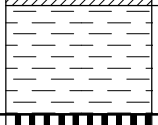
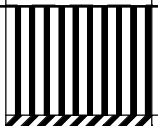
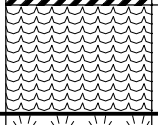
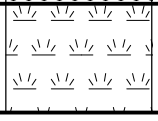
Rock Mass Description	RQD Value
Excellent	90 -100
Good	75 - 90
Fair	50 - 75
Poor	25 -50
Very Poor	Less than 25

DEGREE OF WEATHERING

Slightly Weathered:	Rock generally fresh, joints stained and discoloration extends into rock up to 25 mm (1 in), open joints may contain clay, core rings under hammer impact.
Weathered:	Rock mass is decomposed 50% or less, significant portions of the rock show discoloration and weathering effects, cores cannot be broken by hand or scraped by knife.
Highly Weathered:	Rock mass is more than 50% decomposed, complete discoloration of rock fabric, core may be extremely broken and gives clunk sound when struck by hammer, may be shaved with a knife.

SOIL CLASSIFICATION CHART

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

LABORATORY TESTING PROGRAM AND PROCEDURES

Soil samples obtained during field explorations were examined in our laboratory. The physical characteristics of the samples were noted, and the field classifications were modified, where necessary. Representative samples were selected during the course of the examination for further testing.

- **Moisture Content**

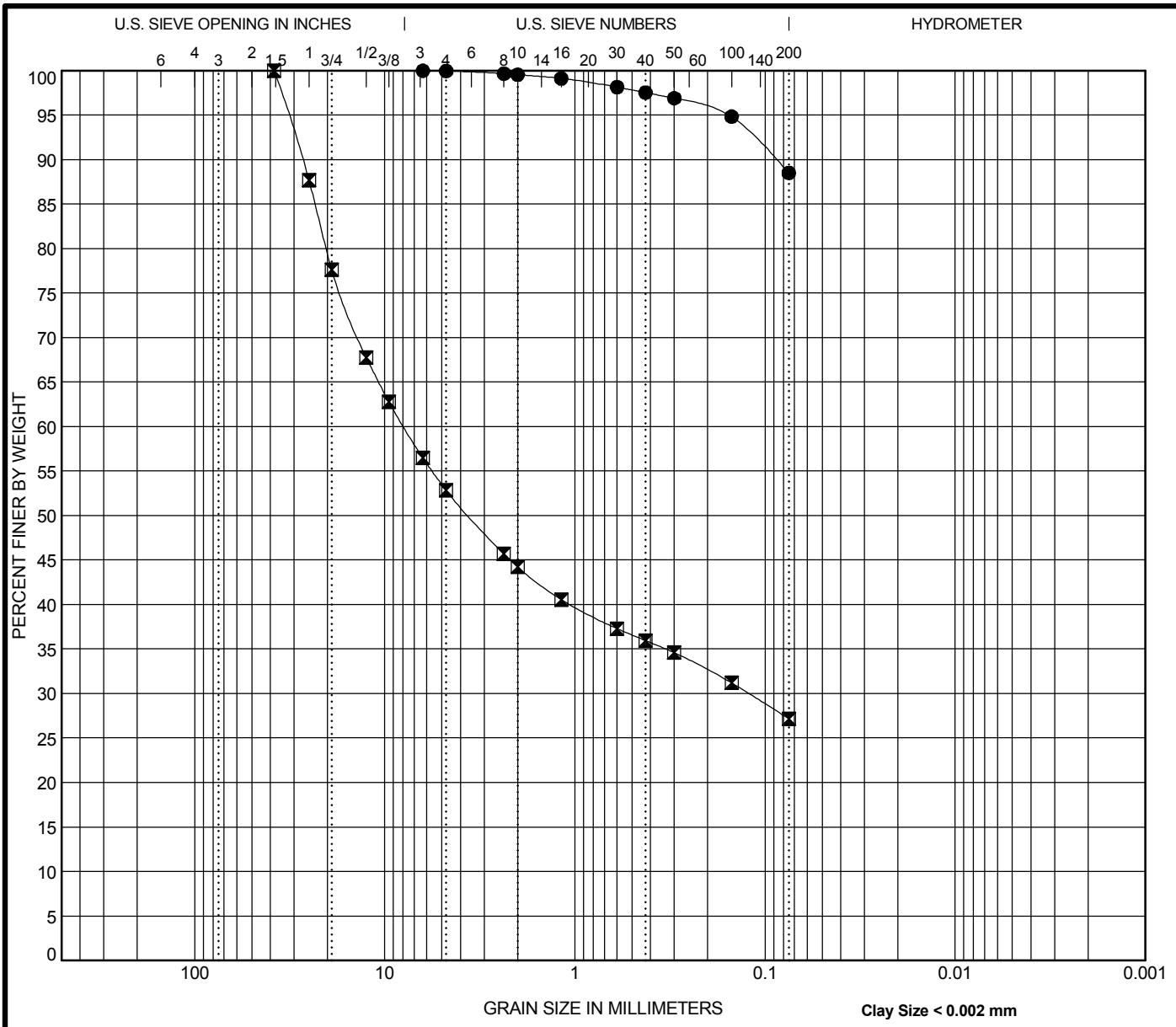
Natural moisture content determinations were made on selected soil samples in general accordance with ASTM D2216. The natural moisture content is defined as the ratio of the weight of water to the dry weight of soil, expressed as a percentage. Results are shown on the exploration logs.

- **Visual-Manual Classification**

The soil samples were classified in general accordance with guidelines presented in ASTM D2487. Certain terminology incorporating current local engineering practice, as provided in the Soil Classification Chart, is included with, or in lieu of, ASTM terminology. The term which best described the major portion of the sample was used in determining the soil type (i.e., gravel, sand, silt or clay). Results are shown on the exploration logs.

- **Sieve Analysis**

The determination of the amount of material finer than the U.S. Standard No. 200 (75-µm) sieve was made on selected soil sample in general accordance with ASTM D1140. In general, the sample was dried in an oven and then washed with water over the No. 200 sieve. The mass retained on the No. 200 sieve was dried in an oven, and the dry weight recorded. Results from this test procedure assist in determining the fraction, by weight, of coarse-grained and fine-grained soils in the sample. Results are shown on the exploration logs.
The determination of the gradation curve of the coarse-grained material was made on selected soil samples in general accordance with ASTM D6913. In general, the oven dried mass retained on the No. 200 sieve is passed over progressively smaller sieve openings, by agitating the sieves by hand or by a mechanical apparatus. The mass retained on each sieve is recorded as a fraction of the total sample, including the percent passing the No. 200 sieve. Results are shown on the Grain Size Analyses below.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**GP-1**	**0.0**						
⊠	**GP-1**	**15.0**						

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**GP-1**	**0.0**	**6.3**				**0.0**	**11.5**	**88.5**	
⊠	**GP-1**	**15.0**	**38.1**	**7.927**	**0.122**		**47.2**	**25.7**	**27.2**	

intertek psi
Professional Service Industries, Inc.
6032 N. Cutter Circle, Suite 480
Portland, OR 97219
Telephone: (503) 289-1778
Fax:

GRAIN SIZE DISTRIBUTION

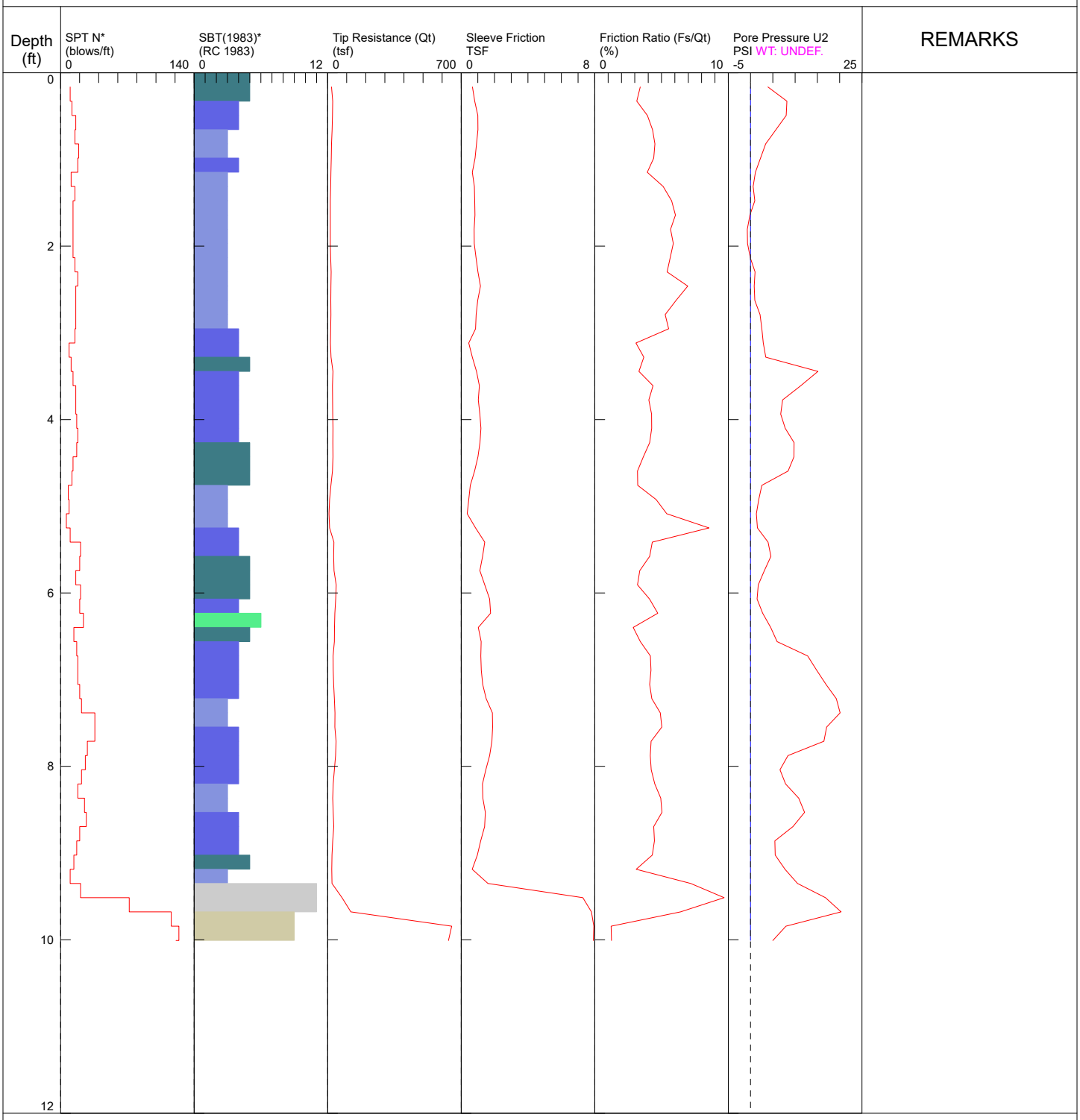
Project: Ionna Proposed EV Charging Station
PSI Job No.: 07041598
Location: 9045 SW Barber St
Wilsonville, OR

APPENDIX B

CPT Exploration results

PSI / CPT-1 / 9025 SW Barber St Wilsonville

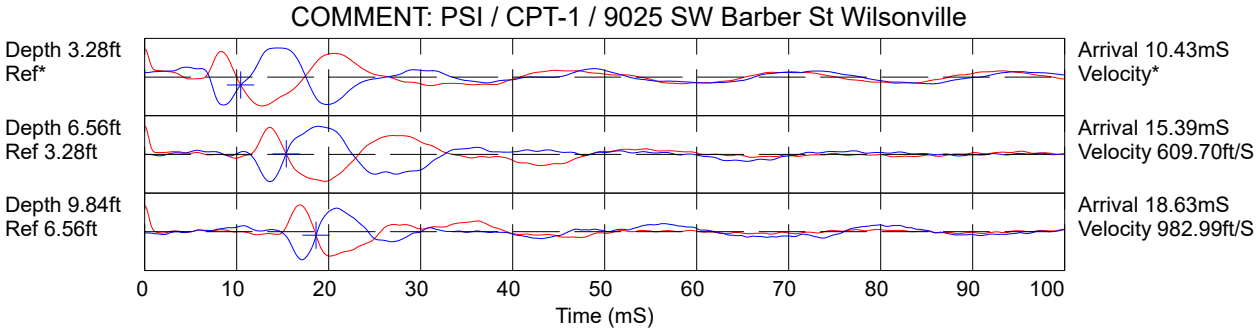
OPERATOR: OGE DMM
TEST DATE: 11/10/2025 9:15:50 AM
CONE ID: DDG1661
TOTAL DEPTH: 10.007 ft
HOLE NUMBER: CPT-1



REMARKS

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

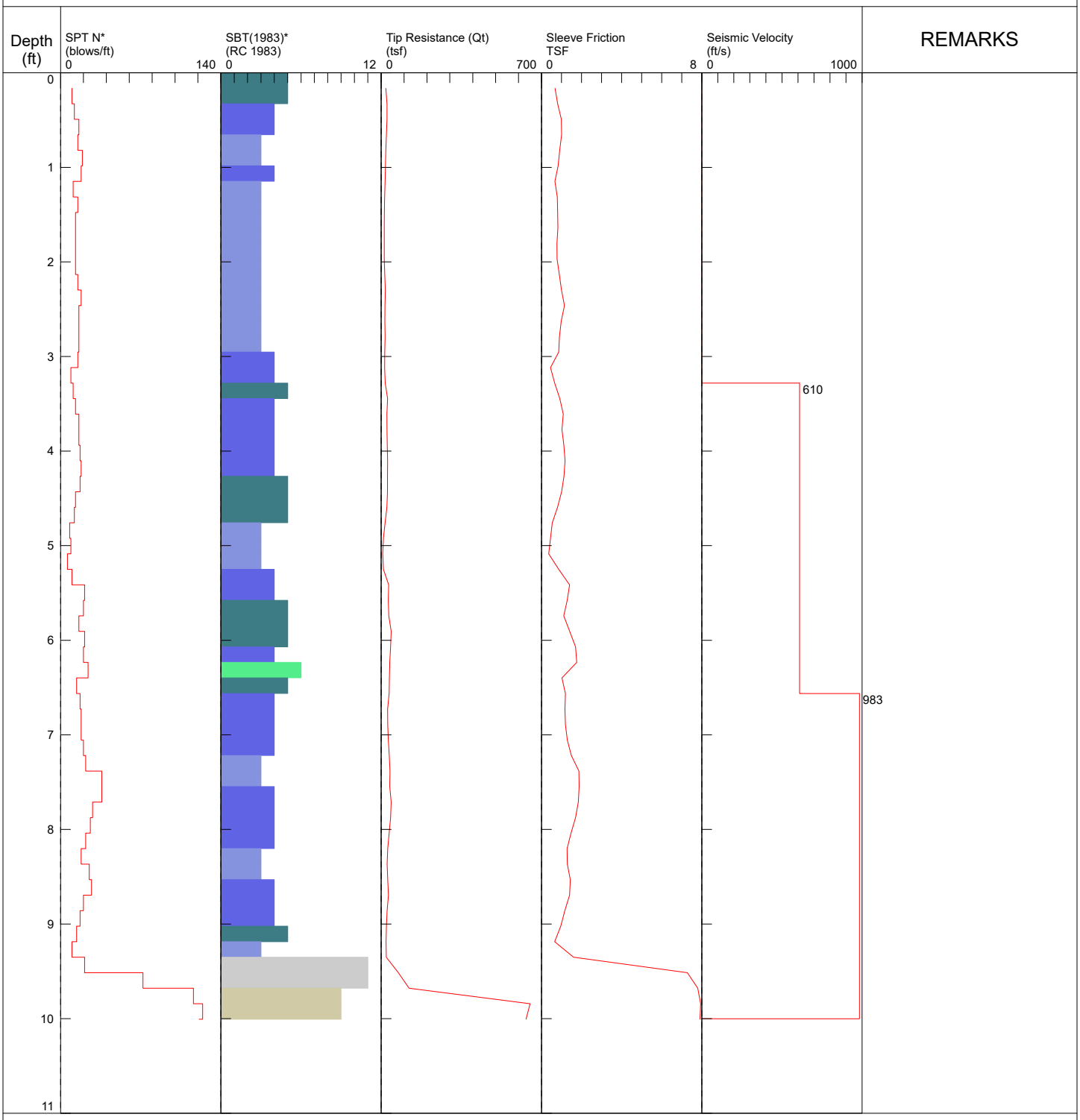


Hammer to Rod String Distance (ft): 1.97
* = Not Determined

COMMENT:

PSI / CPT-1 / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 9:15:50 AM
CONE ID: DDG1661
TOTAL DEPTH: 10.007 ft
HOLE NUMBER: CPT-1

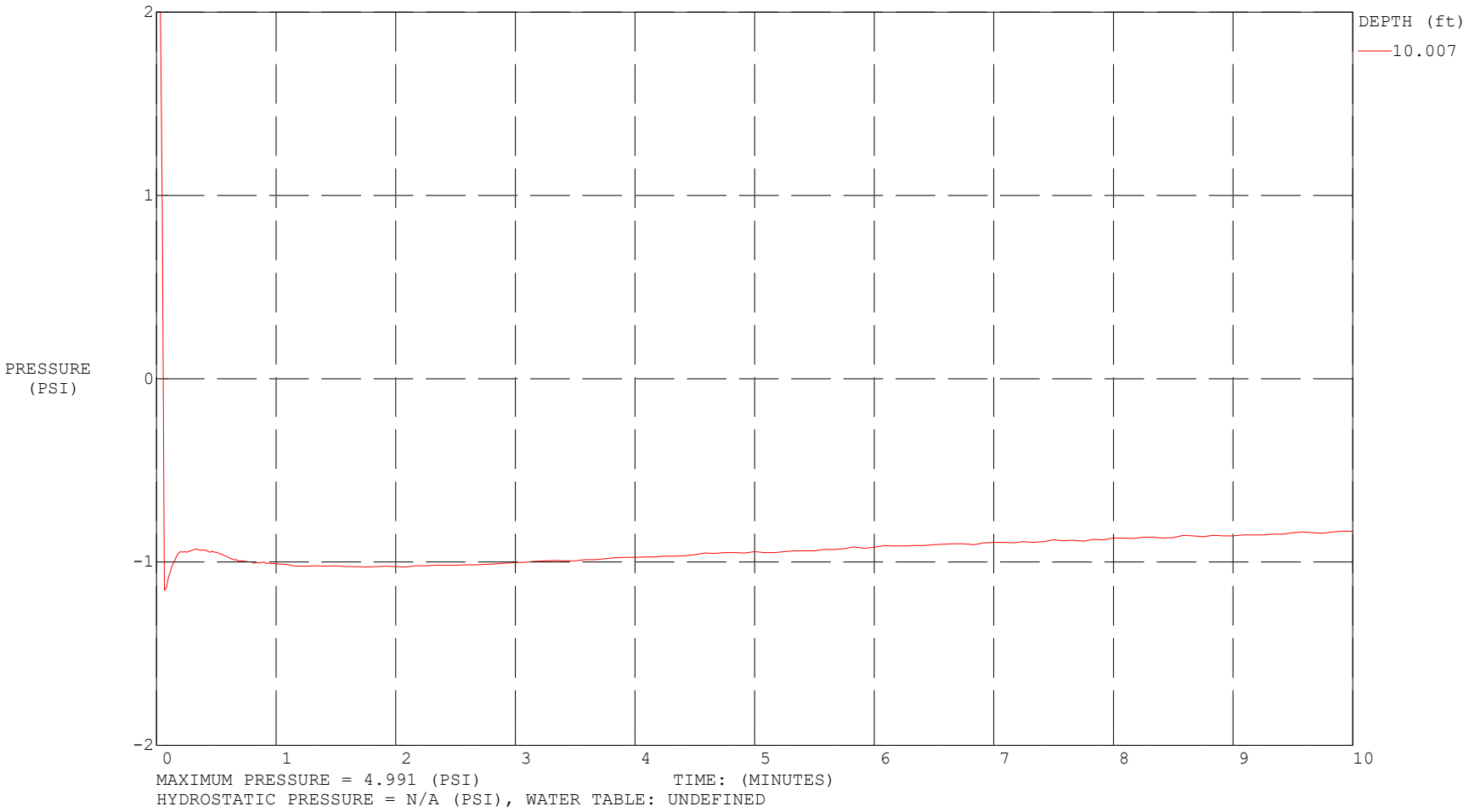


1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

COMMENT: PSI / CPT-1 / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
CONE ID: DDG1661
TEST DATE: 11/10/2025 9:15:50 AM



PSI / CPT-1 / 9025 SW Barber St Wilsonville

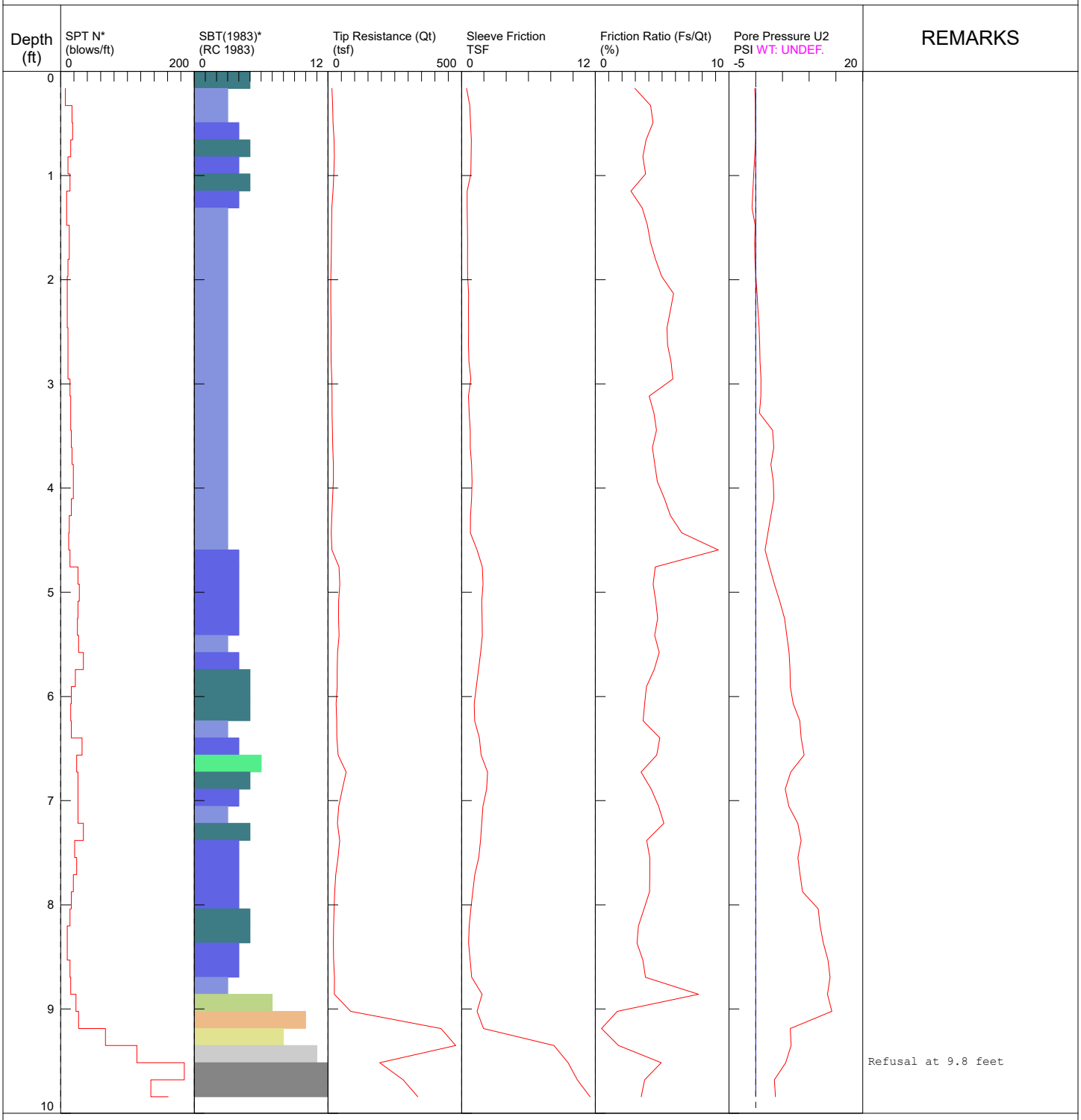
OPERATOR: OGE DMM
TEST DATE: 11/10/2025 9:15:50 AM
CONE ID: DDG1661
TOTAL DEPTH: 10.007 ft
HOLE NUMBER: CPT-1

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
0.164	19.87	0.6754	3.400	3.899	10	5	clayey silt to silty clay
0.328	25.83	0.8107	3.140	8.150	12	5	clayey silt to silty clay
0.492	25.18	0.9921	3.941	8.009	16	4	silty clay to clay
0.656	23.19	1.0016	4.319	5.683	15	4	silty clay to clay
0.820	20.22	0.9092	4.497	3.384	19	3	clay
0.984	18.82	0.8290	4.407	2.247	18	3	clay
1.148	17.06	0.6699	3.929	1.078	11	4	silty clay to clay
1.312	15.39	0.7876	5.117	0.568	15	3	clay
1.476	14.07	0.8098	5.756	0.932	13	3	clay
1.640	13.57	0.8191	6.036	-0.158	13	3	clay
1.804	13.58	0.7705	5.675	-0.757	13	3	clay
1.969	13.31	0.7814	5.872	-0.692	13	3	clay
2.133	15.77	0.8903	5.648	-0.079	15	3	clay
2.297	18.44	0.9981	5.414	0.982	18	3	clay
2.461	16.51	1.1485	6.957	0.814	16	3	clay
2.625	16.25	0.9885	6.085	0.948	16	3	clay
2.789	17.00	0.8960	5.273	2.127	16	3	clay
2.953	15.54	0.8594	5.530	2.539	15	3	clay
3.117	14.74	0.4540	3.081	2.831	9	4	silty clay to clay
3.281	17.95	0.6590	3.672	3.408	11	4	silty clay to clay
3.445	27.67	0.9140	3.304	15.122	13	5	clayey silt to silty clay
3.609	24.93	1.0865	4.359	11.256	16	4	silty clay to clay
3.773	25.34	1.0234	4.040	7.175	16	4	silty clay to clay
3.937	26.28	1.1166	4.250	6.754	17	4	silty clay to clay
4.101	27.67	1.1777	4.258	7.777	18	4	silty clay to clay
4.265	27.29	1.1215	4.110	9.774	17	4	silty clay to clay
4.429	27.52	1.0005	3.636	9.719	13	5	clayey silt to silty clay
4.593	24.95	0.7970	3.195	8.418	12	5	clayey silt to silty clay
4.757	16.79	0.5402	3.218	2.522	8	5	clayey silt to silty clay
4.921	9.89	0.4534	4.586	1.811	9	3	clay
5.085	6.63	0.3567	5.382	1.298	6	3	clay
5.249	10.02	0.8570	8.551	1.516	10	3	clay
5.413	32.67	1.4046	4.301	3.911	21	4	silty clay to clay
5.577	31.07	1.2780	4.114	4.562	20	4	silty clay to clay
5.741	33.10	1.1129	3.363	3.090	16	5	clayey silt to silty clay
5.906	44.07	1.4079	3.196	1.732	21	5	clayey silt to silty clay
6.070	41.46	1.6965	4.093	1.447	20	5	clayey silt to silty clay
6.234	37.33	1.7599	4.716	2.704	24	4	silty clay to clay
6.398	35.53	1.0214	2.876	4.507	14	6	sandy silt to clayey silt
6.562	34.93	1.1914	3.412	5.944	17	5	clayey silt to silty clay
6.726	28.14	1.1714	4.164	12.794	18	4	silty clay to clay
6.890	28.49	1.1981	4.206	14.844	18	4	silty clay to clay
7.054	31.34	1.2890	4.114	16.940	20	4	silty clay to clay
7.218	35.04	1.4936	4.264	19.234	22	4	silty clay to clay
7.382	38.00	1.8647	4.908	20.111	36	3	clay
7.546	37.46	1.8793	5.018	17.064	36	3	clay
7.710	43.56	1.8342	4.212	16.470	28	4	silty clay to clay
7.874	40.96	1.7009	4.153	8.380	26	4	silty clay to clay
8.038	34.84	1.4717	4.225	6.586	22	4	silty clay to clay
8.202	28.44	1.2768	4.490	7.870	18	4	silty clay to clay

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
8.366	26.16	1.2911	4.936	10.789	25	3	clay
8.530	28.65	1.4405	5.029	12.107	27	3	clay
8.694	31.71	1.4005	4.417	9.518	20	4	silty clay to clay
8.858	26.03	1.1627	4.468	5.429	17	4	silty clay to clay
9.022	22.37	0.9630	4.305	5.523	14	4	silty clay to clay
9.186	21.24	0.6577	3.098	7.738	10	5	clayey silt to silty clay
9.350	22.29	1.6000	7.179	10.536	21	3	clay
9.514	75.26	7.2827	9.679	16.794	72	11	very stiff fine grained (*)
9.678	121.56	7.7966	6.415	20.317	116	11	very stiff fine grained (*)
9.843	650.02	7.9400	1.222	7.944	124	9	sand
10.007	632.89	7.9100	1.250	4.996	121	9	sand

PSI / CPT-1a / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 9:46:21 AM
CONE ID: DDG1661
TOTAL DEPTH: 9.843 ft
HOLE NUMBER: CPT-1a



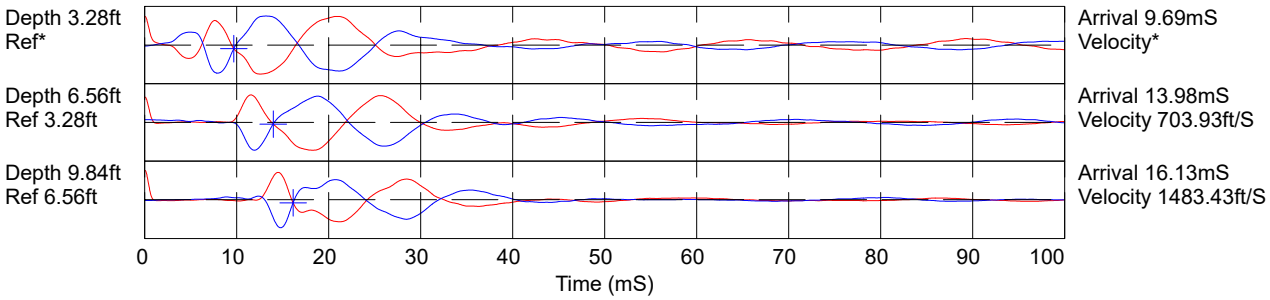
REMARKS

Refusal at 9.8 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

COMMENT: PSI / CPT-1a / 9025 SW Barber St Wilsonville

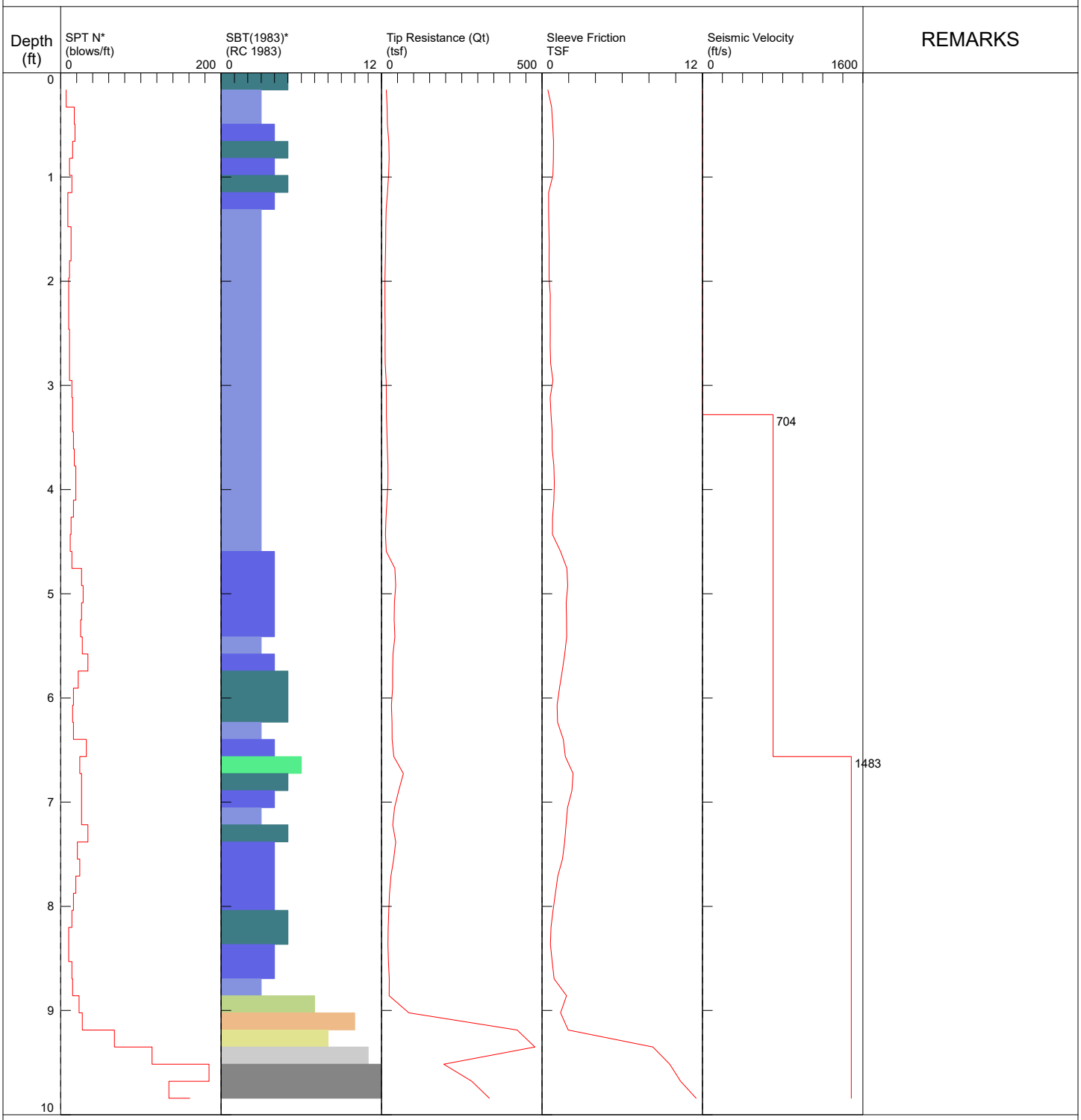


Hammer to Rod String Distance (ft): 1.97
* = Not Determined

COMMENT:

PSI / CPT-1a / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 9:46:21 AM
CONE ID: DDG1661
TOTAL DEPTH: 9.843 ft
HOLE NUMBER: CPT-1a



1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

PSI / CPT-1a / 9025 SW Barber St Wilsonville

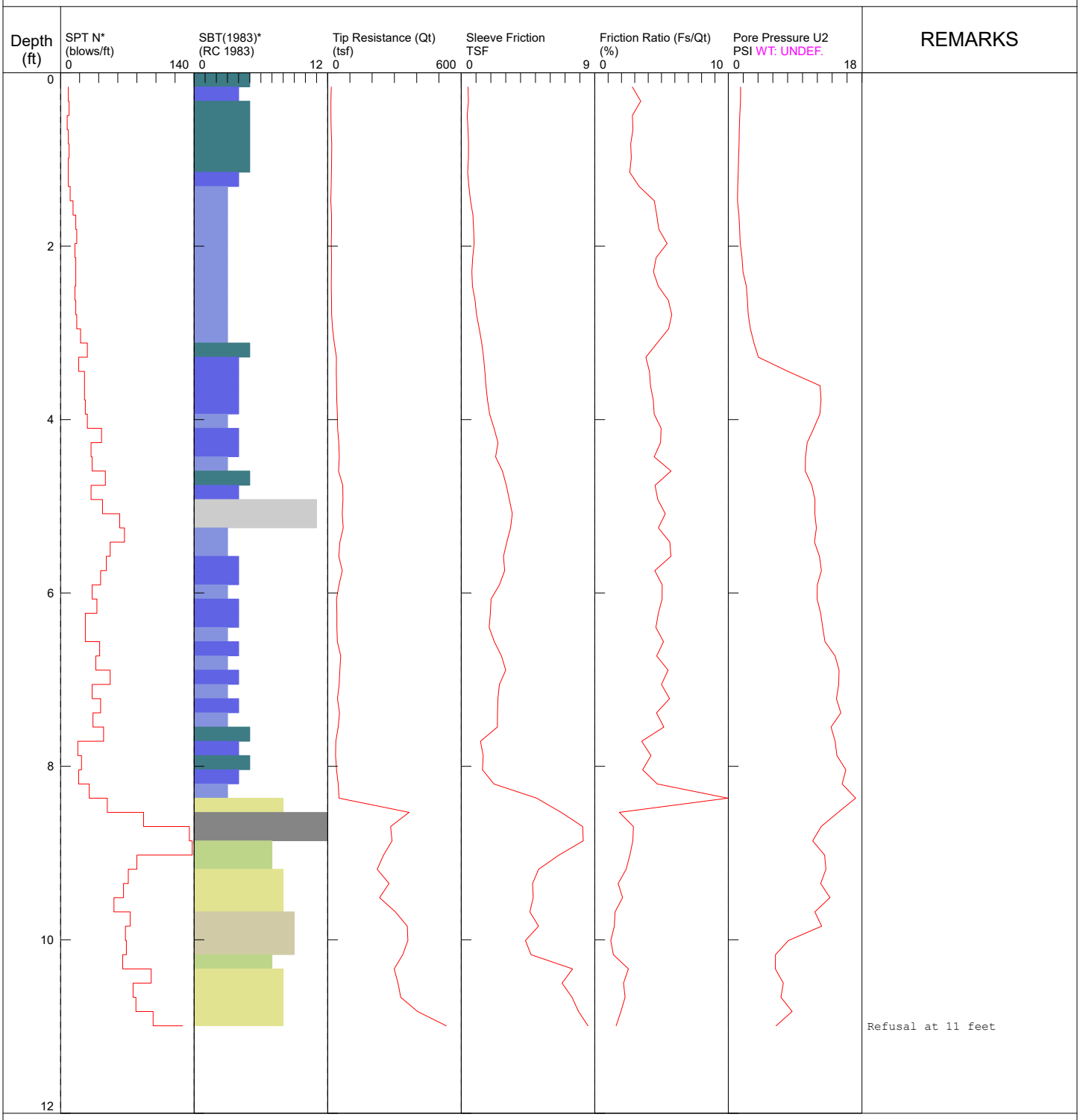
OPERATOR: OGE DMM
TEST DATE: 11/10/2025 9:46:21 AM
CONE ID: DDG1661
TOTAL DEPTH: 9.843 ft
HOLE NUMBER: CPT-1a

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
0.164	14.75	0.4375	2.967	-0.177	7	5	clayey silt to silty clay
0.328	17.40	0.7193	4.135	-0.060	17	3	clay
0.492	18.45	0.7956	4.314	-0.072	18	3	clay
0.656	22.76	0.8642	3.797	-0.034	15	4	silty clay to clay
0.820	23.92	0.8488	3.550	-0.211	11	5	clayey silt to silty clay
0.984	21.80	0.8197	3.760	-0.388	14	4	silty clay to clay
1.148	18.56	0.4927	2.656	-0.532	9	5	clayey silt to silty clay
1.312	14.13	0.4951	3.505	-0.692	9	4	silty clay to clay
1.476	13.29	0.5169	3.891	-0.129	13	3	clay
1.640	13.09	0.5395	4.123	-0.225	13	3	clay
1.804	11.77	0.5290	4.497	-0.151	11	3	clay
1.969	10.71	0.5322	4.969	0.031	10	3	clay
2.133	10.57	0.6187	5.852	0.249	10	3	clay
2.297	10.91	0.6116	5.608	0.424	10	3	clay
2.461	11.47	0.6148	5.362	0.613	11	3	clay
2.625	11.23	0.6067	5.404	0.740	11	3	clay
2.789	11.49	0.6505	5.664	0.814	11	3	clay
2.953	14.18	0.8214	5.795	0.968	14	3	clay
3.117	15.17	0.6113	4.030	0.953	15	3	clay
3.281	15.35	0.6730	4.385	0.704	15	3	clay
3.445	16.80	0.7677	4.569	3.149	16	3	clay
3.609	18.01	0.7677	4.263	3.351	17	3	clay
3.773	20.02	0.8889	4.442	2.845	19	3	clay
3.937	20.00	0.9261	4.631	3.291	19	3	clay
4.101	17.13	0.8850	5.168	3.396	16	3	clay
4.265	14.09	0.7911	5.616	2.838	13	3	clay
4.429	12.11	0.7822	6.462	2.278	12	3	clay
4.593	15.03	1.3826	9.202	1.734	14	3	clay
4.757	41.44	1.8587	4.486	2.591	26	4	silty clay to clay
4.921	44.43	1.9180	4.318	3.470	28	4	silty clay to clay
5.085	40.01	1.8080	4.520	4.486	26	4	silty clay to clay
5.249	39.32	1.8336	4.664	5.382	25	4	silty clay to clay
5.413	41.62	1.8477	4.441	5.789	27	4	silty clay to clay
5.577	35.64	1.7027	4.779	6.220	34	3	clay
5.741	34.31	1.5082	4.397	6.414	22	4	silty clay to clay
5.906	34.35	1.3126	3.822	6.450	16	5	clayey silt to silty clay
6.070	30.65	1.1302	3.689	7.010	15	5	clayey silt to silty clay
6.234	32.71	1.1675	3.571	8.232	16	5	clayey silt to silty clay
6.398	33.07	1.5948	4.824	8.483	32	3	clay
6.562	38.09	1.7500	4.596	9.039	24	4	silty clay to clay
6.726	67.97	2.3229	3.419	6.541	26	6	sandy silt to clayey silt
6.890	53.65	2.2386	4.174	5.508	26	5	clayey silt to silty clay
7.054	40.24	1.9064	4.739	6.186	26	4	silty clay to clay
7.218	35.19	1.8029	5.125	7.858	34	3	clay
7.382	44.08	1.6926	3.840	8.469	21	5	clayey silt to silty clay
7.546	37.76	1.5367	4.071	7.872	24	4	silty clay to clay
7.710	29.06	1.1833	4.072	8.284	19	4	silty clay to clay
7.874	24.80	1.0042	4.050	8.761	16	4	silty clay to clay
8.038	22.61	0.8228	3.641	11.671	14	4	silty clay to clay
8.202	20.87	0.6725	3.223	12.028	10	5	clayey silt to silty clay

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
8.366	20.04	0.6234	3.112	12.646	10	5	clayey silt to silty clay
8.530	21.40	0.7605	3.554	13.503	14	4	silty clay to clay
8.694	24.15	0.9052	3.750	13.896	15	4	silty clay to clay
8.858	23.75	1.8345	7.725	13.431	23	3	clay
9.022	84.84	1.3875	1.636	14.224	27	7	silty sand to sandy silt
9.186	422.62	1.9579	0.463	6.454	67	10	gravelly sand to sand
9.350	477.62	8.2918	1.737	6.598	114	8	sand to silty sand
9.514	193.70	9.5499	4.931	5.599	185	11	very stiff fine grained (*)
9.678	281.20	10.3700	3.689	3.468	135	12	sand to clayey sand (*)
9.843	335.93	11.5300	3.433	3.672	161	12	sand to clayey sand (*)

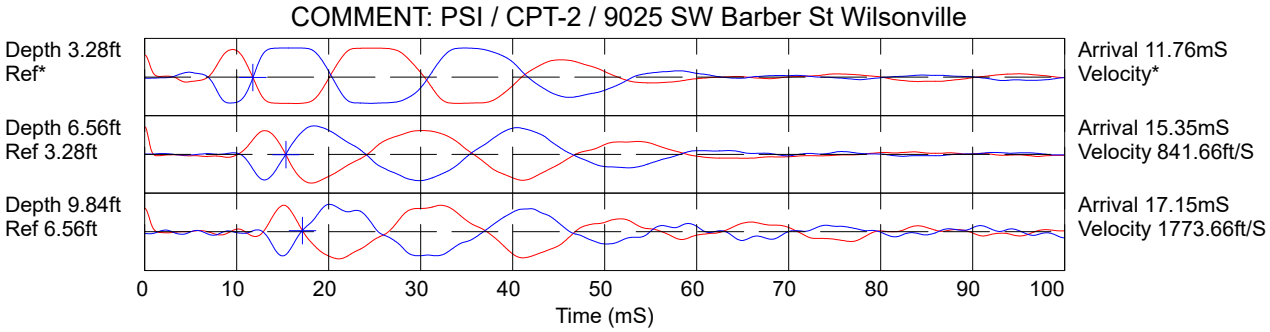
PSI / CPT-2 / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 10:12:47 AM
CONE ID: DDG1661
TOTAL DEPTH: 10.991 ft
HOLE NUMBER: CPT-2



1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

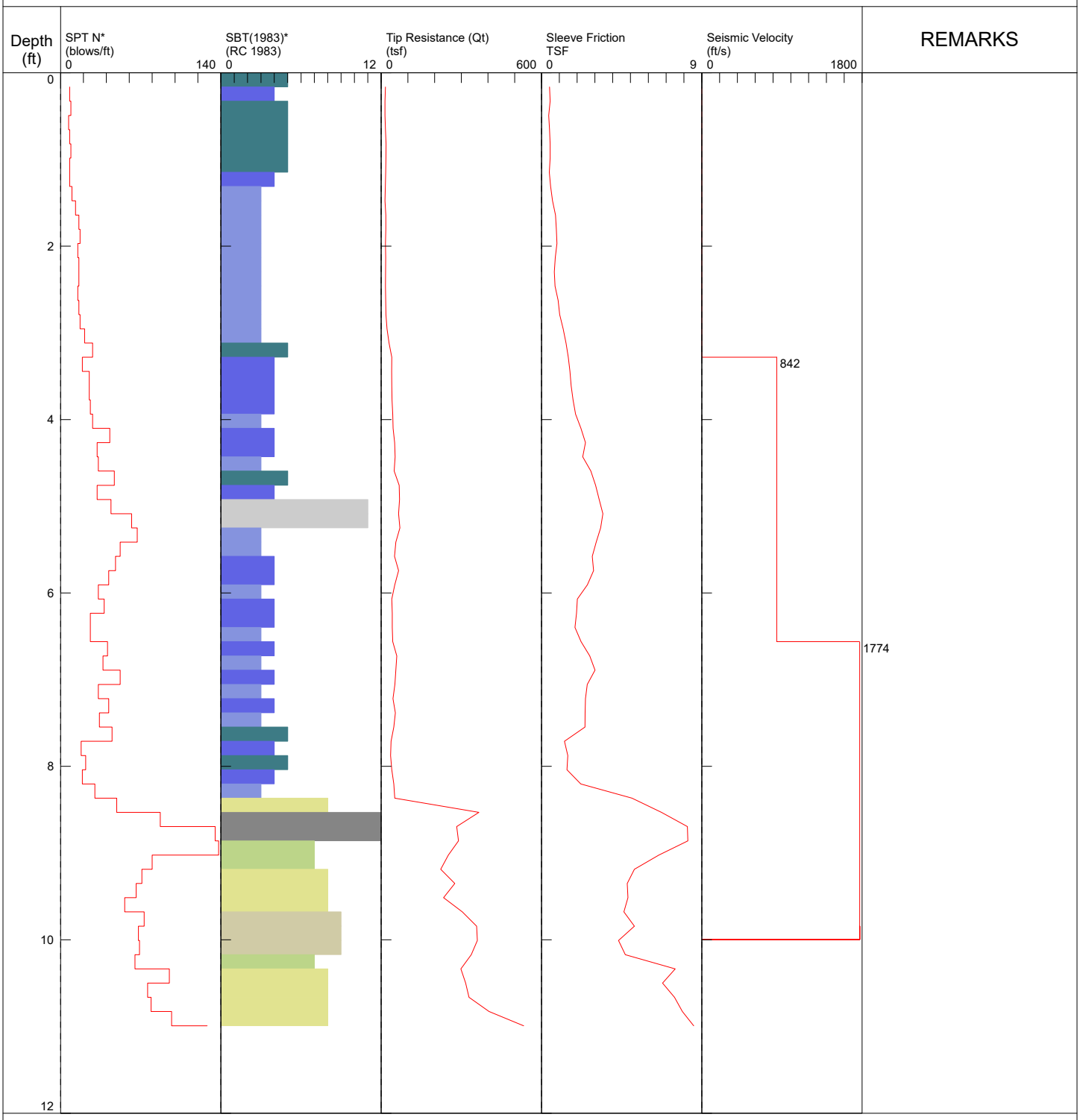


Hammer to Rod String Distance (ft): 1.97
* = Not Determined

COMMENT:

PSI / CPT-2 / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 10:12:47 AM
CONE ID: DDG1661
TOTAL DEPTH: 10.991 ft
HOLE NUMBER: CPT-2

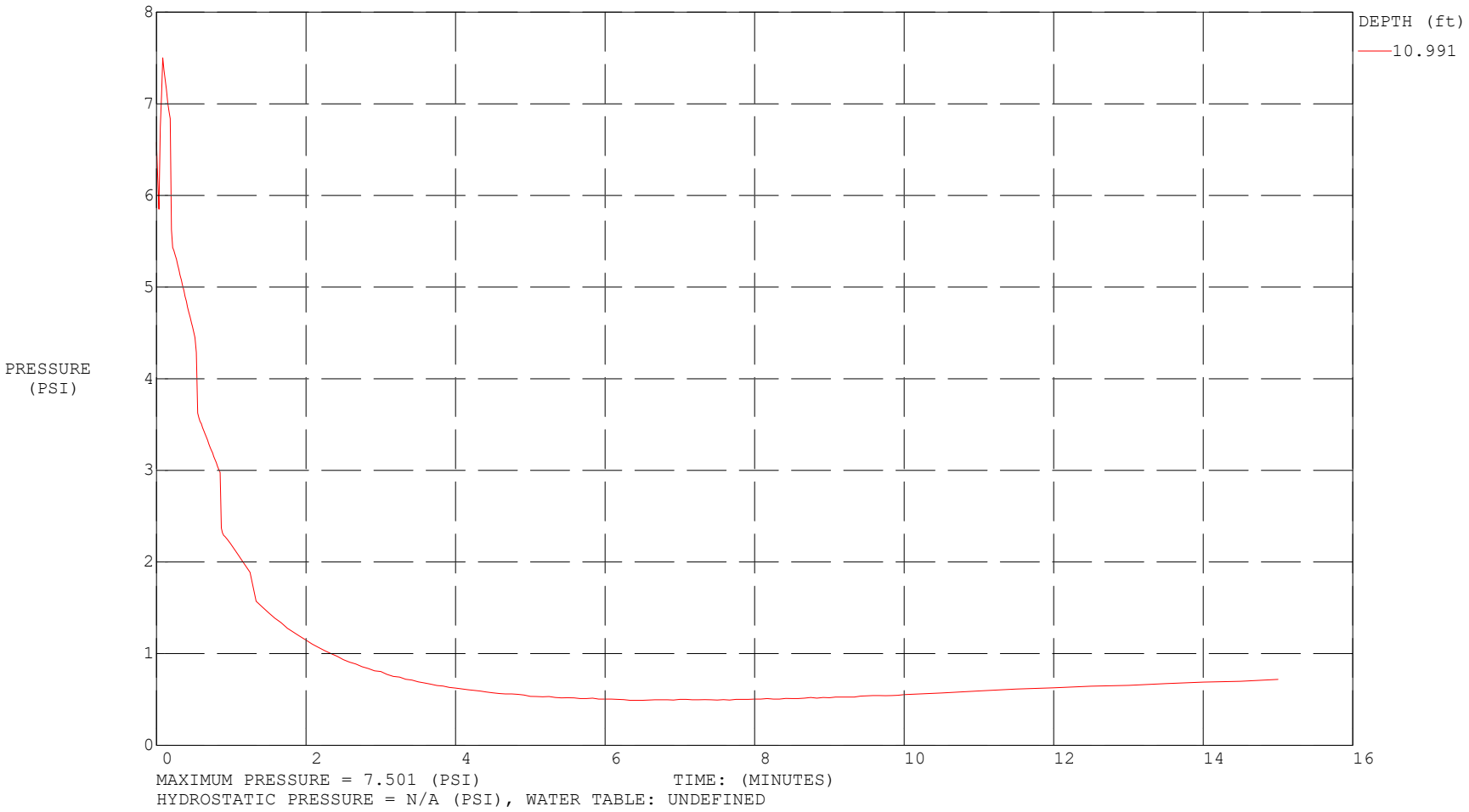


1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

COMMENT: PSI / CPT-2 / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
CONE ID: DDG1661
TEST DATE: 11/10/2025 10:12:47 AM



PSI / CPT-2 / 9025 SW Barber St Wilsonville

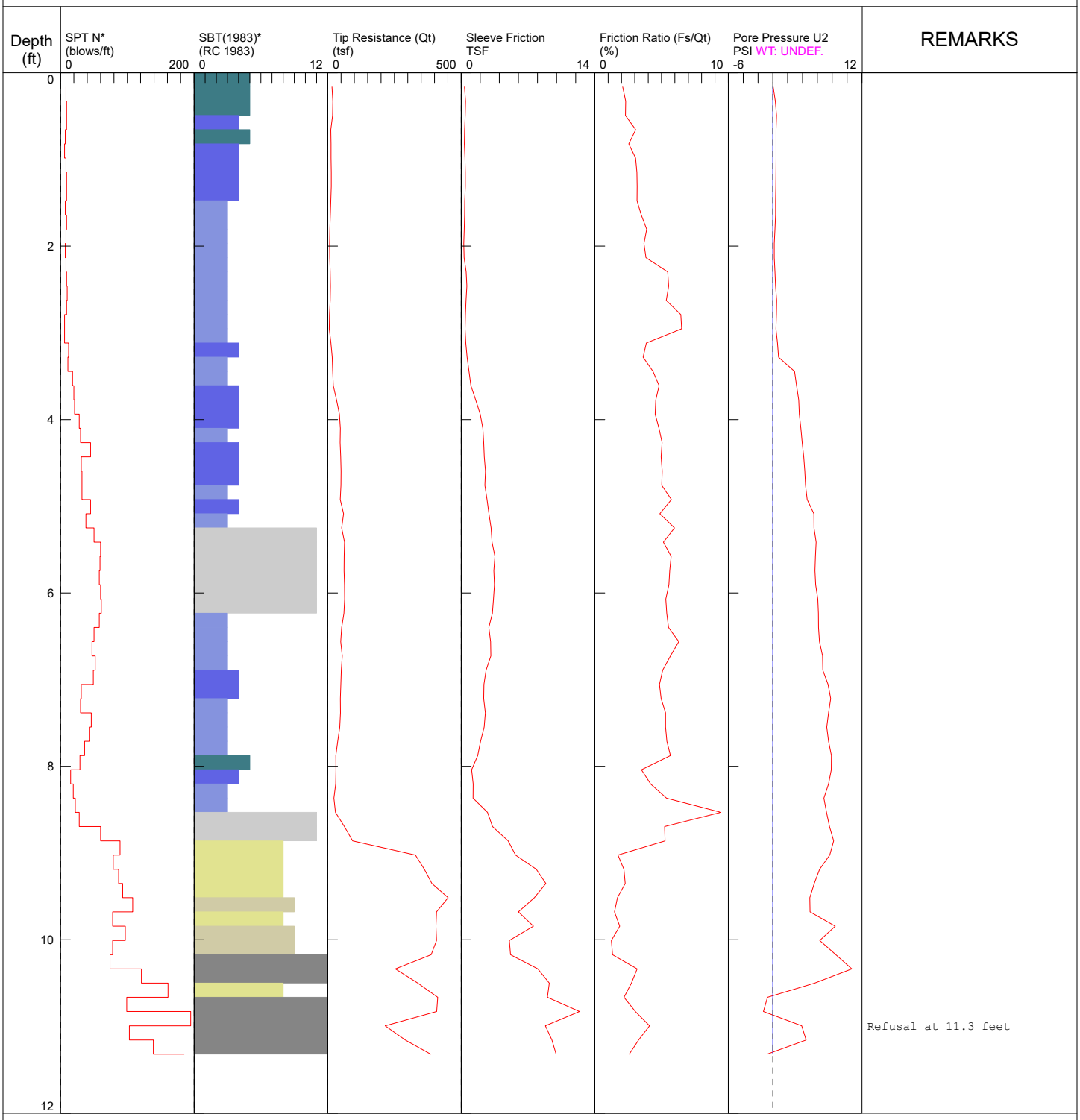
OPERATOR: OGE DMM
TEST DATE: 11/10/2025 10:12:47 AM
CONE ID: DDG1661
TOTAL DEPTH: 10.991 ft
HOLE NUMBER: CPT-2

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
0.164	16.08	0.4530	2.818	1.643	8	5	clayey silt to silty clay
0.328	14.10	0.4851	3.442	1.631	9	4	silty clay to clay
0.492	14.32	0.4032	2.817	1.538	7	5	clayey silt to silty clay
0.656	15.83	0.4530	2.863	1.480	8	5	clayey silt to silty clay
0.820	18.15	0.4873	2.685	1.432	9	5	clayey silt to silty clay
0.984	17.74	0.4849	2.734	1.384	8	5	clayey silt to silty clay
1.148	16.73	0.4376	2.617	1.322	8	5	clayey silt to silty clay
1.312	15.48	0.5140	3.321	1.265	10	4	silty clay to clay
1.476	13.97	0.6224	4.458	1.231	13	3	clay
1.640	16.94	0.7849	4.633	1.423	16	3	clay
1.804	17.41	0.8344	4.794	1.509	17	3	clay
1.969	16.04	0.8680	5.414	1.593	15	3	clay
2.133	16.82	0.7731	4.597	1.851	16	3	clay
2.297	16.38	0.7194	4.393	1.969	16	3	clay
2.461	15.95	0.7581	4.754	2.424	15	3	clay
2.625	16.88	0.9302	5.512	2.570	16	3	clay
2.789	17.79	1.0243	5.760	2.682	17	3	clay
2.953	21.97	1.2152	5.532	2.982	21	3	clay
3.117	29.55	1.3798	4.671	3.461	28	3	clay
3.281	39.40	1.5035	3.817	4.048	19	5	clayey silt to silty clay
3.445	39.01	1.5943	4.088	8.040	25	4	silty clay to clay
3.609	39.83	1.6617	4.173	12.353	25	4	silty clay to clay
3.773	40.47	1.7721	4.380	12.492	26	4	silty clay to clay
3.937	43.13	1.9162	4.444	12.337	28	4	silty clay to clay
4.101	44.57	2.2121	4.965	11.510	43	3	clay
4.265	50.15	2.4695	4.925	10.631	32	4	silty clay to clay
4.429	52.00	2.3095	4.443	10.397	33	4	silty clay to clay
4.593	48.61	2.7720	5.705	10.358	47	3	clay
4.757	67.37	3.0368	4.509	11.249	32	5	clayey silt to silty clay
4.921	68.69	3.2389	4.717	11.673	44	4	silty clay to clay
5.085	65.26	3.4460	5.282	11.647	62	11	very stiff fine grained (*)
5.249	69.84	3.3237	4.760	11.855	67	11	very stiff fine grained (*)
5.413	54.66	3.0712	5.620	11.604	52	3	clay
5.577	50.03	2.8495	5.698	12.279	48	3	clay
5.741	65.17	2.9276	4.493	12.538	42	4	silty clay to clay
5.906	50.93	2.5721	5.052	11.992	33	4	silty clay to clay
6.070	39.92	2.0078	5.031	11.951	38	3	clay
6.234	41.25	1.9629	4.760	12.440	26	4	silty clay to clay
6.398	41.15	1.8820	4.575	12.715	26	4	silty clay to clay
6.562	43.24	2.2232	5.143	13.024	41	3	clay
6.726	58.47	2.7077	4.632	14.375	37	4	silty clay to clay
6.890	54.73	3.0027	5.488	14.918	52	3	clay
7.054	51.54	2.5701	4.988	14.861	33	4	silty clay to clay
7.218	44.11	2.4685	5.598	14.569	42	3	clay
7.382	53.03	2.4457	4.613	15.158	34	4	silty clay to clay
7.546	47.18	2.4405	5.174	13.843	45	3	clay
7.710	36.83	1.2920	3.509	14.399	18	5	clayey silt to silty clay
7.874	35.16	1.4794	4.209	14.638	22	4	silty clay to clay
8.038	39.95	1.4318	3.585	15.824	19	5	clayey silt to silty clay
8.202	47.14	2.2078	4.684	15.330	30	4	silty clay to clay

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
8.366	51.07	5.0790	9.949	17.160	49	3	clay
8.530	365.43	6.7309	1.842	14.784	87	8	sand to silty sand
8.694	282.66	8.1877	2.897	12.511	135	12	sand to clayey sand (*)
8.858	289.21	8.2158	2.842	11.359	138	12	sand to clayey sand (*)
9.022	251.29	6.5868	2.622	12.971	80	7	silty sand to sandy silt
9.186	222.66	5.2141	2.342	13.153	71	7	silty sand to sandy silt
9.350	275.49	4.8114	1.747	12.440	66	8	sand to silty sand
9.514	233.36	4.8527	2.080	13.692	56	8	sand to silty sand
9.678	303.81	4.6229	1.522	11.644	73	8	sand to silty sand
9.843	357.43	5.2150	1.459	12.571	68	9	sand
10.007	360.10	4.3196	1.200	8.095	69	9	sand
10.171	337.24	4.7067	1.396	6.352	65	9	sand
10.335	298.28	7.5042	2.516	6.330	95	7	silty sand to sandy silt
10.499	315.91	6.7940	2.151	7.415	76	8	sand to silty sand
10.663	328.58	7.4631	2.272	7.094	79	8	sand to silty sand
10.827	404.00	7.9100	1.958	8.603	97	8	sand to silty sand
10.991	533.02	8.5400	1.603	6.423	128	8	sand to silty sand

PSI / CPT-2a / 9025 SW Barber St Wilsonville

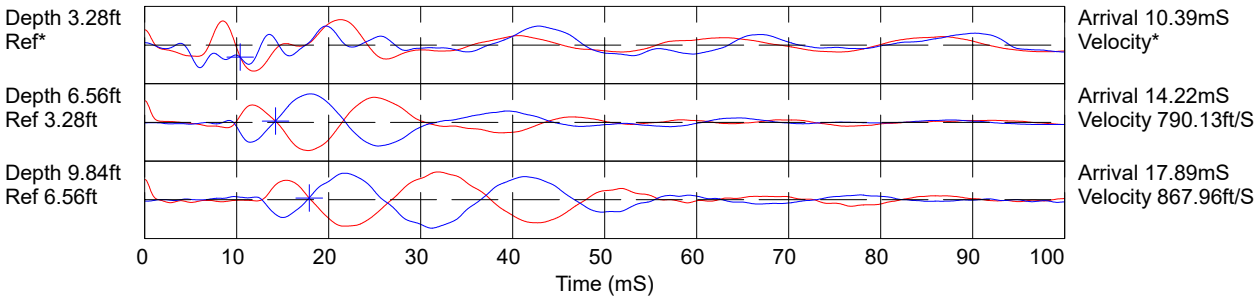
OPERATOR: OGE DMM
TEST DATE: 11/10/2025 10:47:16 AM
CONE ID: DDG1661
TOTAL DEPTH: 11.319 ft
HOLE NUMBER: CPT-2a



1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

COMMENT: PSI / CPT-2a / 9025 SW Barber St Wilsonville

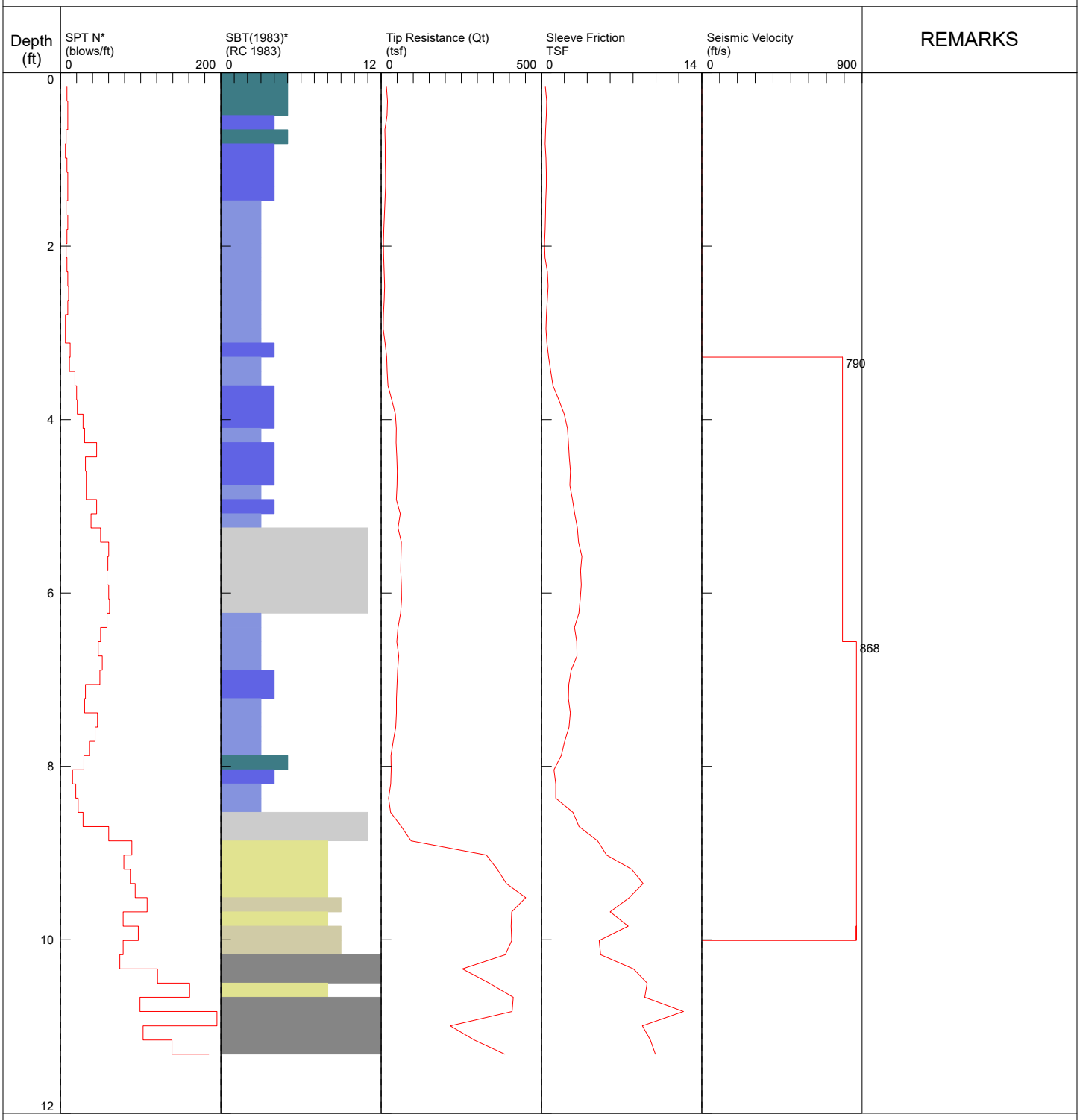


Hammer to Rod String Distance (ft): 1.97
* = Not Determined

COMMENT:

PSI / CPT-2a / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 10:47:16 AM
CONE ID: DDG1661
TOTAL DEPTH: 11.319 ft
HOLE NUMBER: CPT-2a



1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

PSI / CPT-2a / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 10:47:16 AM
CONE ID: DDG1661
TOTAL DEPTH: 11.319 ft
HOLE NUMBER: CPT-2a

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
0.164	16.01	0.3353	2.096	0.048	8	5	clayey silt to silty clay
0.328	19.45	0.4488	2.308	0.326	9	5	clayey silt to silty clay
0.492	18.20	0.4175	2.295	0.481	9	5	clayey silt to silty clay
0.656	11.63	0.3560	3.063	0.414	7	4	silty clay to clay
0.820	12.81	0.3256	2.543	0.431	6	5	clayey silt to silty clay
0.984	12.81	0.3907	3.050	0.431	8	4	silty clay to clay
1.148	13.42	0.4224	3.148	0.410	9	4	silty clay to clay
1.312	13.55	0.4292	3.169	0.388	9	4	silty clay to clay
1.476	11.68	0.3692	3.163	0.364	7	4	silty clay to clay
1.640	9.91	0.3456	3.487	0.366	9	3	clay
1.804	8.16	0.3169	3.886	0.292	8	3	clay
1.969	7.22	0.2656	3.679	0.199	7	3	clay
2.133	7.84	0.3001	3.826	0.199	8	3	clay
2.297	9.44	0.5152	5.457	0.285	9	3	clay
2.461	10.58	0.5849	5.529	0.364	10	3	clay
2.625	9.40	0.5023	5.347	0.501	9	3	clay
2.789	6.75	0.4346	6.438	0.477	6	3	clay
2.953	6.08	0.3951	6.502	0.412	6	3	clay
3.117	12.07	0.4658	3.859	0.618	12	3	clay
3.281	16.97	0.6139	3.619	0.766	11	4	silty clay to clay
3.445	18.59	0.8100	4.358	2.915	18	3	clay
3.609	21.04	1.0114	4.809	3.195	20	3	clay
3.773	33.18	1.5140	4.565	3.478	21	4	silty clay to clay
3.937	44.02	1.9906	4.523	3.573	28	4	silty clay to clay
4.101	47.15	2.2644	4.804	3.765	30	4	silty clay to clay
4.265	46.62	2.3505	5.043	3.945	45	3	clay
4.429	48.80	2.4233	4.967	4.165	31	4	silty clay to clay
4.593	50.13	2.5293	5.047	4.311	32	4	silty clay to clay
4.757	49.46	2.4780	5.011	4.407	32	4	silty clay to clay
4.921	47.02	2.6971	5.737	4.622	45	3	clay
5.085	59.55	2.9005	4.872	5.520	38	4	silty clay to clay
5.249	52.53	3.1312	5.963	5.544	50	3	clay
5.413	62.81	3.2281	5.141	5.841	60	11	very stiff fine grained (*)
5.577	61.65	3.5248	5.719	5.731	59	11	very stiff fine grained (*)
5.741	60.91	3.4141	5.606	5.669	58	11	very stiff fine grained (*)
5.906	62.75	3.4780	5.544	5.774	60	11	very stiff fine grained (*)
6.070	63.67	3.3821	5.314	6.052	61	11	very stiff fine grained (*)
6.234	60.60	3.2625	5.385	6.148	58	11	very stiff fine grained (*)
6.398	52.38	2.8875	5.515	6.158	50	3	clay
6.562	48.84	3.0715	6.290	6.275	47	3	clay
6.726	54.66	3.0979	5.669	6.704	52	3	clay
6.890	51.05	2.5917	5.078	6.728	49	3	clay
7.054	49.17	2.3787	4.839	7.444	31	4	silty clay to clay
7.218	47.40	2.3519	4.963	7.788	30	4	silty clay to clay
7.382	47.54	2.5177	5.297	7.508	46	3	clay
7.546	45.23	2.3946	5.295	7.274	43	3	clay
7.710	37.50	2.0211	5.391	7.496	36	3	clay
7.874	30.51	1.7292	5.668	7.891	29	3	clay
8.038	31.05	1.0845	3.494	7.877	15	5	clayey silt to silty clay
8.202	29.86	1.2463	4.175	7.494	19	4	silty clay to clay

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
8.366	23.09	1.2396	5.371	6.874	22	3	clay
8.530	29.11	2.7485	9.443	7.226	28	3	clay
8.694	62.64	3.2722	5.226	7.630	60	11	very stiff fine grained (*)
8.858	93.29	4.9064	5.261	8.198	89	11	very stiff fine grained (*)
9.022	328.21	5.6906	1.734	7.654	79	8	sand to silty sand
9.186	361.90	7.8734	2.176	6.287	87	8	sand to silty sand
9.350	390.09	8.8737	2.275	5.561	93	8	sand to silty sand
9.514	450.70	7.6594	1.700	4.977	108	8	sand to silty sand
9.678	407.13	5.9974	1.473	5.006	78	9	sand
9.843	405.01	7.5717	1.870	8.414	97	8	sand to silty sand
10.007	407.18	5.0361	1.237	6.313	78	9	sand
10.171	387.34	5.1618	1.333	8.483	74	9	sand
10.335	253.16	8.0260	3.171	10.651	121	12	sand to clayey sand (*)
10.499	337.20	9.2250	2.736	5.631	161	12	sand to clayey sand (*)
10.663	411.93	9.0245	2.191	-0.730	99	8	sand to silty sand
10.827	408.13	12.3955	3.038	-1.284	195	12	sand to clayey sand (*)
10.991	215.30	8.8193	4.097	3.892	103	12	sand to clayey sand (*)
11.155	290.29	9.5100	3.277	4.483	139	12	sand to clayey sand (*)
11.319	385.58	9.9400	2.579	-0.776	185	12	sand to clayey sand (*)

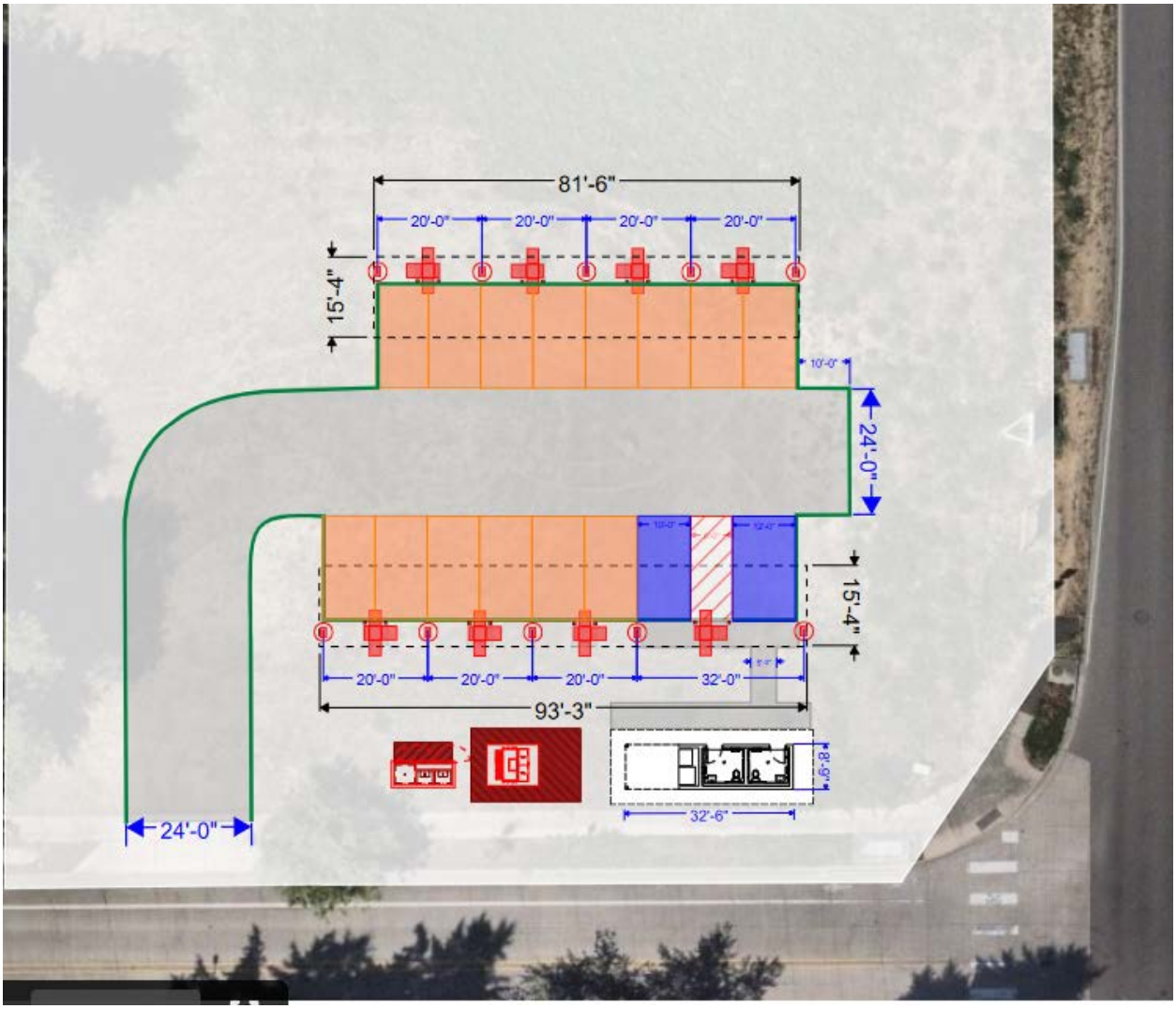
WILSONVILLE
OREGON

Engineering Division

PRE-APPLICATION NOTES

Site Address	Tax Lot
9025 SW Barber	31W14A 01400

Existing Site Description: Vacant lot
Proposed Development: 8 level 3 DC fast-charging stations with canopy and bathroom
Zoning: PDI



CITY OF WILSONVILLE • COMMUNITY DEVELOPMENT

Phone 503-682-4960
Fax 503-682-7025

29799 SW Town Center Loop East
Wilsonville, OR 97070

www.ci.wilsonville.or.us
info@ci.wilsonville.or.us

TRANSPORTATION

TRAFFIC IMPACT STUDY

A traffic impact study is required when three (3) new vehicular trips are generated. The proposed development will generate more than three (3) new vehicular trips. The applicant shall apply for a traffic impact study from the City. The City will contact DKS, Traffic Consultants, for scope of work of the traffic impact study. For new trips between 3 and 25, a full-scale traffic impact study may not be necessary; a trip generation memo will be sufficient. The traffic analysis performed may identify improvements or mitigations required to address impacts from the newly generated trips.

The applicant will be responsible to pay for the consultant's fee plus 15% overhead to the City.

The applicant can apply for a traffic impact study as detailed here:
https://www.ci.wilsonville.or.us/engineering/page/traffic-study-requestwaiver-form

The traffic impact analysis will assist in determining the proportionality of any street improvements.

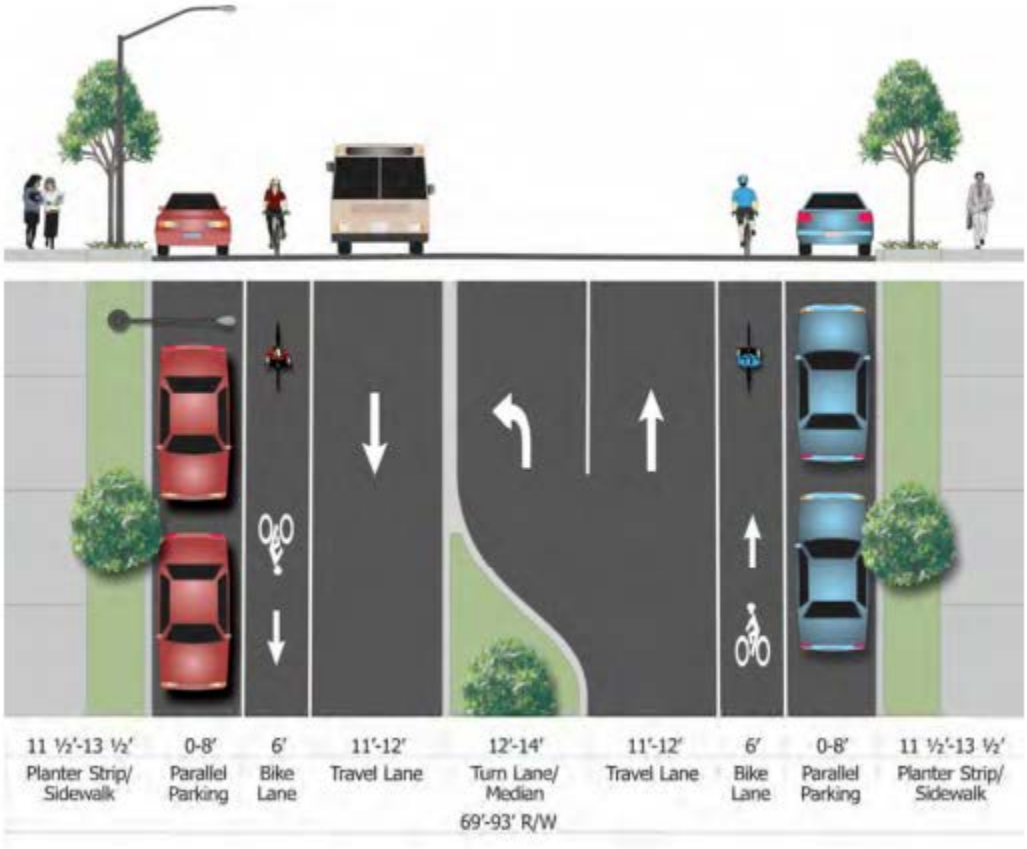
SW BARBER STREET

Classification: Collector
Jurisdiction: City of Wilsonville

EXISTING CONDITIONS:
SW Barber Street is improved with 2 travel lanes, bike lanes on both sides of the street and a curb-tight sidewalk.

IMPROVEMENTS:
The existing ADA ramp at the corner of Barber and Boones Ferry Road shall be upgraded to current ADA standards.

FIGURE 3-8. COLLECTOR CROSS-SECTION



STREET LIGHTS

EXISTING:
Cobrahead street lighting is present on SW Barber Street.

IMPROVEMENTS:
No street light improvements are anticipated.

STREET TREES

EXISTING:
There are no street trees along the frontage.

IMPROVEMENTS:
Install street trees in the landscaping strip.

ACCESS SPACING STANDARDS

The new access proposed on SW Barber Street shall meet the access spacing standards.

Refer to Table 2.12 from the Public Works Standards for access spacing requirements.

Table 2.12. ACCESS SPACING STANDARDS

Roadway Functional Classification	Access Spacing Desired	Access Spacing Minimum
Major Arterial	1320 feet	1000 feet
Minor Arterial	1000 feet	600 feet
Collector	300 feet	100 feet
Local Street	Access to Each Lot	

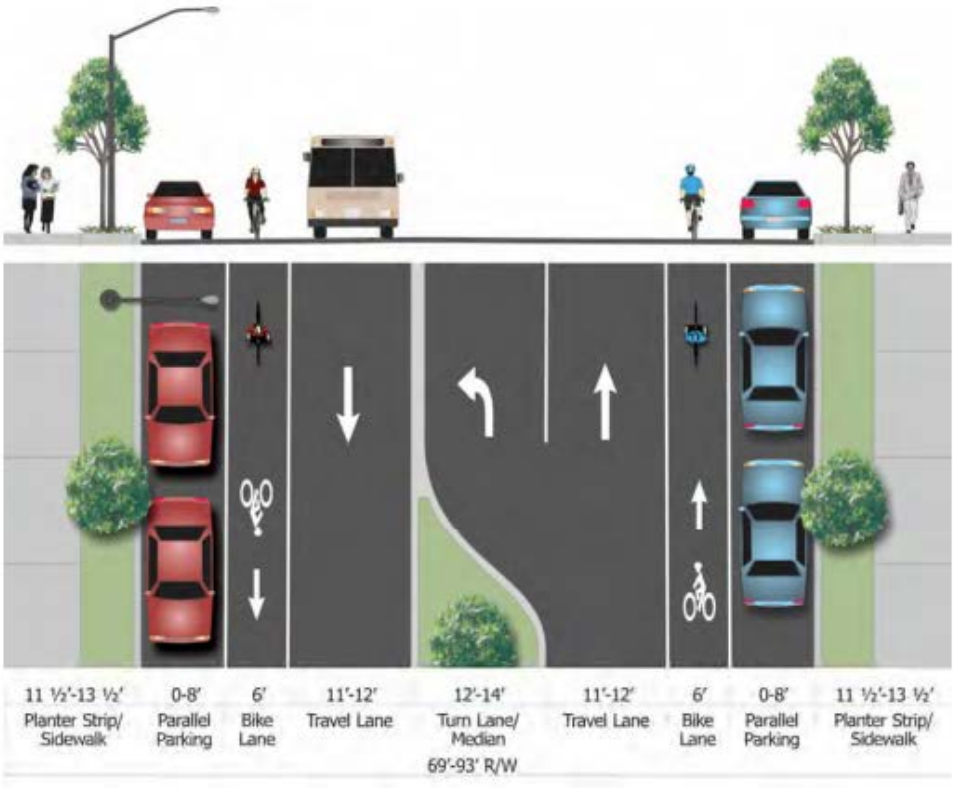
SW BOONES FERRY ROAD

Classification: Collector
Jurisdiction: City of Wilsonville

EXISTING CONDITIONS:
SW Boones Ferry Road is partially improved with 2 travel lanes, a center median/turn lane.

IMPROVEMENTS:
Install curb/gutter, landscaping strip, street trees, street lighting, sidewalk, and bike lane along SW Boones Ferry Road. Variable width, up to 20 feet along northern property boundary, right-of-way dedication required to ensure improvements are within the right-of-way.

FIGURE 3-8. COLLECTOR CROSS-SECTION



STREET LIGHTS

EXISTING:
Cobrahead street lighting is present on SW Boones Ferry Road.

IMPROVEMENTS:
No street light improvements are anticipated.

UNDERGROUNDING

EXISTING:
Franchise utilities are underground along SW Boones Ferry Road.

IMPROVEMENTS:
Install all new utilities underground. Existing PGE vault in conflict with right-of-way improvements may need to be relocated.

STREET TREES

EXISTING:
No street trees.

IMPROVEMENTS:
Install street trees with the street improvements.

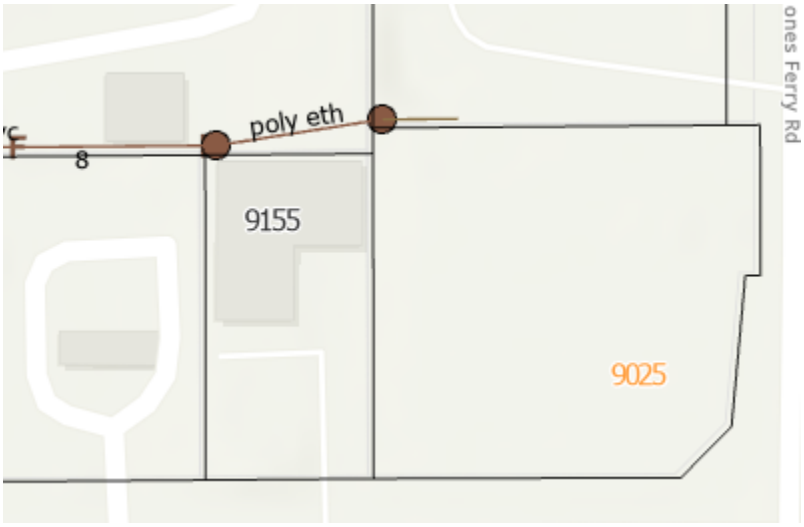
FIVE YEAR STREETS CIP FORECAST FY2024-25 THRU FY2028-29

Project Name	**Funding Source(s)**
I-5 Pedestrian Bridge	Street SDC
Boeckman Road Street Improvements	Street SDC / Frog Pond Dev.
Canyon Creek / Boeckman Roundabout	Street SDC
Boeckman Dip Bridge	Year 2000, Road Ops, Frog Pond Dev.
Brown Road Improvements	West Side Urban Renewal
Stafford-65th-Elligsen Roundabout	Street SDC
French Prairie Road Pathway	Street SDC / Road Ops
Garden Acres/Day Road Intersection	Coffee Creek Urban Renewal

SANITARY SEWER

EXISTING CONDITIONS:

There is a sewer manhole located in the northwest corner of the adjacent property.



IMPROVEMENTS:

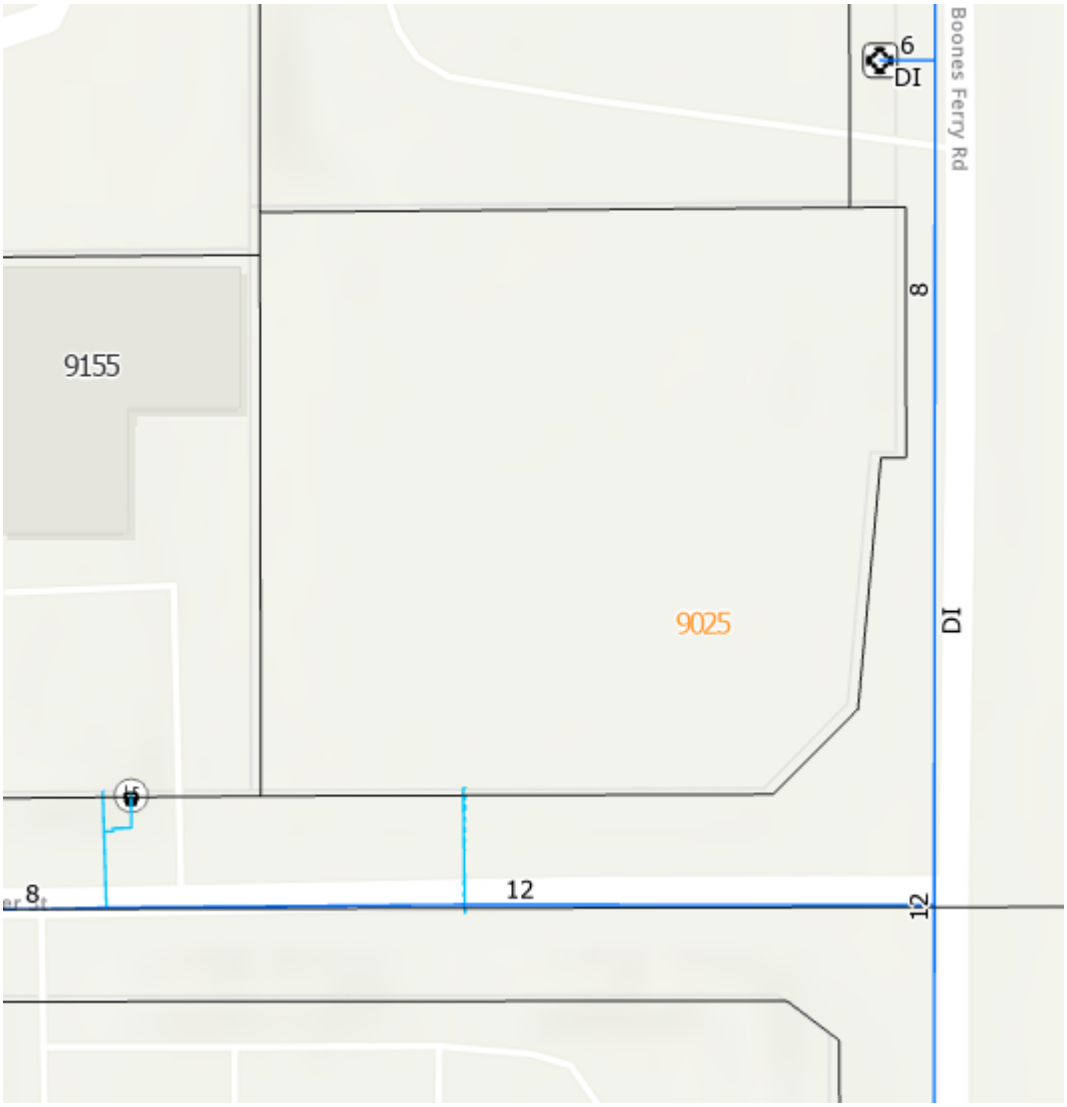
Connect to existing public sewer main downstream of manhole.

FIVE YEAR SANITARY SEWER CIP FORECAST FY2024-2025 THRU FY2028-29

Project Name	Funding Source(s)
Boeckman Road Sanitary Improvements	Sewer SDC/Frog Pond Dev
Boeckman Creek Interceptor	Sewer Ops/Sewer SDC
Charbonneau Lift Station Rehabilitation	Sewer Ops
WWTP UV Disinfection Replacement	Sewer Ops
Town Center Pump Station Replacement	Sewer Ops
Coffee Creek Interceptor Railroad Crossing	Sewer Ops/Sewer SDC
Coffee Creek Day Road Sewer Extension	Coffee Creek Urban Renewal
Willamette Way West Sewer Rehabilitation	Sewer Ops
WWTP Clarifier Mechanisms Replacement	Sewer Ops
Day Dream Sewer Rehabilitation Phase I	Sewer Ops
WWTP Aeration Basin Expansion	Sewer Ops

DOMESTIC WATER

EXISTING CONDITIONS:
A 12-inch ductile iron water main exists in SW Barber and an 8-inch ductile iron water main exists in SW Boones Ferry Road. A water service appears to have been stubbed to the property but there is no existing meter.



IMPROVEMENTS:
Separate connections for fire (if building is sprinklered), irrigation and domestic uses is required for each structure.

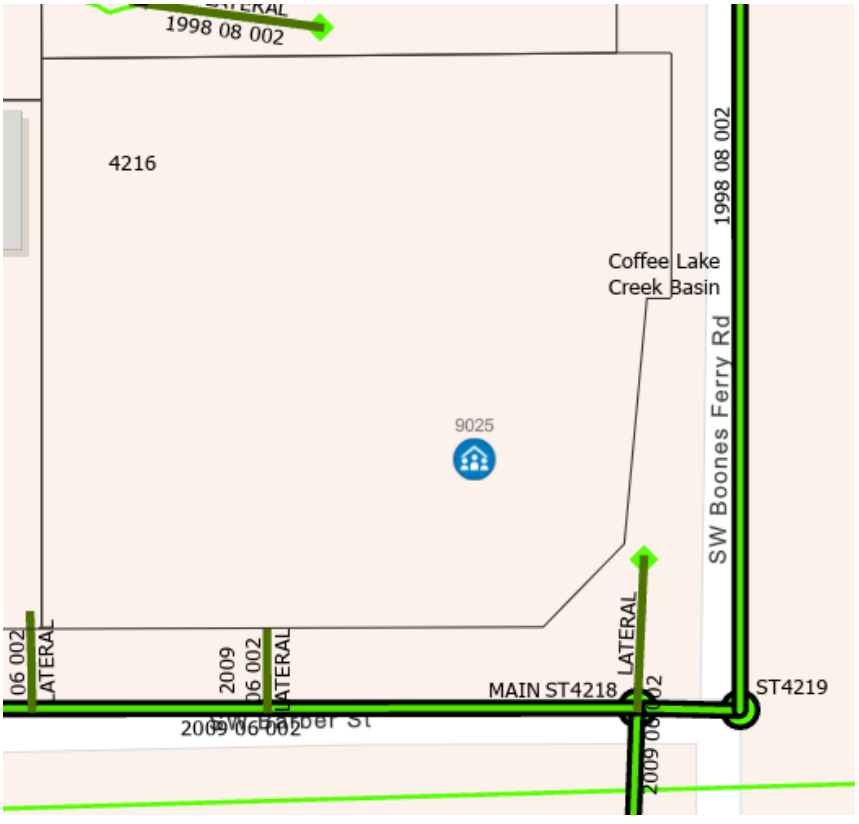
FIVE YEAR WATER CIP FORECAST FY2024-2025 THRU FY2028-29

Project Name	Funding Source(s)
WTP 20 MGD Expansion	Sherwood, Water Ops, Water SDC
Priority 1B Water Distribution Improvements	Water Ops
West Side Level B Reservoir	Water SDC
Automated Vale at Tooze/Westfall	Water SDC
Elligsen Reservoir Fall Protection Replacement	Water Ops
Elligsen West Tank – High Altitude Valve	Water SDC
Reservoir Security Improvement	Water Ops
Boeckman Road Water Relocation	Water Ops
Basalt Creek Parkway Water Line	Water SDC
WRWTP Finish Water Pump Station Upgrades	Sherwood, Water Ops, Water SDC

STORM WATER

EXISTING CONDITIONS:

Stormwater from the site appears to drain to the southwest. There is an existing storm lateral stubbed to the lot in the Barber Street frontage.



IMPROVEMENTS:
The proposed development will create more than 5,000 square feet of new impervious area, therefore it must address the City's Standards for Stormwater Management. Stormwater facilities: rain gardens and/or infiltration basins are subject to enginering review and approval. Carefully review the City's source control standards for applicibility. A PW Permit will be required prior to the construction of the stormwater facilities. A stormwater maintenance and easement agremeent between the City and the Developer shall be recorded prior to issuance of any occupancy permits and/or final approvals if occupany permits are not required.

FIVE YEAR STORMWATER CIP FORECAST FY2024-2025 THRU FY2028-29

Project Name	**Funding Source(s)**
Gesellschaft Water Well Channel Restoration	Storm Ops, Storm SDC
Meridian Creek Culvert Replacement	Storm Ops, Storm SDC
Boeckman Creek Flow Mitigation	Storm Ops, Storm SDC

EROSION CONTROL

The site project area appears to create less than 1 acre of disturbance. A local erosion control permit, meeting the requirements of the NPDES 1200C erosion and sediment control plan requirements, prior to any onsite work. City erosion control standards are found in Section 101.9.00 of the Public Works Construction Standards. Applicable Standard Drawings include those in the S-series here: https://www.ci.wilsonville.or.us/engineering/page/detail-drawings.

SYSTEM DEVELOPMENT CHARGES

System Development Charges (SDCs) are due at the time of building permit issuance. To estimate those fees, you can utilize the City's SDC calculator: https://ci.wilsonville.or.us/building/page/system-development-charges-sdcs-estimate-fees-sdc-calculator

DKS 117 COMMERCIAL STREET NE, SUITE 310, SALEM, OR 97301 • 503.391.8773 • DKSASSOCIATES.COM

TECHNICAL MEMORANDUM

REGISTERED PROFESSIONAL ENGINEER 56,267 OREGON JULY 9, 2002 SCOTT M. MANSUR EXPIRES: DEC. 31, 2026
Digitally Signed 2025.12.10 09:45:49-08'00'

DATE: December 9, 2025

TO: Amy Pepper, PE | City of Wilsonville

FROM: Scott Mansur, PE, PTOE, RSP$_1$ | DKS Associates
Hallie Turk, EI, RSP$_1$ | DKS Associates
Jesse Mills, EI | DKS Associates

SUBJECT: iONNA Electric Vehicle Charging Station – Trip Generation Evaluation P25892-003

INTRODUCTION

This memorandum evaluates the trip generation associated with the proposed iONNA Electric Vehicle (EV) charging station located at 9025 SW Barber Street. The applicant plans to construct a parking lot with 16 EV chargers. (For the purposes of this study, "charger" means one parking stall where an electric vehicle can be charged.)

The purpose of this memorandum is to provide the estimated vehicle trip generation for the proposed development and to evaluate the proposed site plan for potential safety issues and consistency with City standards. The project site is shown in Figure 1.

FIGURE 1: IONNA EV CHARGING STATION PROJECT SITE

TRIP GENERATION

Trip generation is the method used to estimate the number of vehicles that are added to the roadway network by the proposed project during a specific period (e.g., p.m. peak hour). Typically, trip generation is estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual. However, because trip generation rates for EV charging stations are not provided by the ITE manual, a custom trip generation estimate was developed based on three similar sites in the Willamette Valley.

The similar sites with existing EV charging locations surveyed are listed below:

- Flying J Fueling Station with EV Chargers: 12334 Ehlen Rd NE, Aurora, OR 97002
- ARCO Gas Station with EV Chargers: 5401 Commercial St SE, Salem OR 97306
- Chevron Gas Station with EV Chargers: 33157 OR-34 SE, Albany, OR 97322

All site locations currently operate as retail and or commercial gas stations with convenience stores. The Flying J in Aurora is a truck stop with a gas station, convenience store, and four EV chargers. The ARCO in Salem has a gas station, convenience store, and four EV chargers. The third location serves a convenience store, gas station, and Commercial Fuel Network (FCN) station, and two EV chargers.

Table 1 shows the trip generation data collected at each site's EV chargers (no gas station or convenience store trips are included in the data that was collected) as well as the calculated trip generation rate per charger for the a.m. peak hour, p.m. peak hour, and weekday.

TABLE 1: WILLAMETTE VALLEY EV CHARGING STATIONS – TRIP GENERATION DATA

LAND USE	NUMBER OF EV CHARGERS	AM PEAK TRIPS			PM PEAK TRIPS			WEEKDAY
		IN	*OUT*	*TOTAL*	*IN*	*OUT*	*TOTAL*	
FLYING J AURORA	4	1	1	**2**	1	2	**3**	20
ARCO SALEM	4	1	0	**1**	0	0	**0**	8
CHEVRON ALBANY	2	0	0	**0**	0	0	**0**	8
TOTAL AVERAGE PER CHARGER				**0.30**			**0.30**	3.60

According to the site plan, the proposed development will construct 16 EV chargers. Using the trip generation rates shown in Table 1, a trip generation estimate for the project site was calculated for the a.m. peak hour, p.m. peak hour, and weekday. Table 2 shows the project's trip generation estimate.

TABLE 2: TRIP GENERATION ESTIMATE

LOCATION AND SIZE	AM PEAK TRIP ESTIMATE	PM PEAK TRIP ESTIMATE	WEEKDAY TRIP ESTIMATE
9025 SW BARBER ST PROJECT SITE	0.30 trips per charger	0.30 trips per charger	3.60 trips per charger
16 CHARGERS	**5 (3 in, 2 out)**	**5 (2 in, 3 out)**	**58 (29 in, 29 out)**

As shown, the project is expected to generate 5 (3 in, 2 out) a.m. peak hour trips, 5 (2 in, 3 out) p.m. peak hour trips, and 58 (29 in, 29 out) weekday trips.

SITE PLAN REVIEW

ACCESS SPACING

The proposed project is required to comply with access spacing requirements as provided in the City's Transportation System Plan (TSP).[1] The access point for the iONNA development is proposed onto SW Barber Street. According to the TSP, Barber Street is a Collector. The desired access spacing on Collector streets is 300 feet, and the minimum standard is 100 feet. The proposed site plan shows an access spacing of 180 feet to the east (Boones Ferry Road intersection), which meets City requirements. However, the access spacing to the west (electrical supply store driveway) is approximately 75 feet. A variance to the City's access spacing standard will be required. The access proposed on the site plan is in the optimal location based on safety and operations (SW Boones Ferry Road is the other street adjacent to the site, but it has higher speeds and volume) and is where the City located the driveway as part of a past improvement project.

SIGHT DISTANCE

Adequate sight distance should be provided at the proposed access. Objects (e.g., buildings, fences, walls, or vegetation) located near the proposed driveway may inhibit sight distance for drivers attempting to turn out of a minor street onto the major street. A preliminary review of sight distance at the proposed driveway was performed and adequate sight distance is provided.

Prior to occupancy, sight distance at any proposed access point or local street connection will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon to ensure that buildings, signs, or landscaping does not restrict sight distance.

[1] Table 3-2, Wilsonville Transportation System Plan, Amended November 2020.

FRONTAGE IMPROVEMENTS

According to the site plan, the project will construct half-street frontage improvements along the site's east edge adjacent to SW Boones Ferry Road including sidewalk, landscaping, and bike lanes. The frontage along SW Barber Street is already improved and no additional street improvements are needed.

SUMMARY

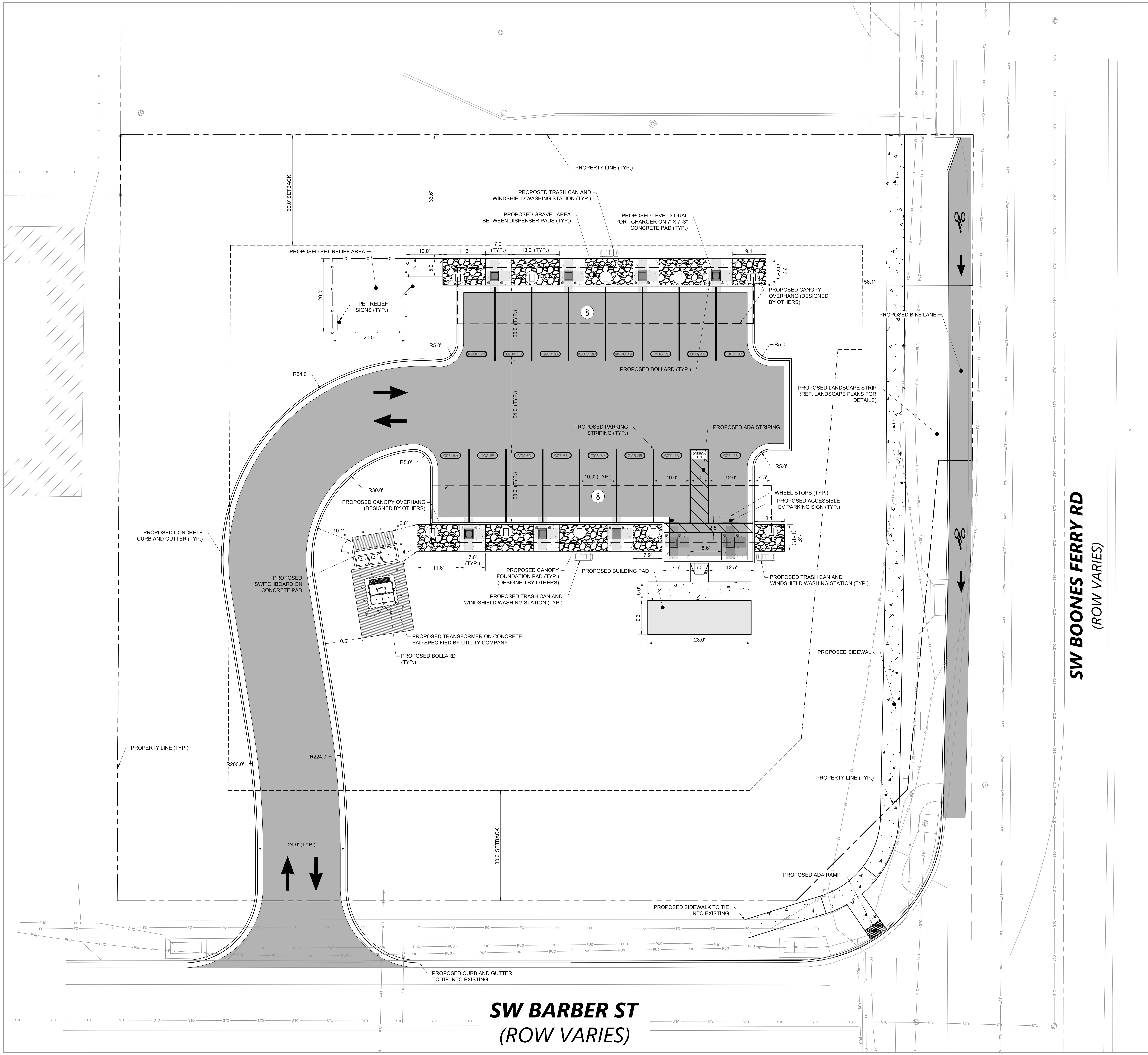
The key findings of this trip generation letter are summarized below.

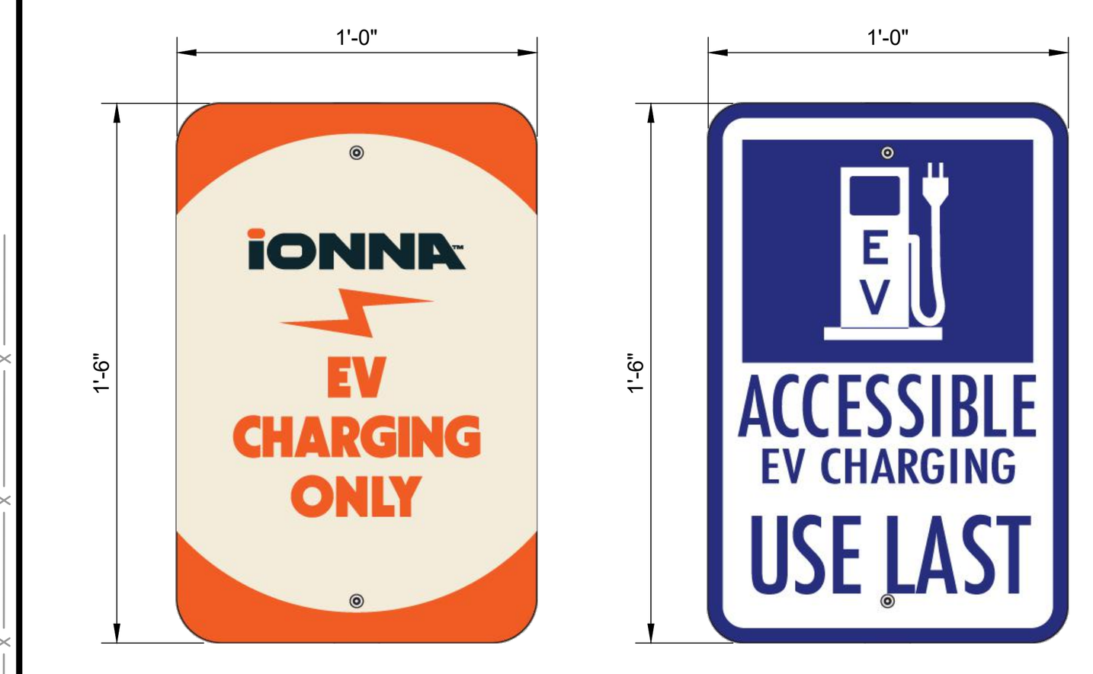
- The project will construct an EV charging station with 16 EV chargers at 9025 SW Barber Street.
- The project is expected to generate 5 (3 in, 2 out) a.m. peak hour trips, 5 (2 in, 3 out) p.m. peak hour trips, and 58 (29 in, 29 out) weekday trips.
- The proposed site access is in the preferred location. A variance to City of Wilsonville access spacing standards will be required.
- Prior to occupancy, sight distance at any proposed access point or local street connection will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon to ensure that buildings, signs, or landscaping does not restrict sight distance.

ATTACHMENTS

A. Site Plan

B. Trip Generation Data





EV CHARGING SIGN (ION-PS-12X18-EV)

USE LAST EV CHARGING SIGN (ION-PS-12X18-ADA-EV)

EV SIGNAGE SCALE N.T.S. **2**

CIVIL SITE PLAN LEGEND

ITEM	DESCRIPTION
	RESTORE ASPHALT PAVEMENT
	CONCRETE PAD / RESTORE CONCRETE PAVEMENT
	RESTORE CONCRETE CURBING
	STRIPED ISLAND
	PARKING STRIPING (SEE PLANS FOR REVISED PARKING LAYOUT)
	REGRADE AND RESTORE PERVIOUS / LANDSCAPE AREA
	RELOCATED TREE
	SIGN POST
	SCREENING FENCE

CONSTRUCTION NOTES

1. SEE PAVING AND ADDITIONAL CONSTRUCTION NOTES ON SHEET ######.
2. CONTRACTOR TO BORE AND / OR HAND-TRENCH CONDUIT AS REQUIRED PER NEC.
3. ALL EQUIPMENT SHALL BE INSTALLED PER CLIENT DESIGN STANDARDS.
4. CONTRACTOR TO RETURN ALL AREAS OF DISTURBANCE BACK TO EXISTING GRADE AND UP TO OR BETTER THAN EXISTING CONDITIONS.
5. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS NOTED OTHERWISE.

PAVEMENT MARKING NOTES

1. CONTRACTOR SHALL TAKE FIELD MEASUREMENTS OR OTHERWISE ESTABLISH A SURVEY OF THE EXISTING STRIPING IN ALL WORK AREAS IN ORDER TO ESTABLISH ALL EXISTING PAVEMENT MARKINGS WITH FULL COORDINATION OF NEW MARKINGS PROPOSED ON THIS PLAN.
2. UNLESS OTHERWISE INDICATED ON THIS PLAN, THE CONTRACTOR SHALL ESTABLISH PAVEMENT MARKINGS FOR ALL FIRE LANES, DIRECTIONAL ARROWS, STOP BARS, CURBS, SIDEWALK, LIGHT POLE BASES, SIGN BASES AND PARKING STALLS TO MATCH THE EXISTING SITE WITHIN THE REPAIR LIMITS.
3. CONTRACTOR TO USE APPROPRIATE PAINT COLORS TO MATCH THE EXISTING FEATURES. ADA BARRIER FREE AREAS TO COMPLY WITH ALL LOCAL AND FEDERAL ADA STANDARDS. PAVEMENT MARKINGS SHALL BE A HIGH QUALITY PAINT RECOMMENDED BY THE PAINT MANUFACTURER. PAINT COLORS SHALL CLOSELY MATCH THE FEDERAL STANDARD 595B COLOR NUMBER AS FOLLOWS: BLUE-COLOR 15180, WHITE-COLOR 37925 AND YELLOW-COLOR 33538.
4. IN AREAS NOT BEING RESURFACED BUT REQUIRING RESTRIPING, CONTRACTOR SHALL REMOVE EXISTING STRIPING BY EITHER SAND BLASTING, WATER BLASTING, OR BY ANOTHER APPROVED METHOD OF STRIPING REMOVAL. WHERE THE STRIPING REMOVAL CHANGES THE SURFACE TEXTURE OF THE EXISTING ASPHALT, CONTRACTOR SHALL SEAL COAT THE AREA PRIOR TO RESTRIPING. CONTRACTOR TO SUBMIT STRIPING REMOVAL METHOD TO PROPERTY MANAGER AND ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.

CHARGER STALL TABLE

STALL NO.	CONNECTOR TYPE	SIGNAGE
1A	NACS	N/A
1B	NACS	N/A
2A	NACS	N/A
2B	NACS	N/A
3A	CCS	N/A
3B	CCS	N/A
4A	CCS	N/A
4B	CCS	N/A
5A	CCS	N/A
5B	CCS	N/A
6A	CCS	N/A
6B	CCS	N/A
7A	CCS	N/A
7B	CCS	N/A
8A	CCS	N/A
8B	CCS	N/A

GRAPHIC SCALE IN FEET
0 5 10 20
SCALE: 1" = 10'
WHEN PRINTED AT FULL SIZE (30"x42")

NORTH

Kimley-Horn
421 FAYETTEVILLE ST, SUITE 600,
RALEIGH, NC 27601
Main: (919) 677-2000 | www.kimley-horn.com

IONNA™
9025 SW BARBER ST
WILSONVILLE, OR 97070
STORE NO.: 0005
EV STALLS: 16
KIMLEY-HORN PROJECT NO.: 16895063
PUBLIC EV

DOCUMENTS WITHOUT SIGNATURE AND REQUIRED SEAL OF AOR / EOR ARE NOT FOR CONSTRUCTION

CONSULTANTS

DRAFT
PRELIMINARY PLANS
NOT FOR CONSTRUCTION

ISSUE BLOCK

No.	DATE	BY
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

DESIGNED BY: GB
DRAWN BY: MF
CHECKED BY: PK
DOCUMENT DATE: 08/01/2025

SHEET TITLE
ENLARGED SITE PLAN

SHEET NUMBER
C2.1

Data Collection Survey by Rally Traffic Services

9/10/2025		Albany		Flying J		Arco Salem	
Time		IN	OUT	IN	OUT	IN	OUT
12:00	AM						
12:15							
12:30							
12:45							
01:00							
01:15							
01:30							
01:45							
02:00							
02:15							
02:30							
02:45							
03:00							
03:15							
03:30							
03:45							
04:00							
04:15							
04:30				1			
04:45					1		
05:00							
05:15				1			
05:30							
05:45					1		
06:00							
06:15							
06:30							
06:45							
07:00							
07:15							
07:30							
07:45				1			
08:00					1		
08:15							
08:30							
08:45						1	
09:00							
09:15							
09:30		1	1				
09:45							
10:00							1
10:15							
10:30		1		1			
10:45			1		1		
11:00							
11:15							
11:30							
11:45						1	
12:00	PM						
12:15							
12:30							
12:45							
01:00							
01:15							
01:30							
01:45							1
02:00							
02:15							
02:30		1		1			
02:45				1			
03:00			1		1		
03:15							
03:30				1	1		
03:45							
04:00					1		
04:15				1			
04:30							
04:45					1		
05:00							
05:15							
05:30							
05:45							
06:00							
06:15							
06:30		1					
06:45							
07:00							
07:15							
07:30							
07:45							
08:00							
08:15							
08:30			1				
08:45				2	1		
09:00						1	
09:15					1		1
09:30							
09:45							
10:00						1	
10:15							
10:30							1
10:45							
11:00							
11:15							
11:30							
11:45							
	Daily trips	4	4	10	10	4	4
		Avg # of daily trips per charger per direction		Avg # of daily trips per charger per direction		Avg # of daily trips per charger per direction	
		2.00	2.00	2.5	2.5	1	1
		Avg # of daily trips total		Avg # of daily trips total		Avg # of daily trips total	
		2.67		10		2	

	Albany			Flying J			Arco Salem		
	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak trips	0	0	0	1	1	2	1	0	1
PM Peak trips	0	0	0	1	2	3	0	0	0

Total Avg of daily trips per charger	**3.60**
Total Avg of AM Peak trips per charger	**0.30**
Total Avg of PM Peak trips per charger	**0.30**

The iONNA site plan shows 16 total charging stalls.

Therefore, iONNA trip gen estimates are as follows:

Estimated total daily trips	**57.60**
Estimated total AM Peak trips	**4.80**
Estimated total PM Peak trips	**4.80**

STORMWATER MANAGEMENT PLAN

FOR WILSONVILLE IONNA ELECTRIC VEHICLE CHARGING SITE DEVELOPMENT

WILSONVILLE, OREGON

(TL 1400, TAX MAP 31W14A)

Kimley-Horn Project Number:	016895063
City of Wilsonville Permit Number:	DB25-0004
Date:	12/29/2025

Prepared For:

iONNA
4022 Stirrup Creek Dr
Durham, NC 27703

https://www.ionna.com/

Prepared By:

Quinn Duffy, PE

Kimley-Horn
1 SW Columbia, Suite 650

Portland, Oregon 97204
(503) 388-6349
quinn.duffy@kimley-horn.com

LIST OF APPENDICES:

PROJECT OVERVIEW AND DESCRIPTION

Size and location of project site: The project site is located in the northwest region at the intersection of SW Barber Street and SW Boones Ferry Rd. The total site is 46,001 square feet (1.056 acres). The site will be developed into an electric vehicle charging station site, which will include onsite parking areas, EV Chargers, landscape areas, green stormwater infrastructure, and picnic areas. Also, bike lane and sidewalk improvements along SW Boones Ferry Rd and SW Barber St. The site address is 9025 SW Barber Street, see Appendix A for a map of the site location.

Type of Development: The proposed development is composed of an electric vehicle charging station with the previously described amenities. Frontage improvements will include a new sidewalk and landscaped areas.

Existing vs. post-construction conditions: Currently the site is made up of grass and undeveloped land with some trees and shrubs along the western and northern borders of the site. All existing 46,001 square feet of the property are considered pervious landscape area. There are no current buildings or developments within the site boundaries. In the post-developed condition, the previously described proposed electric vehicle charging site, associated walkways, and parking areas will make up about 30% (13,899 square feet) of the total project area. The remaining 70% (32,102 square feet) of the site area will remain either pervious landscape area or will be a BMP designed in accordance with WES (Water Environment Services) BMP Sizing Tool. All the existing trees along the site boundaries will be protected in place and preserved.

The site naturally has flow lines running toward the southwest corner of the site. In the post-developed condition, onsite impervious areas will be collected by onsite BMP facilities (catch basin, detention pond, vegetated swale), then routed to the existing storm system along SW Barber Road via a piped storm system.

SOIL CLASSIFICATION

See Appendix A for the Geotechnical Report prepared by Intertek PSI on November 26th, 2025.

INFILTRATION TESTING

See Appendix A for the Geotechnical Report prepared by Intertek PSI on November 26th, 2025.

ONSITE TREATMENT METHODOLOGY

Onsite stormwater runoff from impervious areas will either be collected from a catch basin within the parking area, or sheet flowed towards curb cuts along the driveway curb. The catch basin within the parking area will route stormwater to the main stormwater line along SW Barber St. Curb cuts along the driveway curb will allow for stormwater runoff to the vegetated swale along the west side of the property. The vegetated swale will connect to the detention pond in the SW corner of the property. The detention pond will have a drop inlet that routes the stormwater in question to the proposed line that connects to the existing main line along SW Barber St. For conservative measures, slower infiltration rates were used when sizing the on-site BMPs.

The City of Wilsonville approves the use of the WES BMP Sizing Tool to size the detention pond facility. Due to low infiltration rates discovered on-site, the detention pond will be sized using Hydrologic Soil Group D1 (0.02-0.07 in/hr). The detention pond design will follow City of Wilsonville Standard Drawing ST-6110, Detention Pond with Flow Control Structure. See Appendix B for a visual representation of the detention pond detail, and also see Appendix B for further details on BMP sizing, outlet structure details, and flow frequency/duration charts.

When designing the detention pond, one discharge management area of the total property was considered when determining an adequate size of the BMP. The discharge management area consisted of one pervious section (entirety of proposed hard surface development). Refer to Appendix C for a visual representation of how the post-developed site basin was delineated.

To supplement conveyance onsite, vegetated swales are proposed in the left most section of the property as well as the middle section of the property. Vegetated swales are to be constructed in accordance with City of Wilsonville Standard Detail ST-6050. The vegetated swales will not act as a flow control device, but rather as a conveyance method. The vegetated swale will also provide water quality treatment for the stormwater runoff before it enters the bioretention pond. Assuming a width of 4’ for each of the vegetated swales, there will be around 300-400 square feet of vegetated swale throughout the site. The vegetated swales will collect runoff from the impervious areas and convey flow towards the detention pond. See Appendix B for a visual representation of the standard detail for vegetated swales.

The proposed design for the new iONNA EV Charging site will adequately manage on-site stormwater flows.

OFFSITE TREATMENT METHODOLOGY

Offsite flow from the proposed bike lane area along the east side of the property will be managed by a stormwater planter (Wilsonville ST-6010) located just inside of the curb line along SW Boones Ferry Rd. A curb cut will be installed along the edge of the curb to allow surface runoff from the street to flow towards the stormwater planter. The stormwater planter will be over-excavated by the contractor to ensure proper infiltration occurs considering the natural low infiltration rates within the property. There also is an existing curb catch basin around 50 feet south of the proposed stormwater planter that currently manages the offsite flow in this area. There will be no modifications to the existing roadway (SW Boones Fery Rd. Assuming the existing catch basin is adequately managing the existing offsite flows, adding in a stormwater planter for extra infiltration and water quality control will only result in a positive outcome.

This BMP was sized using the Wilsonville WES BMP Sizing Tool and assumed an infiltration rate of D1 (0.02 – 0.07 in/hr). The area of the proposed bike lane takes up about 800 sq-ft. After running the BMP Sizing Tool, the minimum square footage of this facility is required to be 24 sq-ft. A design flow of 0.003 cfs and a minimum orifice size of 0.32 inches was determined from running the model. To ensure adequate stormwater management for this area, the planned square footage for this facility is 45 sq-ft. See Appendix B

The proposed design for the new iONNA EV Charging site will adequately manage off-site stormwater flows.

CONCLUSION

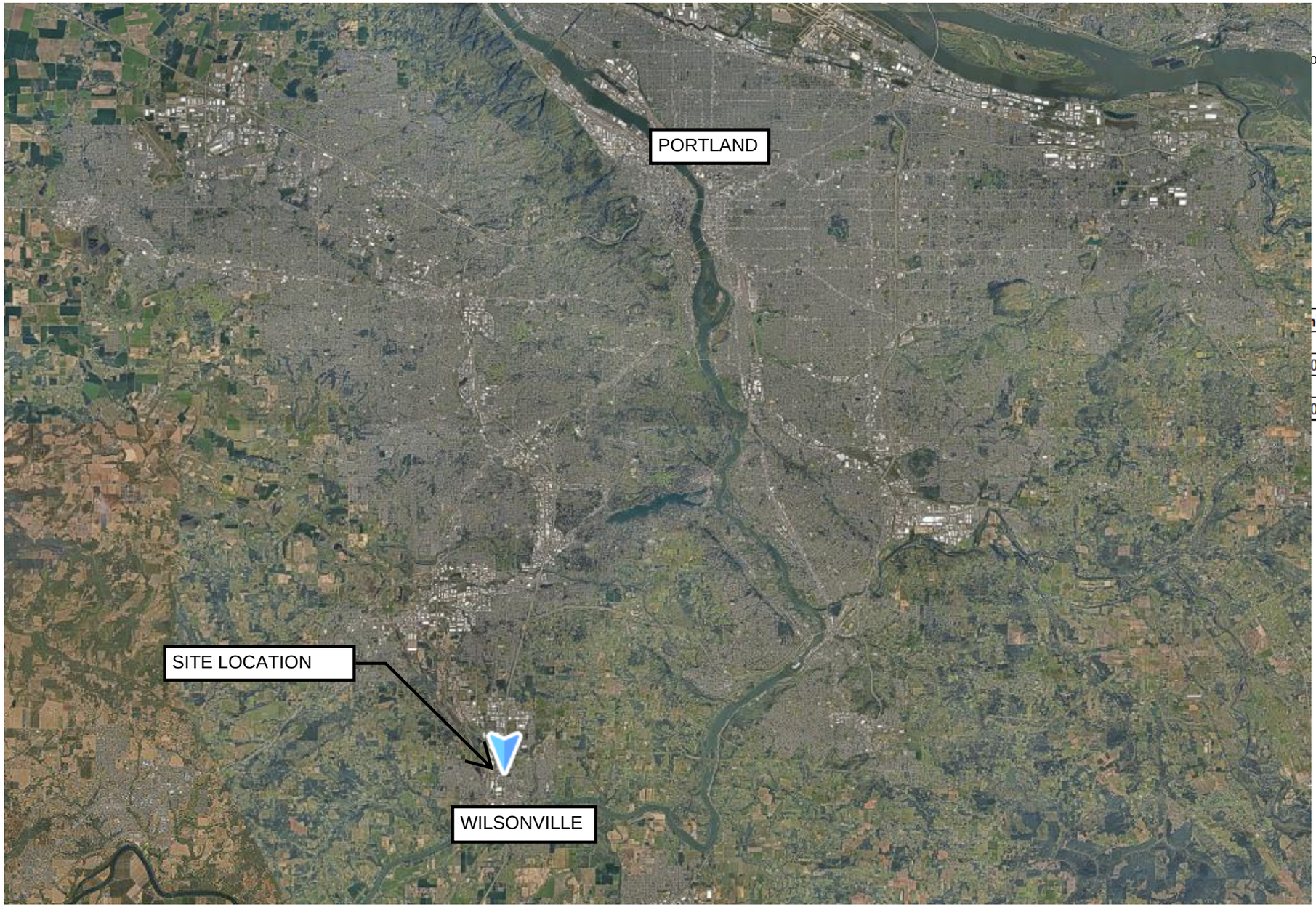
The design of the proposed site satisfies the stormwater design standards set by the City of Wilsonville. Stormwater that is collect on-site will be conveyed to the main line that runs along SW Barber St. Stormwater that is collected offsite will either be infiltrated into the ground, or conveyed to the existing catch basin along SW Boones Ferry Rd.

APPENDIX A – SITE INFORMATION

(1) VICINITY MAP

(2) CURVE NUMBER TABLE

(3) GEOTECHNICAL REPORT



ous Surface

nditions		
	Acres	% of Total
001	1.056	100%
0	0.000	0%
001	1.056	0%

No.	REVISIONS	DATE	BY

Kimley»Horn

IONNA EV CHARGING SITE
PREPARED FOR
IONNA
9025 SW BARBER ST WILSONVILLE, OR

LICENSED PROFESSIONAL

DATE:

SITE VICINITY MAP

SHEET NUMBER

Table 2-2a Runoff curve numbers for urban areas [1]

Cover description		Curve numbers for hydrologic soil group			
Cover type and hydrologic condition	Average percent impervious area [2]	A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) [3]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) [4]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)			96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation) [5]	77	86	91	94	
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

1 Average runoff condition, and $I_a = 0.2S$.

2 The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

3 CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

4 Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

5 Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

GEOTECHNICAL ENGINEERING REPORT

Ionna Proposed EV Charging Station
9045 SW Barber St.
Wilsonville, Oregon
PSI Project No. 07041598

PREPARED FOR:

Kimley-Horn and Associates, Inc.
4201 Winfield Road, Suite 600
Warrenville, IL 60555

November 26, 2025

BY:

PROFESSIONAL SERVICE INDUSTRIES, INC.
6032 N. Cutter Circle, Suite 480
Portland, OR 97217
Phone: (503) 289–1778

Professional Services Industries, Inc.
6032 N. Cutter Circle, Suite 480
Portland, OR, 97217
Office – (503) 289-1778

November 26, 2025

Kimley-Horn and Associates, Inc.
4201 Winfield Rd., Suite 600
Warrenville, IL 60555

Attn: Mr. Quinn Duffy
(971) 420-3194
Quinn.Duffy@kimley-horn.com

Re: **Geotechnical Engineering Report**
IONNA PROPOSED EV CHARGING STATION
9045 SW BARBER ST.
WILSONVILLE, OREGON
PSI Project No. 07041598

Professional Service Industries, Inc. (PSI), an Intertek company, is pleased to submit this geotechnical engineering report for the above-referenced project. This report includes the results from the field exploration and laboratory testing along with recommendations for use in preparation of the appropriate design and construction documents for this project.

PSI appreciates the opportunity to provide this geotechnical engineering report and looks forward to continuing participation during the design and construction phases of this project. PSI also has great interest in providing materials testing and inspection services during the construction of this project and will be glad to meet with you to further discuss how we can be of assistance as the project advances.

If there are questions pertaining to this report, or if PSI may be of further service, please contact us at your convenience.

Respectfully submitted,
Professional Services Industries, Inc.

Abhimanyu Patel
Staff Engineer
Abhimanyu.patel@intertek.com

Dana Biggerstaff, PE.
Senior Geotechnical Engineer
dana.biggerstaff@intertek.com

PC review by Philip Johnson

TABLE OF CONTENTS

Electronic Navigation: The TOC below and Keywords are hyperlinked to sections of relevance. The Symbol will return the reader to the TOC.

Page No.

INDEX OF TABLES

Page No.

1.0 PROJECT INFORMATION

1.1 PROJECT AUTHORIZATION

Professional Service Industries, Inc. (PSI), an Intertek company, has completed a field exploration and geotechnical evaluation for the Ionna Proposed EV Charging Station project. Mr. Bryce Christensen, representing Kimley-Horn and Associates, Inc., authorized PSI's services on November 19th, by signing the subconsultant agreement titled "PSI – Subconsultant Agreement Wilsonville OR_111925".

1.2 PROJECT DESCRIPTION

Based on information provided by the Client, a summary of our understanding of the proposed project is provided below.

Ionna is planning to construct EV charging stations at 9045 SW Barber St., Wilsonville, Oregon. The proposed construction will consist of the installation of EV chargers and a structural canopy and freestanding pre-engineered metal building (PEMB) with outdoor seating. We anticipate the canopy will be wood or steel-framed structures with relatively light structural loading transferred to isolated columns on the order of 1 to 2 kips. We also expect structural loading for the PEMB will be relatively light with isolated columns supporting 25 to 50 kips and continuous bearing walls supporting 1 to 2 kips per foot.

The geotechnical recommendations presented in this report are based on the available project information, structure locations, and the subsurface materials encountered during the field investigation. Should any of the above information or design basis made by PSI be inconsistent with the planned construction, it is requested that you contact us immediately to allow us to make any necessary modifications to this report. PSI will not be held responsible for changes to the project if not provided the opportunity to review the information and provide modifications to our recommendations.

Specifically, this report addresses the following:

- Soil and groundwater conditions.
- Geologic hazards assessment.
- Seismic site class per the current International Building Code (IBC).
- Foundation support.
- Floor slabs.
- Excavations.
- Slopes.
- Drainage.
- Flatwork.
- Site preparation and grading.
- Structural fill and overexcavations.
- Utilities.
- Obstructions.
- Wet weather and wet conditions considerations.

2.0 SITE AND SUBSURFACE CONDITIONS

2.1 SITE DESCRIPTION

Currently the site consists of an undeveloped parcel at 9045 Southwest Barber Street in Wilsonville, Oregon. The approximate site location is shown on Figure 1. Based on a review of Google Earth aerial imagery, the site consists of an undeveloped parcel with minimal vegetation. The property is bounded by Southwest Boones Ferry Road to the east, Southwest Barber Street to the south, and commercial buildings to the north and west. Vegetation at the site consists primarily of grass and weeds with some small- to medium-sized trees located along the site's northern and western perimeters. Based on the National USGS topographic map, the site is generally flat with an elevation of approximately 175 feet above mean sea level.

2.2 SITE GEOLOGY

Based on a review of the *Geology and Geologic Hazards of Northwest Clackamas County* by H.G. Schlicker and C.T. Finlayson (1979), PSI anticipates the site to be underlain by lacustrine deposits of the Willamette Silt Formation (Qws), consisting of unconsolidated fine sandy silt and clay deposited by late Pleistocene glacial floods. These sediments typically occur along valleys of the Tualatin and other tributaries of the Willamette River, with bed thicknesses varying from a few inches to several feet and total thicknesses up to 100 feet. The upper silt deposits observed in the CPTs and geoprobe are generally consistent with this mapped description.

2.3 SUBSURFACE CONDITIONS

To evaluate soil conditions at the subject site, PSI advanced four CPT soundings and one Geoprobe. The geoprobe and CPT soundings were drilled by a track-mounted Geoprobe 6622CPT drill rig, and were advanced with direct push methodology. CPT-1, CPT-1a, CPT-2 and CPT-2a were advanced in the general area of the proposed structure to termination depths of approximately 10 feet below the ground surface (bgs) where the probe met refusal in the underlying, very dense gravel formation. CPTs 1a and 2a were performed due to early refusal on CPTs 1 and 2. The geoprobe was advanced to a depth of approximately 20 feet bgs. Locations of the soil explorations are shown on Figure 2.

The geoprobe and CPT locations were selected by PSI personnel and located in the field using a recreational-grade GPS system. However, elevations of the ground surface at the exploration locations were not provided and should be surveyed by others prior to construction. The references to elevations of various subsurface strata are based on depths below existing grade at the time of drilling. The approximate exploration locations are depicted on the Exploration Location Plan provided in the Figures.

The results of the field and laboratory testing have been used to generalize a subsurface profile at the project site. The following subsurface descriptions provide a highlighted generalization of the major subsurface stratification features and material characteristics.

TABLE 2.1: GENERALIZED SOIL PROFILE

Stratum	Top (ft)	Bottom (ft)	Description
1	0	10	Stiff to Very Stiff SILT (ML)
2	10	Bottom	Very Dense silty GRAVEL with sand (GM)

The Geoprobe and CPT Logs included in Appendix A should be reviewed for specific information at individual test locations. The Geoprobe and CPT logs include continuous soil samples obtained from the Geoprobe, soil behavior types interpreted from CPT correlations, stratifications, sample locations, and available field and laboratory test data. The descriptions provided on the logs only represent the conditions at that actual exploration location; the stratifications represent the approximate boundaries between subsurface materials. The actual transitions between strata may be more gradual and less distinct. Variations will occur and should be expected across the site.

Soil samples collected using the Geoprobe® direct-push system generally correspond to the functional intent of ASTM D1587 and ASTM D3550 sampling methods, although direct-push tools do not meet the exact geometric and energy requirements of these standards. Complete field exploration methodologies are presented in Appendix A. Samples were identified in the field, placed in sealed containers, and transported to the laboratory for further classification and testing. At the completion of drilling, the geoprobe was backfilled with bentonite to match the ground surface.

PSI supplemented the field exploration with a laboratory testing program to determine additional engineering characteristics of the subsurface soils encountered. The laboratory testing program was conducted in general accordance with applicable ASTM Test Methods, and is included in Appendix A. Portions of samples not altered or consumed by laboratory testing will be discarded 30 days from the date shown on this report.

2.4 GROUNDWATER INFORMATION

Groundwater was not encountered during our subsurface investigations. Based on our review of nearby well logs, groundwater is estimated to be approximately 50 feet bgs. As such, groundwater is not expected to impact the proposed construction. It is possible, however, that transient, saturated ground conditions at shallower depths could develop at a later time during periods of heavy precipitation, landscape watering, leaking water lines, or other unforeseen causes. Variations in groundwater levels should be expected seasonally, annually, and from location to location.

The groundwater levels presented in this report were measured at the time of PSI field activities. The contractor should determine the actual groundwater levels at the site before construction activities.

3.0 GEOTECHNICAL CONCLUSIONS AND RECOMMENDATIONS

3.1 GEOTECHNICAL DISCUSSION

The primary geotechnical consideration at this site is the upper strata of silt encountered at all of the CPT sounding locations. Unsuitable soils including loose silts should be replaced by compacted fill for foundation and paving support. Should changes in the project criteria occur, a review must be made by PSI to determine if modifications to our recommendations will be required.

The following geotechnical design recommendations have been developed based on the previously described project characteristics and subsurface conditions encountered. The proposed construction should be performed in accordance with these recommendations and the applicable building code, and local governmental standards which have jurisdiction over this project. If there are changes in the project criteria, PSI should be retained to determine if modifications in the recommendations will be required. The findings of such a review would be presented in a supplemental report. Once final design plans and specifications are available, a general review by PSI is recommended to confirm that the conditions anticipated in preparing this geotechnical report are consistent with the earthwork and foundation recommendations contained within the construction documents.

3.2 GEOLOGIC HAZARD AREAS

The City of Wilsonville and Clackamas County do not explicitly define geologic hazards. However, we have evaluated the site for the presence of erosion, landslide, and seismic hazards in the following sections.

3.2.1 EROSION HAZARD AREAS

The soils onsite are classified as Willamette Silt Loam, 3 to 7 percent slopes (88B), and Woodburn Silt Loam, 0 to 3 percent (91A), by the United States Department of Agriculture Natural Resources Conservation Service (NRCS). These mapped soils are rated as having a slight to moderate susceptibility to erosion when exposed over existing site grades. Therefore, it is our opinion that an erosion hazard area does not exist at the site.

However, some amount of susceptibility to erosion when exposed during construction is anticipated. Therefore, it is our opinion that proper implementation and maintenance of Best Management Practices (BMPs) for erosion prevention and sediment control would sufficiently mitigate the potential for erosion within the planned development area. Erosion control measures as outlined by the City of Wilsonville should be in place prior to and during construction activities at the site.

3.2.2 LANDSLIDE HAZARD AREAS

Topography across the site is relatively flat with no obvious signs of sloping. Moreover, the site is not mapped with either deep or shallow susceptibility to landsliding as shown on the Oregon Department of Geology and Mineral Industries (DOGAMI) HazVu map. Therefore, it is our opinion that a landslide hazard area does not exist at the site.

3.2.3 Seismic Hazard Areas

Soil liquefaction and seismically induced settlements typically occur in saturated loose to medium dense cohesionless soils; and in clays and silts with low plasticity indexes and with moistures near their liquid limits, due to cyclic softening where the groundwater is relatively shallow (within 50 feet of the ground surface). During an earthquake, ground shaking causes a rapid increase in the porewater pressure within the soil mass under undrained conditions. The generation of excess porewater pressures causes a corresponding decrease in the soil's effective stress, which can result in a sudden loss of soil bearing strength and ground surface settlement within the liquefied (and softened) soil layers. Soil liquefaction potential is generally affected by soil types, mineral contents, ground acceleration, duration of shaking, and frequency content of the earthquake ground motion, among other factors.

Based on the HazVu liquefaction susceptibility mapping, the site is considered to have a moderate to high susceptibility to liquefaction. However, based on the soil and groundwater conditions observed, it is our opinion that the risks for impacts related to soil liquefaction are negligible. The upper strata consist predominantly of cohesive soils, which possess sufficient shear strength to withstand cyclical loading without significant degradation. Beneath these layers, the subsurface profile transitions to gravel deposits characterized by high permeability. This permeability allows rapid dissipation of pore pressures during seismic shaking, further reducing the potential for liquefaction. Together, the cohesive upper materials and the well-drained gravel layers below provide a ground profile that is highly resistant to cyclic loading effects, resulting in low liquefaction risk.

Additionally, no known Quaternary faults traverse the property. The nearest mapped fault is the Canby–Molalla Fault (QFFD Fault No. 716), which lies approximately 4 miles to the east of the site. According to the United States Geologic Survey (USGS) Quaternary Fault and Fold Database, this fault is classified as Class A, indicating geologic evidence of Quaternary activity. Accordingly, the potential for ground rupture at the site is low, in our opinion.

3.3 Seismic Design Parameters

We understand that the project is governed by the current International Building Code (IBC). As part of this code, the design of structures must consider dynamic forces resulting from seismic events. These forces are dependent upon the magnitude of the earthquake event as well as the properties of the soils that underlie the site.

As part of the procedure to evaluate seismic forces, the code requires the evaluation of the Seismic Site Class, which categorizes the site based upon the characteristics of the subsurface profile within the upper 100 feet of the ground surface. Our CPT soundings extended to depths of 9.8 to 11.3 feet bgs, and geoprobe exploration extended to a depth of 20 feet bgs; however, to define the Site Class for this project, we have interpreted the results of the explorations drilled within the project site and estimated appropriate soil properties below the base of the explorations to a depth of 100 feet as permitted by the code. The estimated soil properties were based upon the soils encountered at the site, data available in published geologic reports, and our experience with subsurface conditions in the general site area.

Based upon our evaluation and the NEHRP site class map, the subsurface conditions at the site are consistent with the characteristics of a **Site Class "D"** as defined in Chapter 20.3.3 of the ASCE 7-16. This site classification may be used to determine seismic design forces.

3.4 FOUNDATIONS

In our opinion, the structural loads of the proposed development can be supported on conventional spread footing foundations constructed in accordance with the following design criteria. Additionally, PSI recommends that foundation type and bearing strata be consistent throughout a structure.

3.4.1 SHALLOW FOUNDATIONS

Shallow spread and continuous footings founded on native stiff silt or structural fill at a depth of at least 12 inches below lowest adjacent finished grade can be designed for a maximum net allowable soil bearing pressure of 2,000 pounds per square foot (psf) and a modulus of subgrade reaction (k) of 130 pounds per cubic inch (pci). The above recommended allowable soil bearing pressure may be increased by one third (⅓) for short term wind and/or seismic loads.

If unsuitable soils are encountered at footing excavation bottoms, the unsuitable material should be over excavated to suitable subgrade material and replaced with granular structural fill, with a minimum over-excavation depth of 12 inches. The lateral extent of the over excavation area beneath the design footing elevation should increase by 1-foot for each foot of over-excavation. The over excavated areas should be backfilled with structural fill or clean crushed rock and compacted in accordance with the *Structural Fill Materials* section of this report.

Based on the assumed loads and the recommended site preparation, we estimate that post-construction total settlement will be less than 1 inch. Differential settlement is estimated to be less than ½ inch over a 40-foot span. These magnitudes of estimated settlements are assumed to be within tolerable limits but should be confirmed by the project architect and structural engineer.

We recommend the use of a smooth-edged excavator to establish footing excavations. The foundation excavations should be observed by a representative of PSI prior to steel or concrete placement to assess that the foundation materials can support the design loads and are consistent with the materials and recommendations discussed in this report.

The base frictional resistance and the passive soil resistance will counteract the horizontal loads on shallow foundations. Footings cast against natural competent soil or compacted soil may be designed using a frictional coefficient between the concrete and soil of 0.30. An ultimate equivalent fluid pressure of 300 pounds per cubic foot (pcf) may be used to compute the ultimate passive resistance. This assumes footings are cast neat against native silt or backfilled with granular structural fill.

Passive resistance within the upper 1.5 feet of soil should be neglected if the footings are placed using form boards. If the footings are cast against competent natural soils or properly compacted fill soils and the soils above the footings are paved or consist of concrete floor slabs, the passive resistance within the upper 1.5 feet can be taken into account. The passive resistance of any un-compacted fill material or loose natural soils should be neglected. It is recommended that the overturning moments on the foundations be resisted by the weight of the foundation system. A minimum factor of safety of 2 should be used for sliding resistance.

The uplift resistance of a shallow foundation formed in an open excavation will be limited to the weight of the foundation concrete and the soil above it and any sustained dead load. The ultimate uplift resistance may be based on unit weights of 100 pounds per cubic foot (pcf) for silt soils and 150 pcf for concrete. This value should then be reduced by an appropriate factor of safety to arrive at the allowable uplift load. If there is a chance of submergence, the buoyant unit weights should be used.

After opening, footing excavations should be observed, and concrete should be placed as quickly as possible to avoid exposure of the excavations to wetting and drying. Surface run-off water should be drained away from the excavations and not be allowed to pond within 20 feet of the open excavation during or after construction. When possible, the foundation concrete should be placed during the same day the foundation excavation is made. If it is required that footing excavations be left open for more than one day, they should be protected to reduce moisture loss or gain.

PSI should be consulted during the design of the foundation pad to verify that the appropriate parameters are utilized. PSI should provide periodic observation during construction of the foundation pad to verify that the design parameters and the soil materials used during construction correspond.

3.5 FLOOR SLABS

To limit the settlement due to presence of soft soil at the surface, PSI recommends that the soils within the building footprint be over-excavated to a depth of at least 1 foot below new slabs-on-grade and capillary break material (pad grade) and replaced by Structural fill as described in *Structural Fill* Section.

Based on the near surface soil encountered in the probes, PSI estimates that a unit modulus of subgrade reaction (K_1) of 150 pounds per square inch per inch (psi/in) is suitable for concrete slab sections supported by compacted sandy silt. The coefficient of subgrade reaction (K_s) is the unit pressure required to produce a unit settlement in soils. The general equations to account for the effect of width of foundations in soils is given by:

$$K_s = K_1 \left(\frac{B+1}{2B}\right)^2 \qquad For\ cohesinless\ Soil$$

$$K_s = \frac{K_1}{B} \qquad For\ Cohesive\ Soil$$

where, B= Width of foundation in feet.

K_1 = Unit modulus of subgrade reaction for a one-foot square footing.

In areas that will have moisture-sensitive floor coverings will be placed directly on the floor, PSI recommends that the slabs-on-grade be underlain by a minimum 8 inches of sand or rounded aggregate base to provide a capillary break. A durable vapor-retarding membrane could be installed beneath the slab-on-grade to reduce the risks of damp floors. The vapor-retarding membrane should be installed in accordance with the manufacturer's recommendations.

3.6 EXCAVATIONS

Excavations associated with confined spaces, such as those for utility construction, must be completed in accordance with local, state, or federal requirements. Safety regulations for excavations in Oregon are governed by Oregon OSHA, Division 3, Subdivision P – Excavations. This document was issued to better ensure the safety of workmen entering trenches or excavations. It is mandated by this federal regulation that excavations, whether they be utility trenches, basement excavation or footing excavations, be constructed in accordance with the new OSHA guidelines. It is our understanding that these regulations are being strictly enforced and if they are not closely followed the owner and the contractor could be liable for substantial penalties.

In accordance with the State of Oregon OSHA requirements, the upper stiff to very stiff silt soils would be classified as Type B soils and the lower very dense gravel soils would be classified as Type C soils. Accordingly, temporary excavations in Type C soils should have their slopes laid back at an inclination of

1.5:1 (Horizontal: Vertical) or flatter, from the toe to the crest of the slope. Temporary excavations in Type B soils should have their slopes laid back at an inclination of 1:1 or flatter. If there is insufficient space to complete the excavations in this manner, or if excavations greater than 20 feet in depth are planned, then temporary shoring to support the excavations may be required. Properly designed and installed shoring trench boxes can be used to support utility trench excavations where required.

All exposed temporary slope faces that will remain open for an extended period of time should be covered with a durable reinforced plastic membrane during construction to prevent slope raveling and rutting during periods of precipitation.

The contractor is solely responsible for designing and constructing stable excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability. The contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations.

We are providing this information solely as a service to our client. PSI does not assume responsibility for construction site safety or other parties' compliance with local, state, and federal safety or other regulations.

3.7 SLOPES

Any permanent cut or fill slopes should not exceed a 4:1 inclination. Excavations extending below a 1:1 plane extending down from any adjacent footings should be shored for safety. All excavations should be inspected by a representative of the geotechnical engineer during construction to allow any modifications to be made due to variation in the soil types. All work should be performed in accordance with Oregon OSHA guidelines as described in the previous section.

3.8 DRAINAGE CONSIDERATIONS

Site grading should be carefully planned to promote positive drainage away from structures and to divert surface water away from or into stormwater systems. Water should not be allowed to collect near the structures either during or after construction.

Pavement surfaces and open space areas should be sloped such that surface water runoff is collected and routed to suitable discharge points.

Any utility trench that enters the perimeter of a structure should be excavated with a slight slope down and away from the perimeter of the structure.

3.9 FLATWORK

For sidewalks or other flatwork located adjacent to grade-supported foundations, the undercutting and select fill placement operations for the building should extend beyond the perimeter of the building and pavements to at least the width of the adjacent sidewalk or flatwork.

Any other sidewalks or flatworks not adjacent to buildings should be placed on an improved subgrade meeting or exceeding the pavement subgrade improvement methods recommended below. If the sidewalk subgrade consists of material with a plasticity index of 25 or greater, a 12-inch-thick layer of material satisfying the requirements of select fill provided in the *STRUCTURAL FILL* section must be placed below the sidewalk. The material should be compacted to 95% or greater than the maximum dry unit weight and contain a moisture content between -1 and +3% optimum moisture content.

Proper drainage around grade-supported sidewalks and flatwork is also very important to reduce potential movements. Elevating the sidewalks where possible and providing rapid, positive drainage away from them will reduce moisture variations within the underlying soils and will therefore provide valuable benefit in reducing the full magnitude of potential movements from being realized.

4.0 CONSTRUCTION CONSIDERATIONS AND RECOMMENDATIONS

4.1 SITE PREPARATION

The proposed parking areas should be stripped and grubbed of any construction debris, trash, vegetation, organic laden materials, and other structures in conflict with the proposed construction a minimum 5 feet outside the structural and pavement limits. We expect topsoil depths of approximately three to six inches will need to be stripped and removed from the site. Depressions or low areas resulting from stripping and grubbing should be backfilled with approved soil and compacted in accordance with the recommendations presented in this report.

During and following stripping and excavation, the contractor must take care to protect the subgrade from disturbance by construction traffic. The use of trackhoes equipped with smooth-edged buckets in lieu of scrapers for excavation tends to minimize the potential of subgrade disturbance. Also, the contractor should plan the earthwork operations such that heavy construction traffic is not permitted on the exposed fine-grained subgrade. Placement of structural fill concurrently with excavation is appropriate for this purpose. Exposed soils should be periodically evaluated by a geotechnical engineer during earthwork to detect any loose, soft, or disturbed areas that will require over excavation and replacement with structural fill.

We recommend that all construction traffic be limited to movement on granular work pads or haul roads to avoid remolding and softening the exposed fine-grained subgrade soils, especially during wet weather. Generally, 12 to 24 inches of relatively clean, fragmental rock placed over a geotextile fabric is required to protect the subgrade depending on the intensity of the construction traffic and the previous treatment of the subgrade. The use of a geotextile fabric between the granular work pad materials and underlying, untreated, subgrade soils serves as a separation filter to limit the movement of fines into the crushed rock. The use of a geotextile fabric tends to reduce maintenance of the section during construction.

4.2 STRUCTURAL FILL

4.2.1 GENERAL

All fill below foundations or within pavement, and sidewalk areas should be placed as compacted structural fill. All structural fill materials should be compacted per table below. Coarse granular fill should be compacted until fill is relatively firm and unyielding. No brush, roots, construction debris, or other deleterious material should be placed within the structural fills. The earthwork contractor's compactive effort should be evaluated based on field observations, and lift thicknesses should be adjusted accordingly to meet compaction requirements. Additional information regarding specific types of fill is provided below:

TABLE 4.1: COMPACTION CRITERIA AND TESTING FREQUENCY

Material Type	Density Test Method	Minimum Compaction (%)	Moisture Content Range (ref. to optimum moisture content)		Testing Frequency (min. 3 per lift)
			Minimum	Maximum	
Engineered Fill (fine-grained, coarse-grained/ Base Rock)	ASTM D 1557	95	-3%	+3%	1 Test per 2,500 s.f.

4.2.2 *FINE-GRAINED FILL*

The soils observed in the upper approximately 10 feet of the site would be considered fine-grained soils. Unless an admixture such as lime or cement is used, the on-site, fine-grained soils should only be used to as structural fills during the dry season. The natural moisture content of the on-site soils will likely be in excess of the optimum moisture content throughout the wet season (October through May); hence, some drying will be required to meet the above requirements for proper compaction. The required drying can best be accomplished during dry weather by spreading and aerating the material in thin lifts. Fine-grained soils should be placed in lifts less than 6 inches thick and compacted with segmented-pad rollers.

4.2.3 *TREATED SOILS*

Admixtures such as lime or cement may be mixed with fine-grained soils to treat subgrades or facilitate the construction of structural fills. The amount of admixture required depends on the moisture, clay, and organic content of the soil to be treated and needs to be determined at the time of construction; however, typically between 5% to 10% lime or cement, based on the dry weight of the treated soil, has been successfully used on similar soils in the past. Lime treatment principally serves to hydrate excessive moisture while modestly improving soil strength properties; cement treatment both hydrates excessive moisture and substantially improves the strength properties of a fine-grained subgrade or structural fill.

Treatment is accomplished by spreading measured quantities of lime or dry cement and tilling the upper 12 to 18 inches of the exposed subgrade, or into the structural fill lifts using specialized equipment. The treated soils are then compacted with segmented-pad rollers and finished with graders and smooth, steel drum, vibratory rollers. Cement-treated soils are typically given about 3 to 5 days to cure to establish the majority of their strength gain before being trafficked by equipment or placing granular base course.

4.2.4 *GRANULAR FILL*

Imported granular fill materials should consist of sand, gravel, or fragmental rock with a maximum size on the order of 4 inches and with not more than about 5% passing the No. 200 sieve (washed analysis). Material satisfying these requirements can usually be placed during periods of wet weather. The first lift of granular fill placed over a fine-grained subgrade should be about 18 in. thick and subsequent lifts about 12 inches thick when using medium- to heavy-weight vibratory rollers. Granular structural fill should be limited to a maximum size of about 1 ½ inches when compacted with hand-operated equipment. We also recommend that lift thicknesses be limited to less than 6 inches when using hand-operated vibratory plate compactors.

4.2.5 *DRAIN ROCK*

Drain rock, "capillary break" material, or "free-draining" material should have less than 2 percent passing the No. 200 (75-µm) sieve (washed analysis). Examples of these materials include ¾-inch to ¼-inch or 1½-inch to ¾-inch, or 3-inch to 1-inch crushed rock.

4.3 OVER-EXCAVATION

Due to the presence of near-surface fine-grained material, we anticipate that exposed soils in the project area will become easily disturbed. Exposed silt soils will degrade quickly under construction traffic if shallow groundwater is encountered or rainy weather occurs during site clearing and preparation. Where exposed soils become disturbed, we recommend overexcavating the disturbed areas by a depth of approximately 18 inches, placing a geotextile fabric, or geogrid, over the exposed overexcavated subgrade, and restoring grade with two- to four-inch quarry spalls. This overexcavation and replacement method can provide a stable surface for areas exposed to construction traffic.

If disturbed soils are exposed at slab-on-grade or foundation subgrades, we recommend overexcavating the loose/soft soils and replacing them with new structural fill meeting the gradation requirements outlined below. We expect overexcavation depths of no more than 12 inches. Overexcavations should be extended laterally by one foot for each foot of overexcavation depth. The lateral extent and depth of the overexcavations should be determined in the field during grading.

4.4 PROOF ROLLING

Following site preparation and over-excavation, the newly exposed subgrades in site improvement areas intended for structures and pavements should be approved by the geotechnical engineer prior to fill placement. These exposed subgrades should be proof rolled with a loaded tandem axle dump truck or similar pieces of rubber-tired equipment in the presence of the geotechnical engineer's representative. The purpose of the proof rolling is to detect the existence of marginal or loose near-surface materials or unsuitable soils that may require undercutting. Areas which deflect, rut or pump excessively during proof rolling, and which cannot de densified in-place, should be undercut to suitable soils and backfilled and/or as directed by the geotechnical engineer. Proof rolling should not be performed on saturated, frozen or during wet weather conditions.

4.5 UTILITIES

Utility trenches may be backfilled with suitable onsite native soils or imported soil above the pipe zone. Trench backfill should be moisture conditioned to within 0 to 4 percent above the optimum moisture content, compacted in 6- to 8-inch lifts to a minimum of 90 percent of the maximum dry density as determined by the modified Proctor (ASTM D1557). In pavement areas, the top 12-inches of soil subgrade should reach a minimum of 95 percent of this Proctor. If rocks larger than 3-inches in maximum size are encountered, they should be removed from the backfill material prior to placement in the utility trenches. Pipe zone backfill requirements should be in conformance with the requirements of the local agencies having jurisdiction but should consist of clean granular sand material having a sand equivalent equal to or above 30. Jetting or flooding of utility backfill is not recommended. If smaller compaction equipment such as jumping jacks or plate compactors are used, thinner lifts will be required to achieve compaction. Where utilities cross building perimeters, concrete or concrete slurry should be used for backfilling around the utility to prevent moisture from migrating along the utility trench and entering the building envelope.

4.6 OBSTRUCTIONS

Subsurface conditions can be highly variable and make earthwork difficult due to the possible presence of geologic inclusions such as cobbles, boulders, glacial erratics, and/or organic debris. Moreover, on previously developed sites, buried infrastructure such as utilities or stormwater structures can be encountered during construction as the identification and location of such structures are not necessarily known prior to construction. Therefore, contractors should anticipate the possibility of encountering subsurface obstructions during the construction process and prepare appropriate mitigation measures.

4.7 WET WEATHER AND WET CONDITIONS CONSIDERATIONS

Wet weather and increased presence of moisture should be expected in the Pacific Northwest between the months of October and May, although the contractor should be prepared for wet conditions during any time of the year. The soils encountered at this site are expected to be sensitive to disturbances caused by construction traffic and changes in moisture content. During wet weather periods, increases in the moisture content of the soil can cause significant reduction in soil strength and support capabilities. In addition, soils which become wet may be slow to dry and thus significantly retard the progress of grading and compaction activities. Moreover, groundwater levels below the site could rise due to increased precipitation, resulting in heavier seepage into excavations. It will, therefore, be advantageous to perform earthwork and foundations construction activities during dry weather.

Should earthwork scheduling during inclement wet weather conditions be unavoidable, the following recommendations are provided:

- Surface grades in and surrounding the construction area should promote positive drainage to convey runoff of precipitation away from works areas and to prevent ponding of water.
- Work areas and/or slopes should be covered with durable plastic membranes when not being worked. The implementation of slopes, swales, sumps, dewatering, and additional measures should be utilized as necessary to mitigate the impact of free water on earthwork operations.
- Earthwork should be completed in manageable stages in order to minimize the site's exposure to wet conditions. The removal and replacement of, or remediation of unsuitable soils at the site in any given stage should be accomplished within the same day.
- The size of construction equipment may need to be limited in order to prevent disturbance of moisture sensitive or over-optimum soils. Excavation areas, excavation equipment, and construction traffic should be located relative to each other as to prevent disturbing exposed subgrades with construction traffic.
- Wet-weather fill material should consist of clean, well-graded sand and gravel with no more than 5 percent fines by dry weight passing the No. 200 mesh sieve, based on wet-sieving (ASTM D1140). Gravel contents should range from 20 to 50 percent retained on the No. 4 mesh sieve. Any fines should be non-plastic.
- Any exposed fill should be compacted and sealed with a smooth-drum vibratory roller on the day of its placement to seal out as much moisture as possible. Exposed foundation subgrades should be armored with a four-inch layer of crushed rock or lean-mix concrete during the same day they are exposed.
- In-situ soils or fill soils that become wet and unstable and/or too wet to suitably compact should be removed and replaced with clean, granular soil meeting the gradation requirement outlined above.
- The excavation and placement of structural fill should be observed on a full-time basis by a geotechnical engineer (or representative) experienced in wet weather/wet condition earthwork to verify that all work accomplished is in accordance with the project specifications and the recommendations outlined in this report.
- Grading and earthwork should not take place during periods of heavy, continuous rainfall.

We recommend that the above requirements for wet weather/wet conditions earthwork be incorporated into the contract specifications.

4.8 PLAN REVIEW AND CONSTRUCTION OBSERVATION

After final plans and specifications are complete, PSI should review the final design and specifications so that the earthwork and foundation recommendations are properly interpreted and implemented. It is considered imperative that the Geotechnical Engineer and/or their representative be present during earthwork operations and foundation installations to observe the field conditions with respect to the design documents and specifications. PSI will not be responsible for changes in the project design or project information it was not provided, or interpretations and field quality control observations made by others. PSI would be pleased to provide these services for this project.

5.0 GEOTECHNICAL RISK AND REPORT LIMITATIONS

The concept of risk is an important aspect of the geotechnical evaluation. The primary reason for this is that the analytical methods used to develop geotechnical recommendations do not comprise an exact science. The analytical tools which geotechnical engineers use are generally empirical and must be used in conjunction with engineering judgment and experience. Therefore, the solutions and recommendations presented in the geotechnical evaluation should not be considered risk-free and, more importantly, are not a guarantee that the interaction between the soils and the proposed structure will perform as planned. The engineering recommendations presented in the preceding sections constitute PSI's professional estimate of those measures that are necessary for the proposed structure to perform according to the proposed design based on the information generated and referenced during this evaluation, and PSI's experience in working with these conditions.

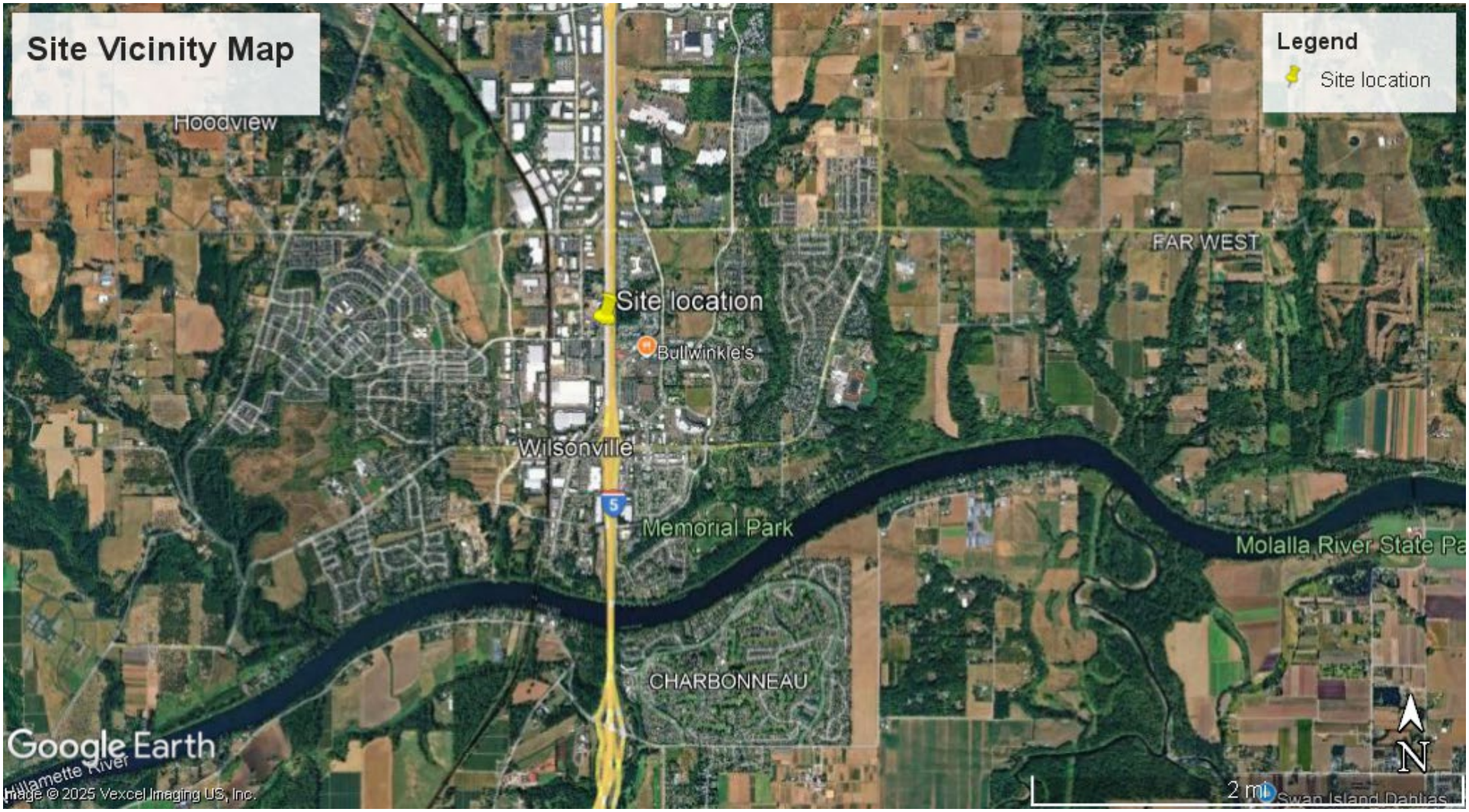
Services performed by PSI for this project have been conducted with that level of care and skill ordinarily exercised by members of the profession currently practicing in this area. No warranty, expressed or implied, is made.

The recommendations submitted are based on the available subsurface information obtained by PSI, and information provided by the client, client's representative and client's design consultants. If there are any revisions to the plans for this project or if deviations from the subsurface conditions noted in this report are encountered during construction, PSI should be notified immediately to determine if changes in the foundation and/or other recommendations are required. If PSI is not retained to perform these functions, PSI cannot be responsible for the impact of those conditions on the performance of the project.

The Geotechnical Engineer should be retained and provided the opportunity to review the final design plans and specifications to check that our engineering recommendations have been properly incorporated into the design documents. At that time, it may be necessary to submit supplementary recommendations.

This report has been prepared for the exclusive use of Client and their design consultants, for the aforementioned project parameters.

FIGURES



Professional Service Industries, Inc.
6032 N. Cutter Circle, Suite 480
Portland, OR 97217
Phone: (503) 289–1778

Site Vicinity Map
Figure 1
PSI Project No. 07041598

Ionna Proposed EV Charging Station

9045 SW Barber St
Wilsonville, Oregon

Professional Service Industries, Inc.
6032 N. Cutter Circle, Suite 480
Portland, OR 97217
Phone: (503) 289–1778

Exploration Location Plan
Figure 2
PSI Project No. 07041598

Ionna Proposed EV Charging Station

9045 SW Barber St
Wilsonville, Oregon

APPENDIX A

Field Exploration & Laboratory Testing Program

FIELD EXPLORATION PROGRAM

PSI explored subsurface conditions on November 10, 2025. The field exploration consisted of advancing one Geoprobe and two CPTu inside the parking envelope which were subcontracted to Oregon Geotechnical Explorations.

Approximate exploration locations are shown on Figure 2, Exploration Location Map. PSI notified the Oregon Utility Notification Center to indicate the approximate location of underground utilities in the vicinity of the proposed exploration locations prior to commencing field activities.

A representative from PSI's office observed the drilling and prepared a Geoprobe log of the conditions encountered. During field activities, the encountered subsurface conditions were observed, logged, and visually classified (in general accordance with ASTM D2488/D2487). Field notes were maintained to summarize soil types and descriptions, water levels, changes in subsurface conditions, and drilling conditions.

It should be noted that the subsurface conditions presented on the exploration logs are representative of the conditions at the specific locations drilled. Variations may occur and should be expected across the site. The soil morphology represents the approximate boundary between subsurface materials and the transitions may be gradual and indistinct.

Exploration Location Selection and Staking

The exploration plan was superimposed onto Google Earth™ Imagery and the latitude and longitude were recorded. The location of the explorations in the field were established by hand-held GPS using the coordinates from Google Earth™. The latitude, longitude and elevation are noted on each exploration log with the perceived accuracy unknown. If accurate locations and elevations are needed, PSI recommends the client/owner have exploration locations and elevations determined by survey methods.

Cone Penetration Test

The SCPTu is an in-situ testing method used to determine the geotechnical engineering properties of soils and delineating soil lithology. The test method consists of advancing an instrumented cone tip, mechanical or electric, through several rods and at a constant rate of 2 cm/sec. The resistance needed to penetrate the ground is measured continuously. The total force acting on the cone is called the cone resistance (qc). Measurements with an electric cone, equipped with a friction sleeve, provide the local sleeve friction (fs) which can be related to the undrained shear strength of fine-grained soils and the friction resistance of cohesion less soils. The dimensionless ratio of the friction sleeve to point bearing capacity provides an indicator of the type of soil penetrated. Measurements of pore water pressure and rates of dissipation are also made with a piezometer fitted between the cone and the sleeve. SCPTu probe testing does not allow for visual classification of the subsurface soils, but instead classifies the soil based on a correlation between tip resistance and side friction obtained in real-time during the testing. Cone penetration test logs and data are provided in this Appendix

Downhole Shear wave Velocity Measurements. Down hole shear wave velocity measurements were made while advancing each of the probes. This test consists of generating a shear wave by striking a hammer equipped with a trigger on a source beam located on the ground surface under the outrigger of the cone rig. The seismic cone consists of a piezocone unit with a receiver above it. The seismic cone penetrometer is pushed into the ground and penetration is stopped at 1-meter intervals. During the pause in penetration, a shear wave is generated at the ground surface and the time required for the shear wave to reach the seismometer in the cone penetrometer is recorded. The shear wave velocity measurements are used with elastic theory to estimate the mass density of the soil layers

Pore Pressure Dissipation Tests. Pore Pressure Dissipation Tests (PPDT's) conducted at various intervals measured hydrostatic water pressures and determined the approximate depth of the ground water table. A PPDT is conducted when the cone is halted at specific intervals determined by the field representative. The variation of the penetration pore pressure (u) with time is measured behind the tip of the cone and recorded by a computer system.

Pore pressure dissipation data can be interpreted to provide estimates of:

- Equilibrium piezometric pressure
- Phreatic Surface
- In situ horizontal coefficient of consolidation (ch)
- In situ horizontal coefficient of permeability (kh)

In order to correctly interpret the equilibrium piezometric pressure and/or the phreatic surface, the pore pressure must be monitored until such time as there is no variation in pore pressure with time. This time is commonly referred to as t_{100}, the point at which 100% of the excess pore pressure has dissipated.

The estimated Groundwater Depth at the site based on the pore pressure dissipation tests could not be determined as refusal was reached at a shallow depth.

Field Classification

Soil samples were initially classified visually in the field. Consistency, color, relative moisture, degree of plasticity, and other distinguishing characteristics of the soil samples were noted. The terminology used in the soil classifications and other modifiers are depicted in the General Notes and Soil Classification Chart.

BORING GP-1

DATE STARTED:	11/10/25	**DRILL COMPANY:**	
DATE COMPLETED:	11/10/25	**DRILLER:**	Terry Jacques
COMPLETION DEPTH	20.0 ft	**LOGGED BY:**	Abhimanyu Patel
BENCHMARK:	N/A	**DRILL RIG:**	Geoprobe 6622CPT
ELEVATION:	176 ft	**DRILLING METHOD:**	Direct Push
LATITUDE:	45.310387°	**SAMPLING METHOD:**	
LONGITUDE:	-122.77007°	**HAMMER TYPE:**	N/A
STATION:	N/A	**EFFICIENCY**	N/A
OFFSET:	N/A	**REVIEWED BY:**	DCB

Water

BORING LOCATION:

REMARKS:

Elevation (feet)	Depth, (feet)	Material Description	USCS Classification	Moisture, %	Additional Remarks
175	0	Brown SILT (Stiff to Very Stiff, moist) (lacustrine deposits)	ML	26	Fines=88.5%
170	5			35	
165	10	Brown silty GRAVEL with sand (Very Dense, moist)	GM	31	
160	15			17	Fines=27.2%
	20	Boring terminated at 20 ft bgl			

STANDARD PENETRATION TEST DATA
N in blows/ft ◎
Moisture PL LL
0 25 50
STRENGTH, tsf
Qu Qp
0 2.0 4.0

intertek psi

Professional Service Industries, Inc.
6032 N. Cutter Circle, Suite 480
Portland, OR 97219
Telephone: (503) 289-1778

PROJECT NO.: 07041598
PROJECT: Ionna Proposed EV Charging Station
LOCATION: 9045 SW Barber St
Wilsonville, OR

The stratification lines represent approximate boundaries. The transition may be gradual.

GENERAL NOTES

SAMPLE IDENTIFICATION

The Unified Soil Classification System (USCS), AASHTO 1988 and ASTM designations D2487 and D-2488 are used to identify the encountered materials unless otherwise noted. Coarse-grained soils are defined as having more than 50% of their dry weight retained on a #200 sieve (0.075mm); they are described as: boulders, cobbles, gravel or sand. Fine-grained soils have less than 50% of their dry weight retained on a #200 sieve; they are defined as silts or clay depending on their Atterberg Limit attributes. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size.

DRILLING AND SAMPLING SYMBOLS

SFA: Solid Flight Auger - typically 4" diameter flights, except where noted.
HSA: Hollow Stem Auger - typically 3¼" or 4¼ I.D. openings, except where noted.
M.R.: Mud Rotary - Uses a rotary head with Bentonite or Polymer Slurry
R.C.: Diamond Bit Core Sampler
H.A.: Hand Auger
P.A.: Power Auger - Handheld motorized auger

SS: Split-Spoon - 1 3/8" I.D., 2" O.D., except where noted.
ST: Shelby Tube - 3" O.D., except where noted.
RC: Rock Core
TC: Texas Cone
BS: Bulk Sample
PM: Pressuremeter
CPT-U: Cone Penetrometer Testing with Pore-Pressure Readings

SOIL PROPERTY SYMBOLS

N: Standard "N" penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2-inch O.D. Split-Spoon.
N_{60}: A "N" penetration value corrected to an equivalent 60% hammer energy transfer efficiency (ETR)
Q_u: Unconfined compressive strength, TSF
Q_p: Pocket penetrometer value, unconfined compressive strength, TSF
w%: Moisture/water content, %
LL: Liquid Limit, %
PL: Plastic Limit, %
PI: Plasticity Index = (LL-PL),%
DD: Dry unit weight, pcf
▼,▽,⧩ Apparent groundwater level at time noted

RELATIVE DENSITY OF COARSE-GRAINED SOILS

Relative Density	N - Blows/foot
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	50 - 80
Extremely Dense	80+

ANGULARITY OF COARSE-GRAINED PARTICLES

Description	Criteria
Angular:	Particles have sharp edges and relatively plane sides with unpolished surfaces
Subangular:	Particles are similar to angular description, but have rounded edges
Subrounded:	Particles have nearly plane sides, but have well-rounded corners and edges
Rounded:	Particles have smoothly curved sides and no edges

GRAIN-SIZE TERMINOLOGY

Component	Size Range
Boulders:	Over 300 mm (>12 in.)
Cobbles:	75 mm to 300 mm (3 in. to 12 in.)
Coarse-Grained Gravel:	19 mm to 75 mm (¾ in. to 3 in.)
Fine-Grained Gravel:	4.75 mm to 19 mm (No.4 to ¾ in.)
Coarse-Grained Sand:	2 mm to 4.75 mm (No.10 to No.4)
Medium-Grained Sand:	0.42 mm to 2 mm (No.40 to No.10)
Fine-Grained Sand:	0.075 mm to 0.42 mm (No. 200 to No.40)
Silt:	0.005 mm to 0.075 mm
Clay:	<0.005 mm

PARTICLE SHAPE

Description	Criteria
Flat:	Particles with width/thickness ratio > 3
Elongated:	Particles with length/width ratio > 3
Flat & Elongated:	Particles meet criteria for both flat and elongated

RELATIVE PROPORTIONS OF FINES

Descriptive Term	% Dry Weight
Trace:	< 5%
With:	5% to 12%
Modifier:	>12%

GENERAL NOTES

(Continued)

CONSISTENCY OF FINE-GRAINED SOILS

Q_U - TSF	N - Blows/foot	Consistency
0 - 0.25	0 - 2	Very Soft
0.25 - 0.50	2 - 4	Soft
0.50 - 1.00	4 - 8	Firm (Medium Stiff)
1.00 - 2.00	8 - 15	Stiff
2.00 - 4.00	15 - 30	Very Stiff
4.00 - 8.00	30 - 50	Hard
8.00+	50+	Very Hard

MOISTURE CONDITION DESCRIPTION

Description	Criteria
Dry:	Absence of moisture, dusty, dry to the touch
Moist:	Damp but no visible water
Wet:	Visible free water, usually soil is below water table

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term	% Dry Weight
Trace:	< 15%
With:	15% to 30%
Modifier:	>30%

STRUCTURE DESCRIPTION

Description	Criteria
Stratified:	Alternating layers of varying material or color with layers at least ¼-inch (6 mm) thick
Laminated:	Alternating layers of varying material or color with layers less than ¼-inch (6 mm) thick
Fissured:	Breaks along definite planes of fracture with little resistance to fracturing
Slickensided:	Fracture planes appear polished or glossy, sometimes striated
Blocky:	Cohesive soil that can be broken down into small angular lumps which resist further breakdown
Lensed:	Inclusion of small pockets of different soils
Layer:	Inclusion greater than 3 inches thick (75 mm)
Seam:	Inclusion 1/8-inch to 3 inches (3 to 75 mm) thick extending through the sample
Parting:	Inclusion less than 1/8-inch (3 mm) thick

SCALE OF RELATIVE ROCK HARDNESS

Q_U - TSF	Consistency
2.5 - 10	Extremely Soft
10 - 50	Very Soft
50 - 250	Soft
250 - 525	Medium Hard
525 - 1,050	Moderately Hard
1,050 - 2,600	Hard
>2,600	Very Hard

ROCK BEDDING THICKNESSES

Description	Criteria
Very Thick Bedded	Greater than 3-foot (>1.0 m)
Thick Bedded	1-foot to 3-foot (0.3 m to 1.0 m)
Medium Bedded	4-inch to 1-foot (0.1 m to 0.3 m)
Thin Bedded	1¼-inch to 4-inch (30 mm to 100 mm)
Very Thin Bedded	½-inch to 1¼-inch (10 mm to 30 mm)
Thickly Laminated	1/8-inch to ½-inch (3 mm to 10 mm)
Thinly Laminated	1/8-inch or less "paper thin" (<3 mm)

ROCK VOIDS

Voids	Void Diameter
Pit	<6 mm (<0.25 in)
Vug	6 mm to 50 mm (0.25 in to 2 in)
Cavity	50 mm to 600 mm (2 in to 24 in)
Cave	>600 mm (>24 in)

GRAIN-SIZED TERMINOLOGY

(Typically Sedimentary Rock)

Component	Size Range
Very Coarse Grained	>4.76 mm
Coarse Grained	2.0 mm - 4.76 mm
Medium Grained	0.42 mm - 2.0 mm
Fine Grained	0.075 mm - 0.42 mm
Very Fine Grained	<0.075 mm

ROCK QUALITY DESCRIPTION

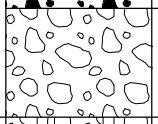
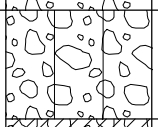
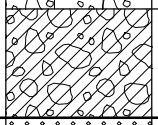
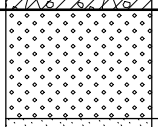
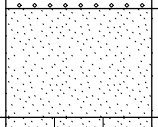
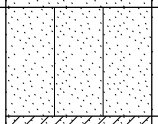
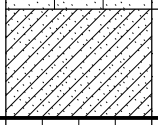
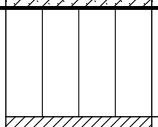
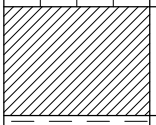
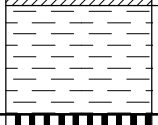
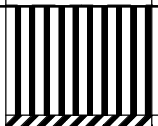
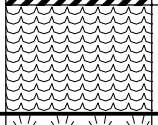
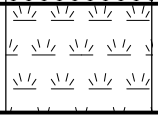
Rock Mass Description	RQD Value
Excellent	90 -100
Good	75 - 90
Fair	50 - 75
Poor	25 -50
Very Poor	Less than 25

DEGREE OF WEATHERING

Slightly Weathered:	Rock generally fresh, joints stained and discoloration extends into rock up to 25 mm (1 in), open joints may contain clay, core rings under hammer impact.
Weathered:	Rock mass is decomposed 50% or less, significant portions of the rock show discoloration and weathering effects, cores cannot be broken by hand or scraped by knife.
Highly Weathered:	Rock mass is more than 50% decomposed, complete discoloration of rock fabric, core may be extremely broken and gives clunk sound when struck by hammer, may be shaved with a knife.

SOIL CLASSIFICATION CHART

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

LABORATORY TESTING PROGRAM AND PROCEDURES

Soil samples obtained during field explorations were examined in our laboratory. The physical characteristics of the samples were noted, and the field classifications were modified, where necessary. Representative samples were selected during the course of the examination for further testing.

- **Moisture Content**

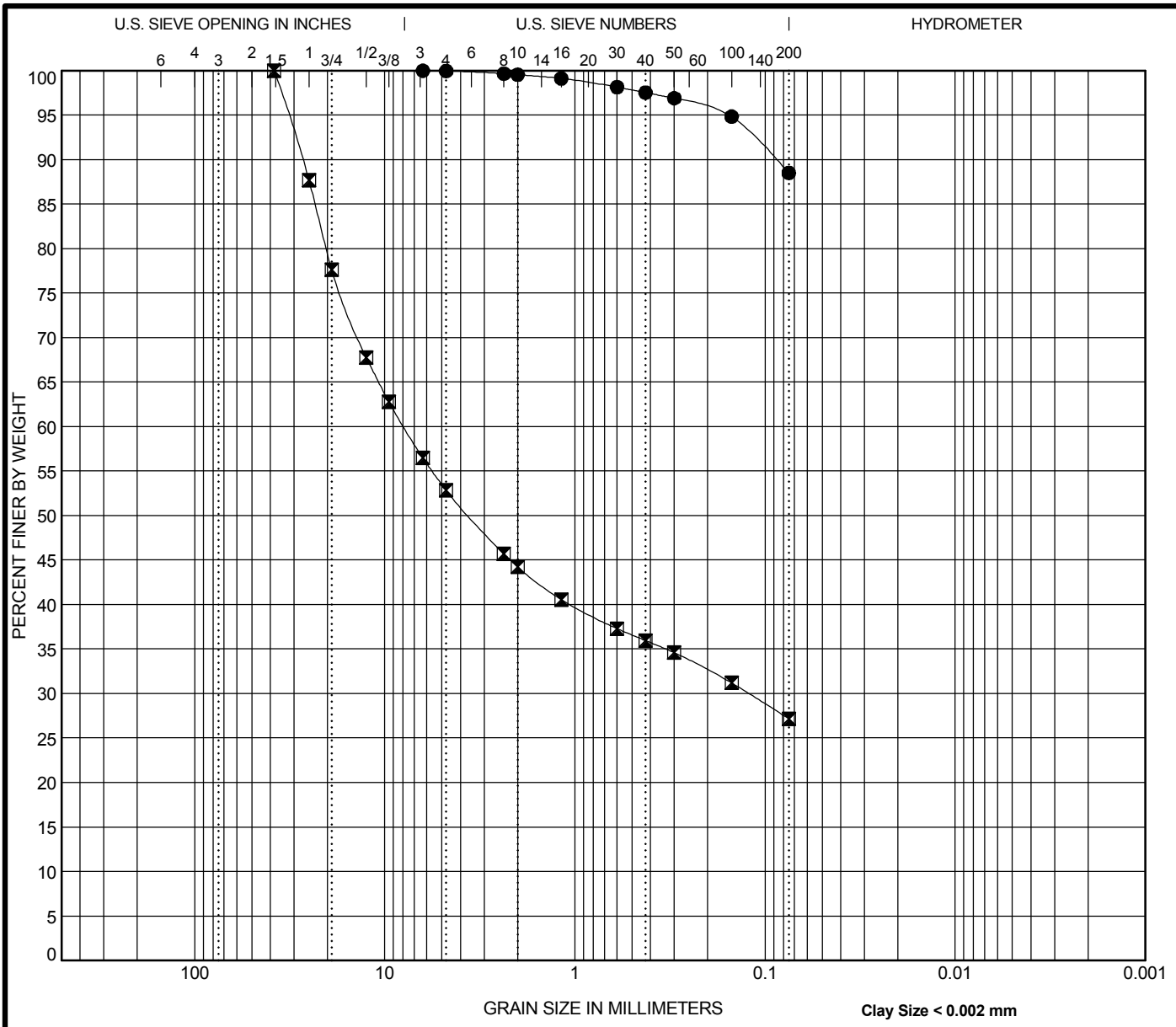
Natural moisture content determinations were made on selected soil samples in general accordance with ASTM D2216. The natural moisture content is defined as the ratio of the weight of water to the dry weight of soil, expressed as a percentage. Results are shown on the exploration logs.

- **Visual-Manual Classification**

The soil samples were classified in general accordance with guidelines presented in ASTM D2487. Certain terminology incorporating current local engineering practice, as provided in the Soil Classification Chart, is included with, or in lieu of, ASTM terminology. The term which best described the major portion of the sample was used in determining the soil type (i.e., gravel, sand, silt or clay). Results are shown on the exploration logs.

- **Sieve Analysis**

The determination of the amount of material finer than the U.S. Standard No. 200 (75-µm) sieve was made on selected soil sample in general accordance with ASTM D1140. In general, the sample was dried in an oven and then washed with water over the No. 200 sieve. The mass retained on the No. 200 sieve was dried in an oven, and the dry weight recorded. Results from this test procedure assist in determining the fraction, by weight, of coarse-grained and fine-grained soils in the sample. Results are shown on the exploration logs.
The determination of the gradation curve of the coarse-grained material was made on selected soil samples in general accordance with ASTM D6913. In general, the oven dried mass retained on the No. 200 sieve is passed over progressively smaller sieve openings, by agitating the sieves by hand or by a mechanical apparatus. The mass retained on each sieve is recorded as a fraction of the total sample, including the percent passing the No. 200 sieve. Results are shown on the Grain Size Analyses below.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**GP-1**	**0.0**						
⊠	**GP-1**	**15.0**						

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**GP-1**	**0.0**	**6.3**				**0.0**	**11.5**	**88.5**	
⊠	**GP-1**	**15.0**	**38.1**	**7.927**	**0.122**		**47.2**	**25.7**	**27.2**	

intertek psi
Professional Service Industries, Inc.
6032 N. Cutter Circle, Suite 480
Portland, OR 97219
Telephone: (503) 289-1778
Fax:

GRAIN SIZE DISTRIBUTION

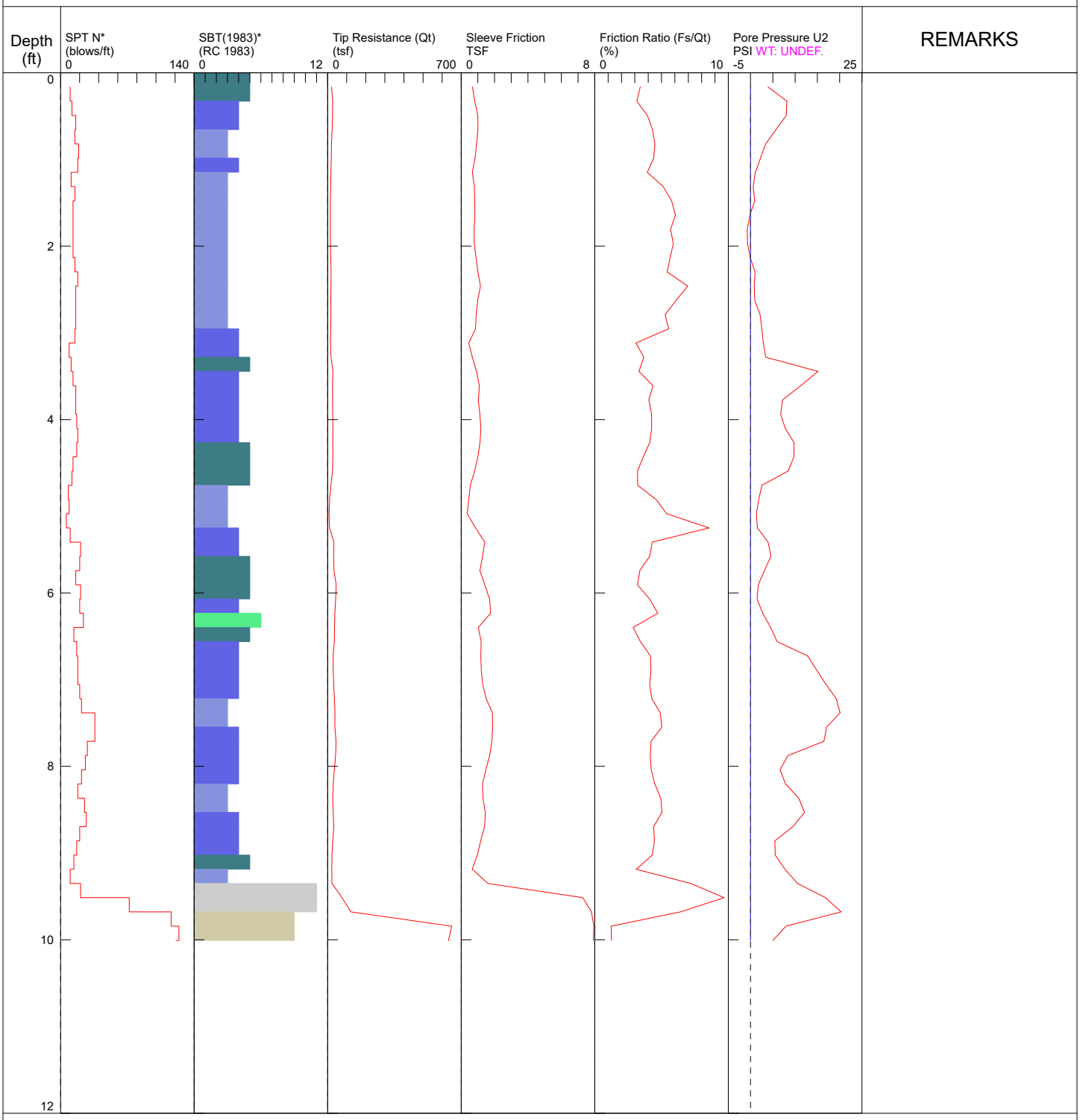
Project: Ionna Proposed EV Charging Station
PSI Job No.: 07041598
Location: 9045 SW Barber St
Wilsonville, OR

APPENDIX B

CPT Exploration results

PSI / CPT-1 / 9025 SW Barber St Wilsonville

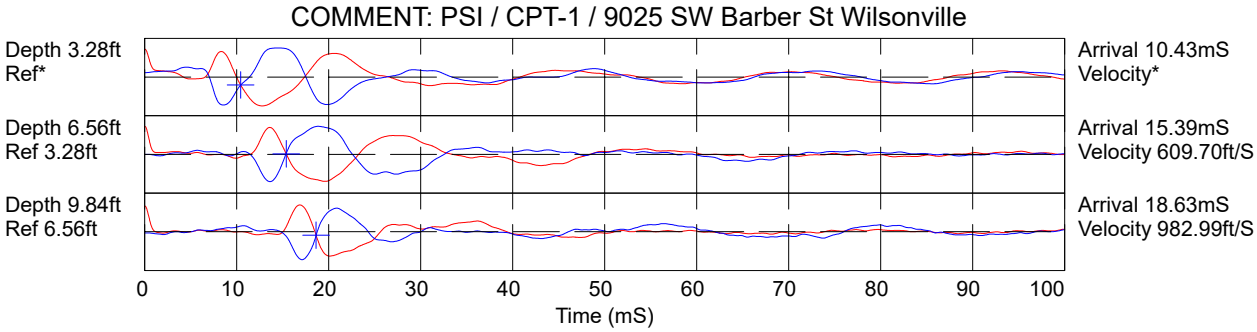
OPERATOR: OGE DMM
TEST DATE: 11/10/2025 9:15:50 AM
CONE ID: DDG1661
TOTAL DEPTH: 10.007 ft
HOLE NUMBER: CPT-1



REMARKS

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

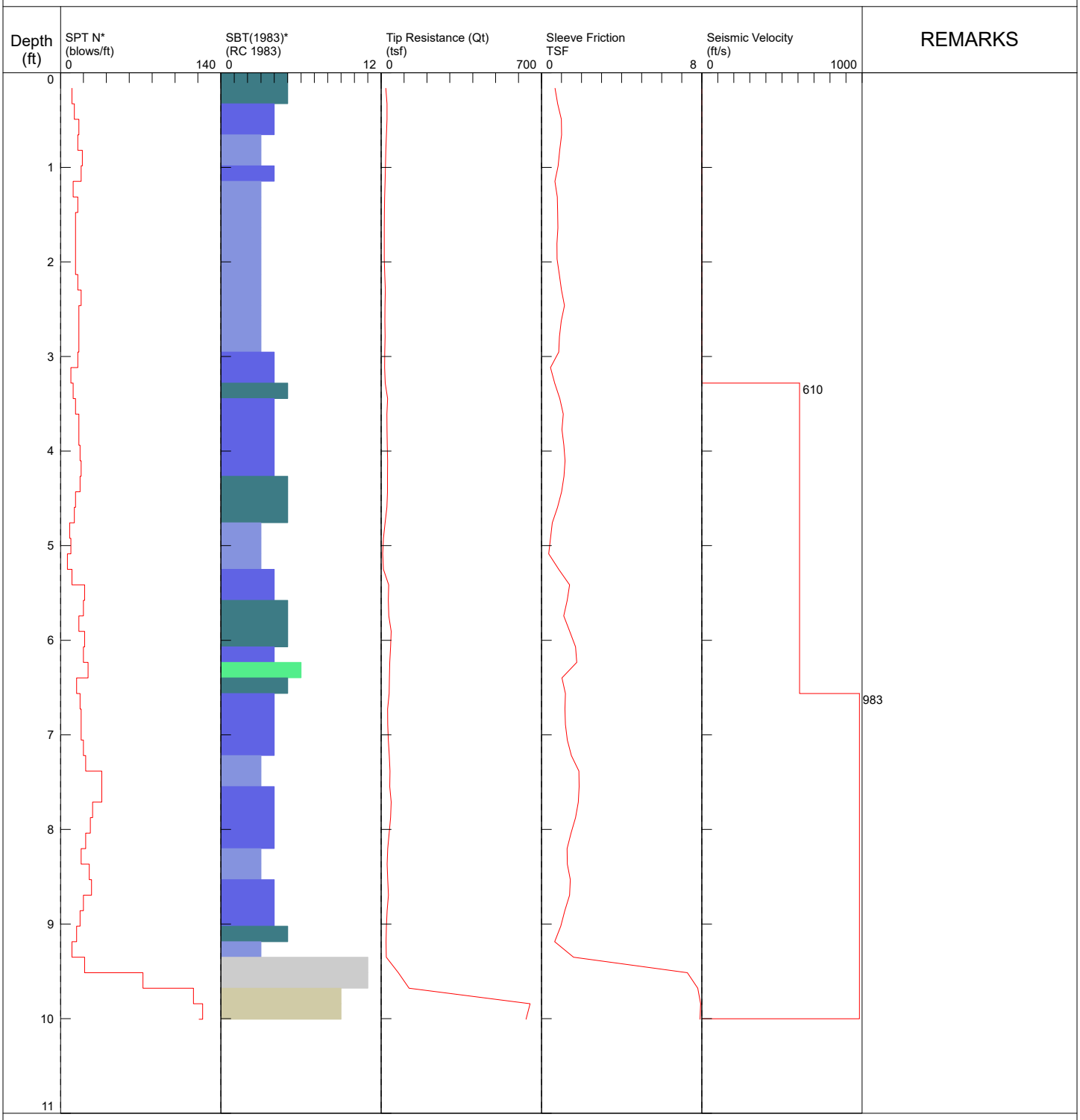


Hammer to Rod String Distance (ft): 1.97
* = Not Determined

COMMENT:

PSI / CPT-1 / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 9:15:50 AM
CONE ID: DDG1661
TOTAL DEPTH: 10.007 ft
HOLE NUMBER: CPT-1

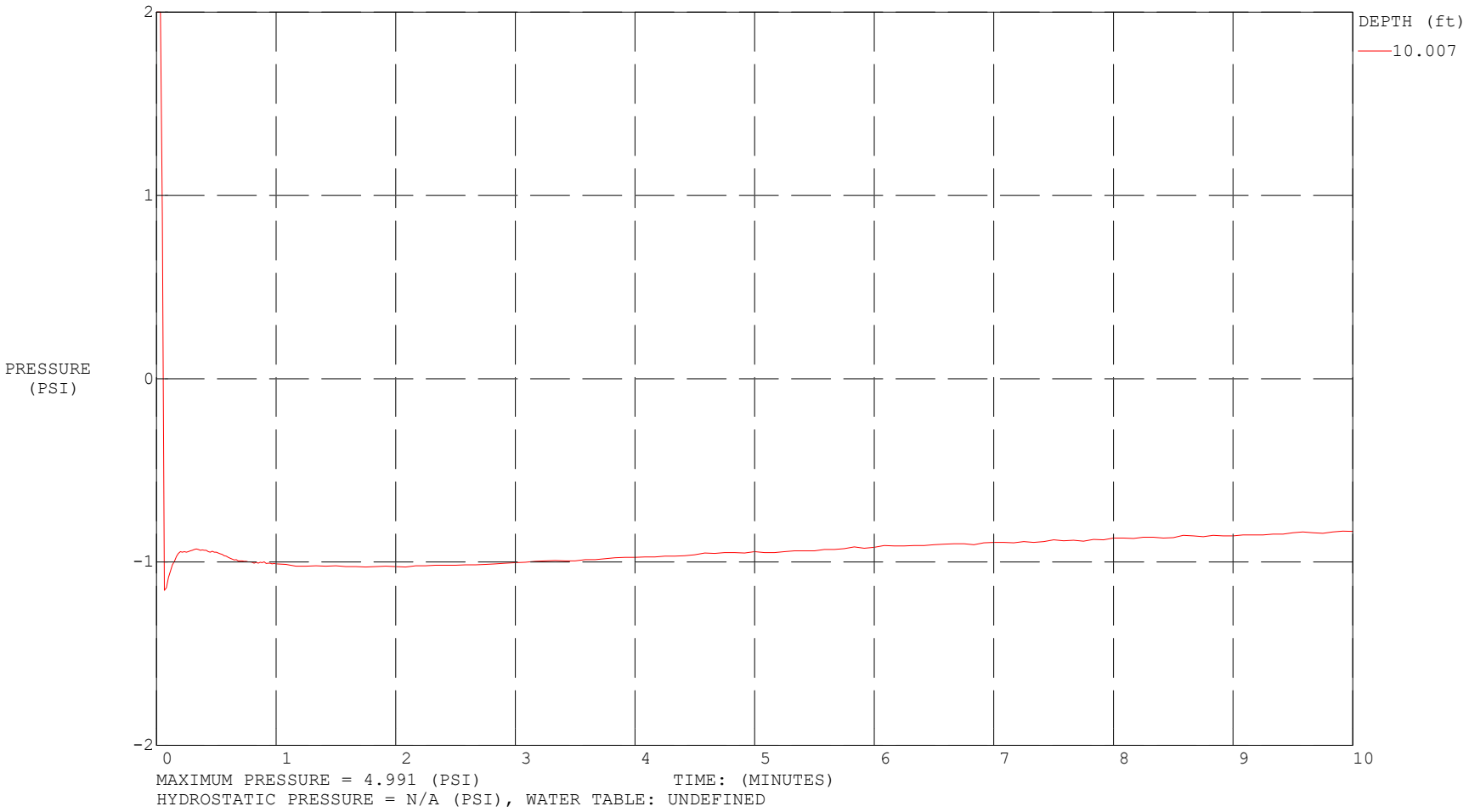


1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

COMMENT: PSI / CPT-1 / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
CONE ID: DDG1661
TEST DATE: 11/10/2025 9:15:50 AM



PSI / CPT-1 / 9025 SW Barber St Wilsonville

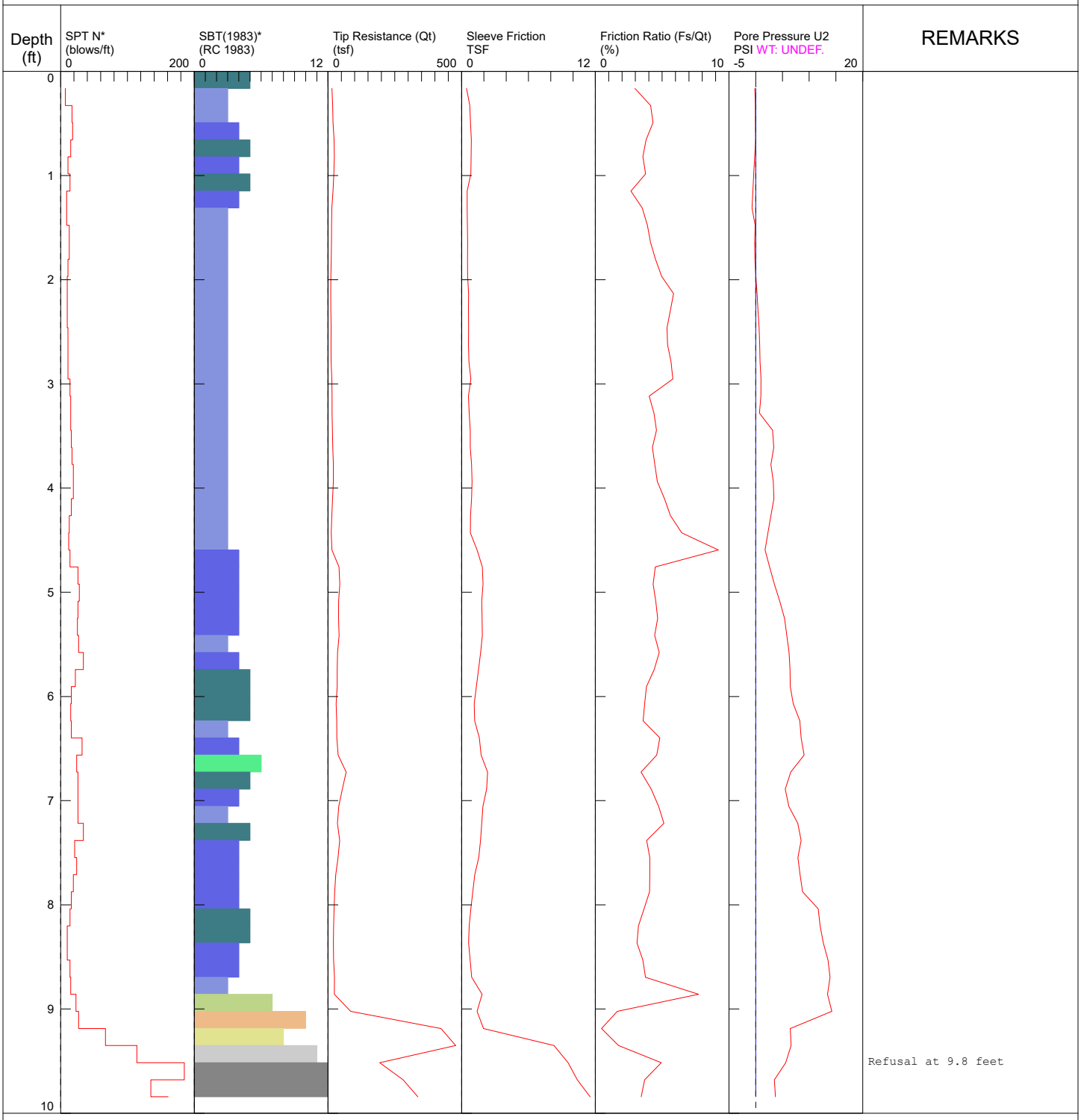
OPERATOR: OGE DMM
TEST DATE: 11/10/2025 9:15:50 AM
CONE ID: DDG1661
TOTAL DEPTH: 10.007 ft
HOLE NUMBER: CPT-1

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
0.164	19.87	0.6754	3.400	3.899	10	5	clayey silt to silty clay
0.328	25.83	0.8107	3.140	8.150	12	5	clayey silt to silty clay
0.492	25.18	0.9921	3.941	8.009	16	4	silty clay to clay
0.656	23.19	1.0016	4.319	5.683	15	4	silty clay to clay
0.820	20.22	0.9092	4.497	3.384	19	3	clay
0.984	18.82	0.8290	4.407	2.247	18	3	clay
1.148	17.06	0.6699	3.929	1.078	11	4	silty clay to clay
1.312	15.39	0.7876	5.117	0.568	15	3	clay
1.476	14.07	0.8098	5.756	0.932	13	3	clay
1.640	13.57	0.8191	6.036	-0.158	13	3	clay
1.804	13.58	0.7705	5.675	-0.757	13	3	clay
1.969	13.31	0.7814	5.872	-0.692	13	3	clay
2.133	15.77	0.8903	5.648	-0.079	15	3	clay
2.297	18.44	0.9981	5.414	0.982	18	3	clay
2.461	16.51	1.1485	6.957	0.814	16	3	clay
2.625	16.25	0.9885	6.085	0.948	16	3	clay
2.789	17.00	0.8960	5.273	2.127	16	3	clay
2.953	15.54	0.8594	5.530	2.539	15	3	clay
3.117	14.74	0.4540	3.081	2.831	9	4	silty clay to clay
3.281	17.95	0.6590	3.672	3.408	11	4	silty clay to clay
3.445	27.67	0.9140	3.304	15.122	13	5	clayey silt to silty clay
3.609	24.93	1.0865	4.359	11.256	16	4	silty clay to clay
3.773	25.34	1.0234	4.040	7.175	16	4	silty clay to clay
3.937	26.28	1.1166	4.250	6.754	17	4	silty clay to clay
4.101	27.67	1.1777	4.258	7.777	18	4	silty clay to clay
4.265	27.29	1.1215	4.110	9.774	17	4	silty clay to clay
4.429	27.52	1.0005	3.636	9.719	13	5	clayey silt to silty clay
4.593	24.95	0.7970	3.195	8.418	12	5	clayey silt to silty clay
4.757	16.79	0.5402	3.218	2.522	8	5	clayey silt to silty clay
4.921	9.89	0.4534	4.586	1.811	9	3	clay
5.085	6.63	0.3567	5.382	1.298	6	3	clay
5.249	10.02	0.8570	8.551	1.516	10	3	clay
5.413	32.67	1.4046	4.301	3.911	21	4	silty clay to clay
5.577	31.07	1.2780	4.114	4.562	20	4	silty clay to clay
5.741	33.10	1.1129	3.363	3.090	16	5	clayey silt to silty clay
5.906	44.07	1.4079	3.196	1.732	21	5	clayey silt to silty clay
6.070	41.46	1.6965	4.093	1.447	20	5	clayey silt to silty clay
6.234	37.33	1.7599	4.716	2.704	24	4	silty clay to clay
6.398	35.53	1.0214	2.876	4.507	14	6	sandy silt to clayey silt
6.562	34.93	1.1914	3.412	5.944	17	5	clayey silt to silty clay
6.726	28.14	1.1714	4.164	12.794	18	4	silty clay to clay
6.890	28.49	1.1981	4.206	14.844	18	4	silty clay to clay
7.054	31.34	1.2890	4.114	16.940	20	4	silty clay to clay
7.218	35.04	1.4936	4.264	19.234	22	4	silty clay to clay
7.382	38.00	1.8647	4.908	20.111	36	3	clay
7.546	37.46	1.8793	5.018	17.064	36	3	clay
7.710	43.56	1.8342	4.212	16.470	28	4	silty clay to clay
7.874	40.96	1.7009	4.153	8.380	26	4	silty clay to clay
8.038	34.84	1.4717	4.225	6.586	22	4	silty clay to clay
8.202	28.44	1.2768	4.490	7.870	18	4	silty clay to clay

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
8.366	26.16	1.2911	4.936	10.789	25	3	clay
8.530	28.65	1.4405	5.029	12.107	27	3	clay
8.694	31.71	1.4005	4.417	9.518	20	4	silty clay to clay
8.858	26.03	1.1627	4.468	5.429	17	4	silty clay to clay
9.022	22.37	0.9630	4.305	5.523	14	4	silty clay to clay
9.186	21.24	0.6577	3.098	7.738	10	5	clayey silt to silty clay
9.350	22.29	1.6000	7.179	10.536	21	3	clay
9.514	75.26	7.2827	9.679	16.794	72	11	very stiff fine grained (*)
9.678	121.56	7.7966	6.415	20.317	116	11	very stiff fine grained (*)
9.843	650.02	7.9400	1.222	7.944	124	9	sand
10.007	632.89	7.9100	1.250	4.996	121	9	sand

PSI / CPT-1a / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 9:46:21 AM
CONE ID: DDG1661
TOTAL DEPTH: 9.843 ft
HOLE NUMBER: CPT-1a



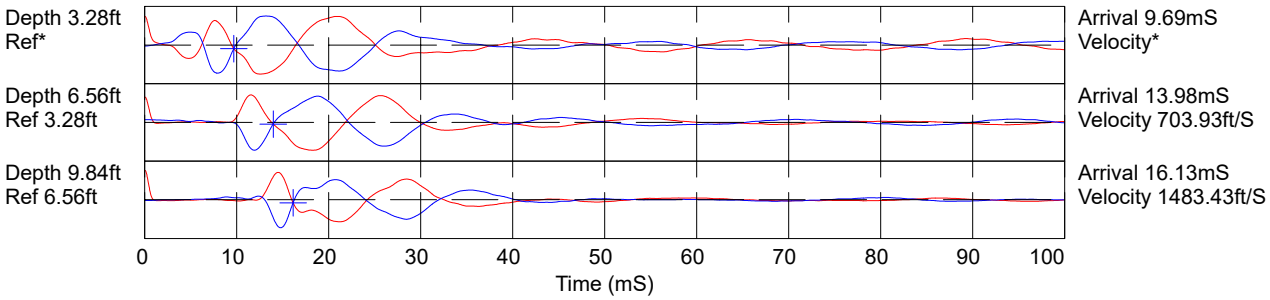
REMARKS

Refusal at 9.8 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

COMMENT: PSI / CPT-1a / 9025 SW Barber St Wilsonville

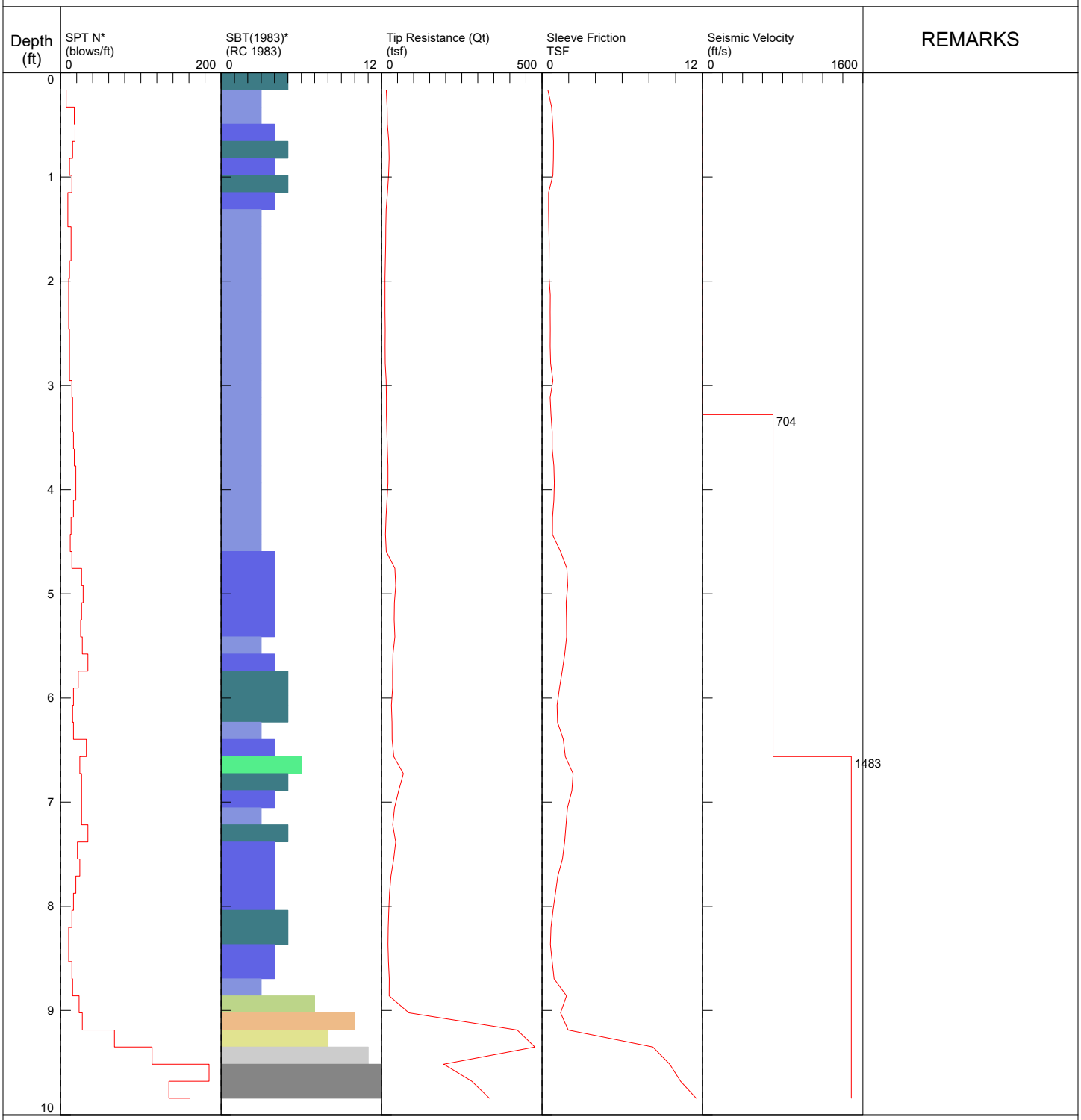


Hammer to Rod String Distance (ft): 1.97
* = Not Determined

COMMENT:

PSI / CPT-1a / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 9:46:21 AM
CONE ID: DDG1661
TOTAL DEPTH: 9.843 ft
HOLE NUMBER: CPT-1a



1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

PSI / CPT-1a / 9025 SW Barber St Wilsonville

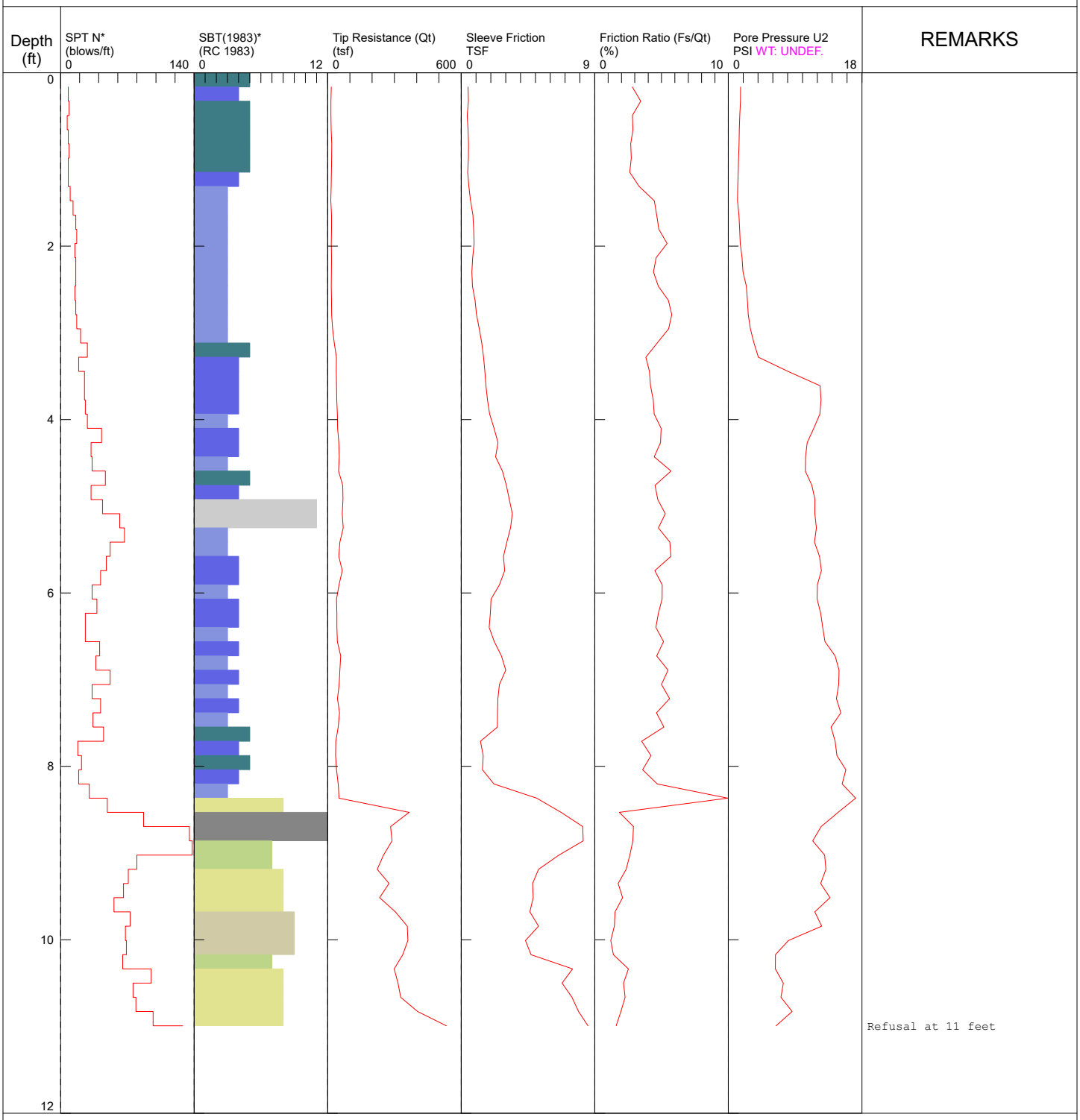
OPERATOR: OGE DMM
TEST DATE: 11/10/2025 9:46:21 AM
CONE ID: DDG1661
TOTAL DEPTH: 9.843 ft
HOLE NUMBER: CPT-1a

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
0.164	14.75	0.4375	2.967	-0.177	7	5	clayey silt to silty clay
0.328	17.40	0.7193	4.135	-0.060	17	3	clay
0.492	18.45	0.7956	4.314	-0.072	18	3	clay
0.656	22.76	0.8642	3.797	-0.034	15	4	silty clay to clay
0.820	23.92	0.8488	3.550	-0.211	11	5	clayey silt to silty clay
0.984	21.80	0.8197	3.760	-0.388	14	4	silty clay to clay
1.148	18.56	0.4927	2.656	-0.532	9	5	clayey silt to silty clay
1.312	14.13	0.4951	3.505	-0.692	9	4	silty clay to clay
1.476	13.29	0.5169	3.891	-0.129	13	3	clay
1.640	13.09	0.5395	4.123	-0.225	13	3	clay
1.804	11.77	0.5290	4.497	-0.151	11	3	clay
1.969	10.71	0.5322	4.969	0.031	10	3	clay
2.133	10.57	0.6187	5.852	0.249	10	3	clay
2.297	10.91	0.6116	5.608	0.424	10	3	clay
2.461	11.47	0.6148	5.362	0.613	11	3	clay
2.625	11.23	0.6067	5.404	0.740	11	3	clay
2.789	11.49	0.6505	5.664	0.814	11	3	clay
2.953	14.18	0.8214	5.795	0.968	14	3	clay
3.117	15.17	0.6113	4.030	0.953	15	3	clay
3.281	15.35	0.6730	4.385	0.704	15	3	clay
3.445	16.80	0.7677	4.569	3.149	16	3	clay
3.609	18.01	0.7677	4.263	3.351	17	3	clay
3.773	20.02	0.8889	4.442	2.845	19	3	clay
3.937	20.00	0.9261	4.631	3.291	19	3	clay
4.101	17.13	0.8850	5.168	3.396	16	3	clay
4.265	14.09	0.7911	5.616	2.838	13	3	clay
4.429	12.11	0.7822	6.462	2.278	12	3	clay
4.593	15.03	1.3826	9.202	1.734	14	3	clay
4.757	41.44	1.8587	4.486	2.591	26	4	silty clay to clay
4.921	44.43	1.9180	4.318	3.470	28	4	silty clay to clay
5.085	40.01	1.8080	4.520	4.486	26	4	silty clay to clay
5.249	39.32	1.8336	4.664	5.382	25	4	silty clay to clay
5.413	41.62	1.8477	4.441	5.789	27	4	silty clay to clay
5.577	35.64	1.7027	4.779	6.220	34	3	clay
5.741	34.31	1.5082	4.397	6.414	22	4	silty clay to clay
5.906	34.35	1.3126	3.822	6.450	16	5	clayey silt to silty clay
6.070	30.65	1.1302	3.689	7.010	15	5	clayey silt to silty clay
6.234	32.71	1.1675	3.571	8.232	16	5	clayey silt to silty clay
6.398	33.07	1.5948	4.824	8.483	32	3	clay
6.562	38.09	1.7500	4.596	9.039	24	4	silty clay to clay
6.726	67.97	2.3229	3.419	6.541	26	6	sandy silt to clayey silt
6.890	53.65	2.2386	4.174	5.508	26	5	clayey silt to silty clay
7.054	40.24	1.9064	4.739	6.186	26	4	silty clay to clay
7.218	35.19	1.8029	5.125	7.858	34	3	clay
7.382	44.08	1.6926	3.840	8.469	21	5	clayey silt to silty clay
7.546	37.76	1.5367	4.071	7.872	24	4	silty clay to clay
7.710	29.06	1.1833	4.072	8.284	19	4	silty clay to clay
7.874	24.80	1.0042	4.050	8.761	16	4	silty clay to clay
8.038	22.61	0.8228	3.641	11.671	14	4	silty clay to clay
8.202	20.87	0.6725	3.223	12.028	10	5	clayey silt to silty clay

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
8.366	20.04	0.6234	3.112	12.646	10	5	clayey silt to silty clay
8.530	21.40	0.7605	3.554	13.503	14	4	silty clay to clay
8.694	24.15	0.9052	3.750	13.896	15	4	silty clay to clay
8.858	23.75	1.8345	7.725	13.431	23	3	clay
9.022	84.84	1.3875	1.636	14.224	27	7	silty sand to sandy silt
9.186	422.62	1.9579	0.463	6.454	67	10	gravelly sand to sand
9.350	477.62	8.2918	1.737	6.598	114	8	sand to silty sand
9.514	193.70	9.5499	4.931	5.599	185	11	very stiff fine grained (*)
9.678	281.20	10.3700	3.689	3.468	135	12	sand to clayey sand (*)
9.843	335.93	11.5300	3.433	3.672	161	12	sand to clayey sand (*)

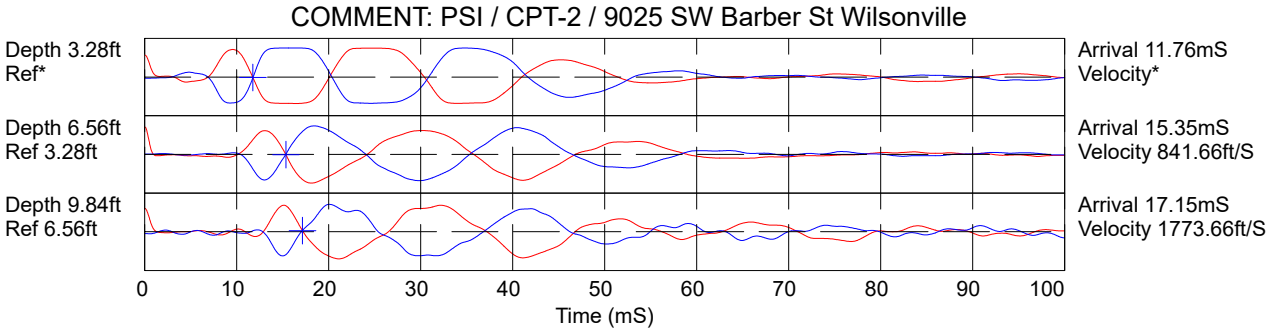
PSI / CPT-2 / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 10:12:47 AM
CONE ID: DDG1661
TOTAL DEPTH: 10.991 ft
HOLE NUMBER: CPT-2



1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

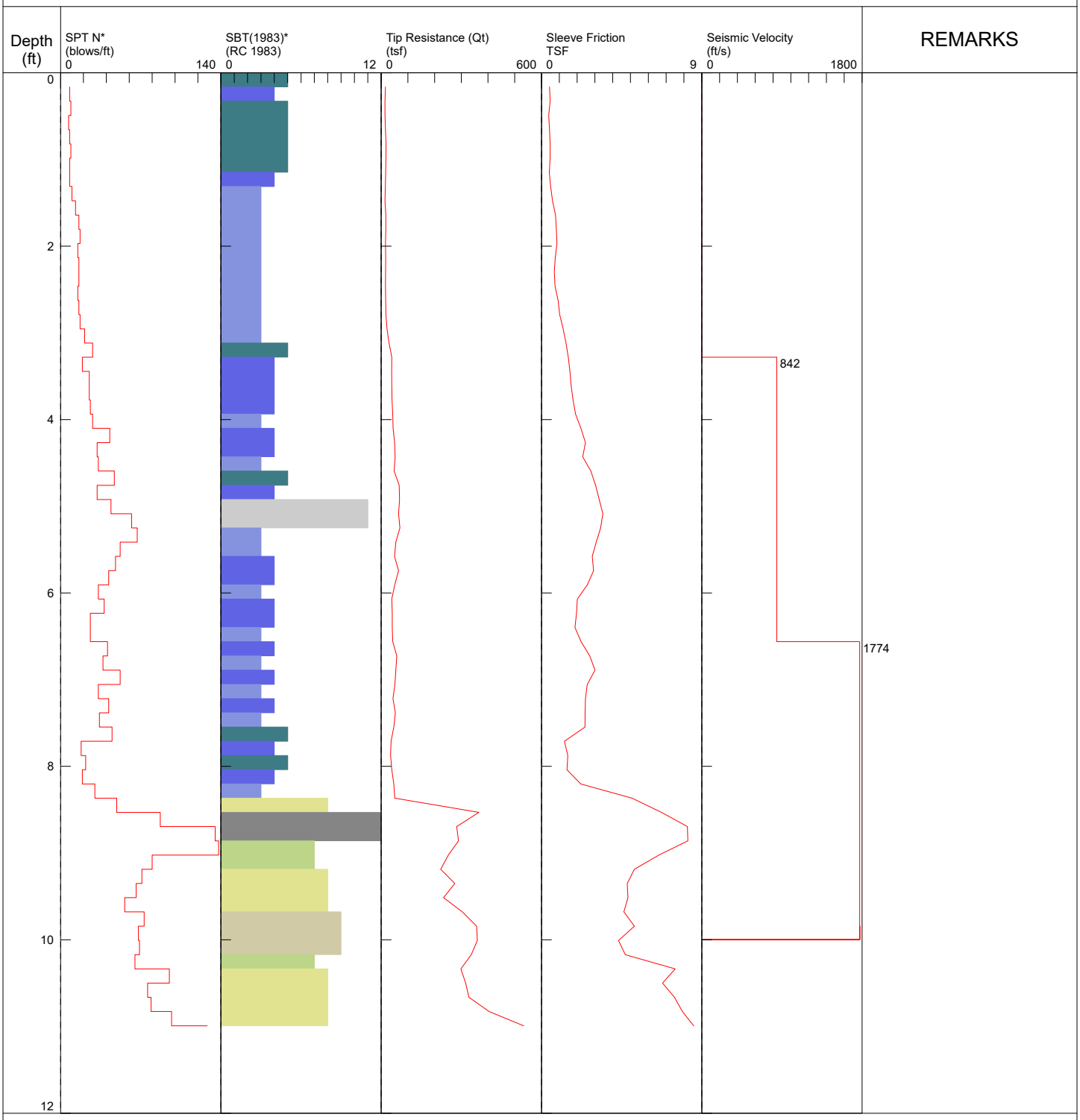


Hammer to Rod String Distance (ft): 1.97
* = Not Determined

COMMENT:

PSI / CPT-2 / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 10:12:47 AM
CONE ID: DDG1661
TOTAL DEPTH: 10.991 ft
HOLE NUMBER: CPT-2

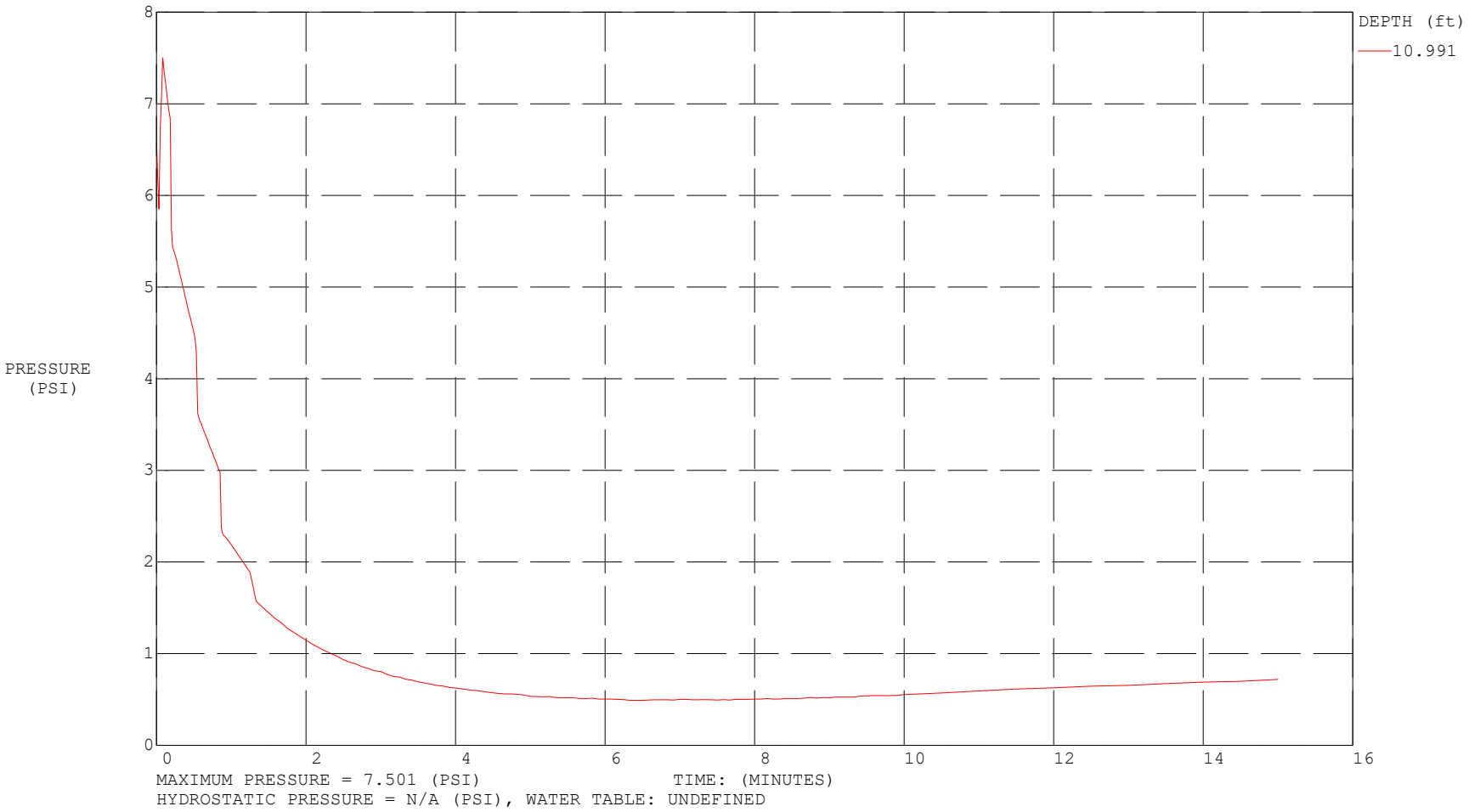


1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

COMMENT: PSI / CPT-2 / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
CONE ID: DDG1661
TEST DATE: 11/10/2025 10:12:47 AM



PSI / CPT-2 / 9025 SW Barber St Wilsonville

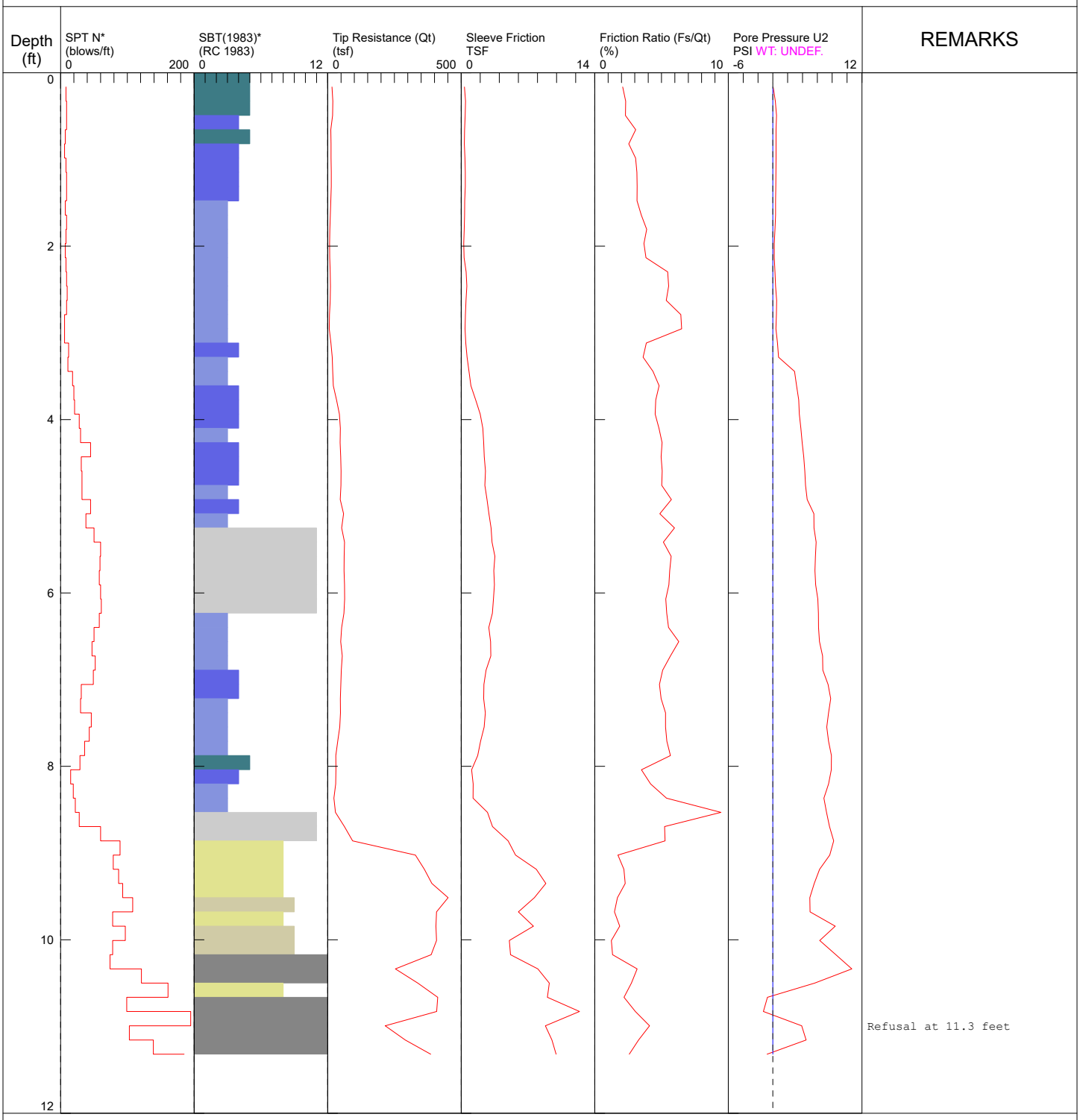
OPERATOR: OGE DMM
TEST DATE: 11/10/2025 10:12:47 AM
CONE ID: DDG1661
TOTAL DEPTH: 10.991 ft
HOLE NUMBER: CPT-2

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
0.164	16.08	0.4530	2.818	1.643	8	5	clayey silt to silty clay
0.328	14.10	0.4851	3.442	1.631	9	4	silty clay to clay
0.492	14.32	0.4032	2.817	1.538	7	5	clayey silt to silty clay
0.656	15.83	0.4530	2.863	1.480	8	5	clayey silt to silty clay
0.820	18.15	0.4873	2.685	1.432	9	5	clayey silt to silty clay
0.984	17.74	0.4849	2.734	1.384	8	5	clayey silt to silty clay
1.148	16.73	0.4376	2.617	1.322	8	5	clayey silt to silty clay
1.312	15.48	0.5140	3.321	1.265	10	4	silty clay to clay
1.476	13.97	0.6224	4.458	1.231	13	3	clay
1.640	16.94	0.7849	4.633	1.423	16	3	clay
1.804	17.41	0.8344	4.794	1.509	17	3	clay
1.969	16.04	0.8680	5.414	1.593	15	3	clay
2.133	16.82	0.7731	4.597	1.851	16	3	clay
2.297	16.38	0.7194	4.393	1.969	16	3	clay
2.461	15.95	0.7581	4.754	2.424	15	3	clay
2.625	16.88	0.9302	5.512	2.570	16	3	clay
2.789	17.79	1.0243	5.760	2.682	17	3	clay
2.953	21.97	1.2152	5.532	2.982	21	3	clay
3.117	29.55	1.3798	4.671	3.461	28	3	clay
3.281	39.40	1.5035	3.817	4.048	19	5	clayey silt to silty clay
3.445	39.01	1.5943	4.088	8.040	25	4	silty clay to clay
3.609	39.83	1.6617	4.173	12.353	25	4	silty clay to clay
3.773	40.47	1.7721	4.380	12.492	26	4	silty clay to clay
3.937	43.13	1.9162	4.444	12.337	28	4	silty clay to clay
4.101	44.57	2.2121	4.965	11.510	43	3	clay
4.265	50.15	2.4695	4.925	10.631	32	4	silty clay to clay
4.429	52.00	2.3095	4.443	10.397	33	4	silty clay to clay
4.593	48.61	2.7720	5.705	10.358	47	3	clay
4.757	67.37	3.0368	4.509	11.249	32	5	clayey silt to silty clay
4.921	68.69	3.2389	4.717	11.673	44	4	silty clay to clay
5.085	65.26	3.4460	5.282	11.647	62	11	very stiff fine grained (*)
5.249	69.84	3.3237	4.760	11.855	67	11	very stiff fine grained (*)
5.413	54.66	3.0712	5.620	11.604	52	3	clay
5.577	50.03	2.8495	5.698	12.279	48	3	clay
5.741	65.17	2.9276	4.493	12.538	42	4	silty clay to clay
5.906	50.93	2.5721	5.052	11.992	33	4	silty clay to clay
6.070	39.92	2.0078	5.031	11.951	38	3	clay
6.234	41.25	1.9629	4.760	12.440	26	4	silty clay to clay
6.398	41.15	1.8820	4.575	12.715	26	4	silty clay to clay
6.562	43.24	2.2232	5.143	13.024	41	3	clay
6.726	58.47	2.7077	4.632	14.375	37	4	silty clay to clay
6.890	54.73	3.0027	5.488	14.918	52	3	clay
7.054	51.54	2.5701	4.988	14.861	33	4	silty clay to clay
7.218	44.11	2.4685	5.598	14.569	42	3	clay
7.382	53.03	2.4457	4.613	15.158	34	4	silty clay to clay
7.546	47.18	2.4405	5.174	13.843	45	3	clay
7.710	36.83	1.2920	3.509	14.399	18	5	clayey silt to silty clay
7.874	35.16	1.4794	4.209	14.638	22	4	silty clay to clay
8.038	39.95	1.4318	3.585	15.824	19	5	clayey silt to silty clay
8.202	47.14	2.2078	4.684	15.330	30	4	silty clay to clay

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
8.366	51.07	5.0790	9.949	17.160	49	3	clay
8.530	365.43	6.7309	1.842	14.784	87	8	sand to silty sand
8.694	282.66	8.1877	2.897	12.511	135	12	sand to clayey sand (*)
8.858	289.21	8.2158	2.842	11.359	138	12	sand to clayey sand (*)
9.022	251.29	6.5868	2.622	12.971	80	7	silty sand to sandy silt
9.186	222.66	5.2141	2.342	13.153	71	7	silty sand to sandy silt
9.350	275.49	4.8114	1.747	12.440	66	8	sand to silty sand
9.514	233.36	4.8527	2.080	13.692	56	8	sand to silty sand
9.678	303.81	4.6229	1.522	11.644	73	8	sand to silty sand
9.843	357.43	5.2150	1.459	12.571	68	9	sand
10.007	360.10	4.3196	1.200	8.095	69	9	sand
10.171	337.24	4.7067	1.396	6.352	65	9	sand
10.335	298.28	7.5042	2.516	6.330	95	7	silty sand to sandy silt
10.499	315.91	6.7940	2.151	7.415	76	8	sand to silty sand
10.663	328.58	7.4631	2.272	7.094	79	8	sand to silty sand
10.827	404.00	7.9100	1.958	8.603	97	8	sand to silty sand
10.991	533.02	8.5400	1.603	6.423	128	8	sand to silty sand

PSI / CPT-2a / 9025 SW Barber St Wilsonville

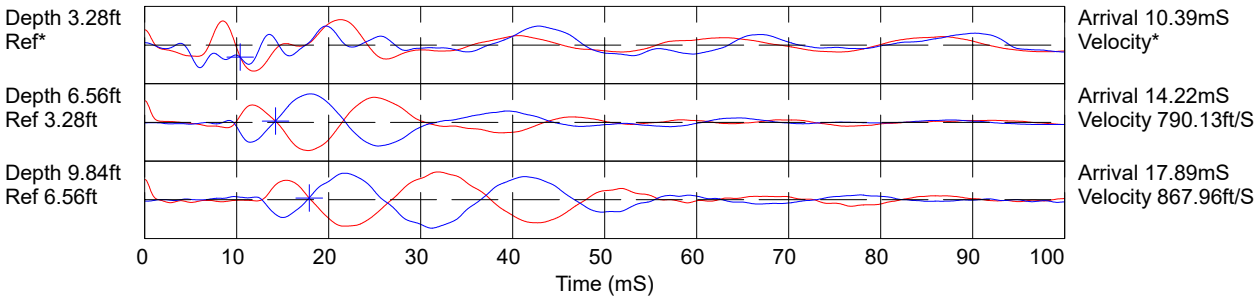
OPERATOR: OGE DMM
TEST DATE: 11/10/2025 10:47:16 AM
CONE ID: DDG1661
TOTAL DEPTH: 11.319 ft
HOLE NUMBER: CPT-2a



1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

COMMENT: PSI / CPT-2a / 9025 SW Barber St Wilsonville

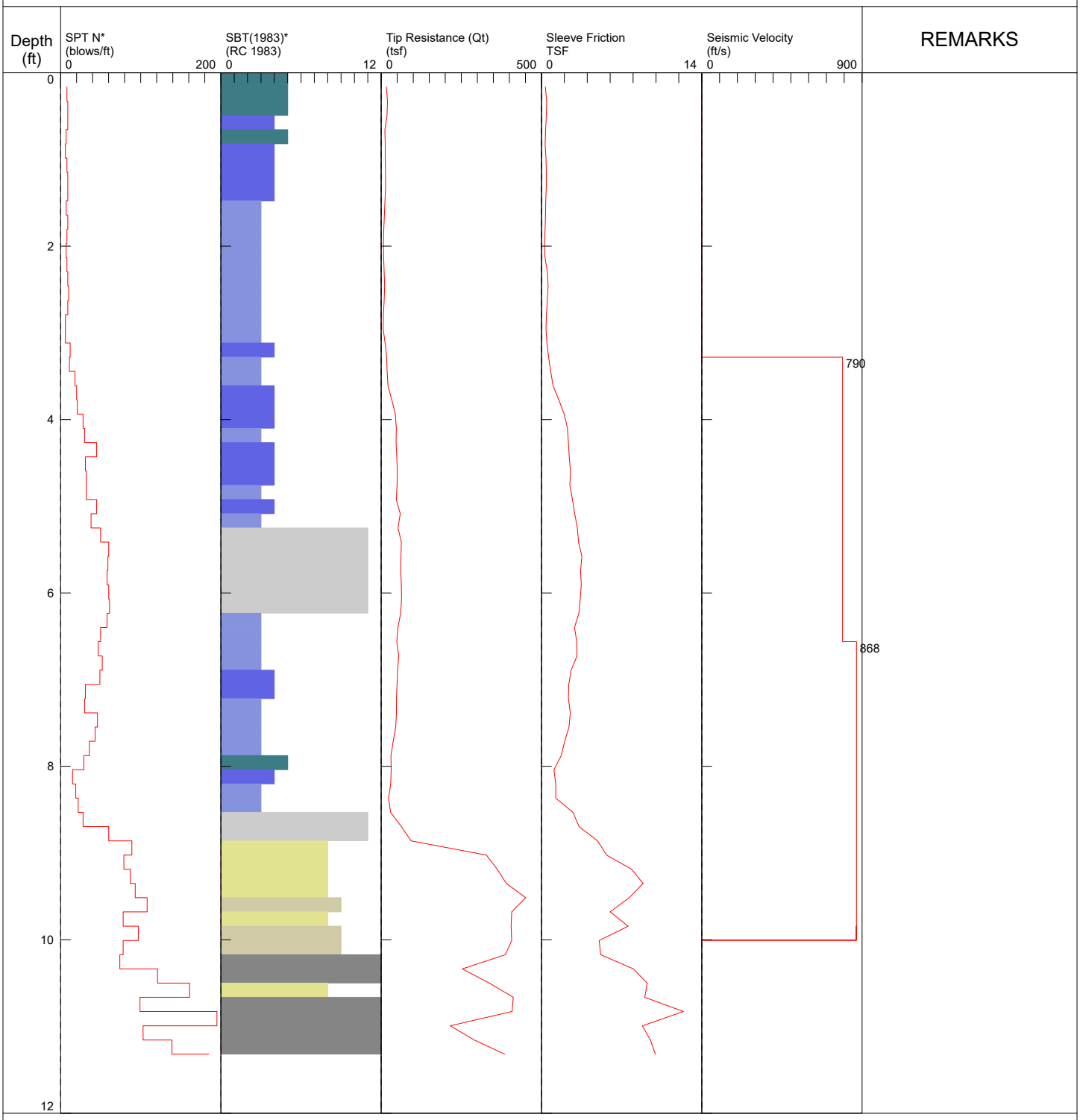


Hammer to Rod String Distance (ft): 1.97
* = Not Determined

COMMENT:

PSI / CPT-2a / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 10:47:16 AM
CONE ID: DDG1661
TOTAL DEPTH: 11.319 ft
HOLE NUMBER: CPT-2a



1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*SBT/SPT CORRELATION: UBC-1983

PSI / CPT-2a / 9025 SW Barber St Wilsonville

OPERATOR: OGE DMM
TEST DATE: 11/10/2025 10:47:16 AM
CONE ID: DDG1661
TOTAL DEPTH: 11.319 ft
HOLE NUMBER: CPT-2a

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
0.164	16.01	0.3353	2.096	0.048	8	5	clayey silt to silty clay
0.328	19.45	0.4488	2.308	0.326	9	5	clayey silt to silty clay
0.492	18.20	0.4175	2.295	0.481	9	5	clayey silt to silty clay
0.656	11.63	0.3560	3.063	0.414	7	4	silty clay to clay
0.820	12.81	0.3256	2.543	0.431	6	5	clayey silt to silty clay
0.984	12.81	0.3907	3.050	0.431	8	4	silty clay to clay
1.148	13.42	0.4224	3.148	0.410	9	4	silty clay to clay
1.312	13.55	0.4292	3.169	0.388	9	4	silty clay to clay
1.476	11.68	0.3692	3.163	0.364	7	4	silty clay to clay
1.640	9.91	0.3456	3.487	0.366	9	3	clay
1.804	8.16	0.3169	3.886	0.292	8	3	clay
1.969	7.22	0.2656	3.679	0.199	7	3	clay
2.133	7.84	0.3001	3.826	0.199	8	3	clay
2.297	9.44	0.5152	5.457	0.285	9	3	clay
2.461	10.58	0.5849	5.529	0.364	10	3	clay
2.625	9.40	0.5023	5.347	0.501	9	3	clay
2.789	6.75	0.4346	6.438	0.477	6	3	clay
2.953	6.08	0.3951	6.502	0.412	6	3	clay
3.117	12.07	0.4658	3.859	0.618	12	3	clay
3.281	16.97	0.6139	3.619	0.766	11	4	silty clay to clay
3.445	18.59	0.8100	4.358	2.915	18	3	clay
3.609	21.04	1.0114	4.809	3.195	20	3	clay
3.773	33.18	1.5140	4.565	3.478	21	4	silty clay to clay
3.937	44.02	1.9906	4.523	3.573	28	4	silty clay to clay
4.101	47.15	2.2644	4.804	3.765	30	4	silty clay to clay
4.265	46.62	2.3505	5.043	3.945	45	3	clay
4.429	48.80	2.4233	4.967	4.165	31	4	silty clay to clay
4.593	50.13	2.5293	5.047	4.311	32	4	silty clay to clay
4.757	49.46	2.4780	5.011	4.407	32	4	silty clay to clay
4.921	47.02	2.6971	5.737	4.622	45	3	clay
5.085	59.55	2.9005	4.872	5.520	38	4	silty clay to clay
5.249	52.53	3.1312	5.963	5.544	50	3	clay
5.413	62.81	3.2281	5.141	5.841	60	11	very stiff fine grained (*)
5.577	61.65	3.5248	5.719	5.731	59	11	very stiff fine grained (*)
5.741	60.91	3.4141	5.606	5.669	58	11	very stiff fine grained (*)
5.906	62.75	3.4780	5.544	5.774	60	11	very stiff fine grained (*)
6.070	63.67	3.3821	5.314	6.052	61	11	very stiff fine grained (*)
6.234	60.60	3.2625	5.385	6.148	58	11	very stiff fine grained (*)
6.398	52.38	2.8875	5.515	6.158	50	3	clay
6.562	48.84	3.0715	6.290	6.275	47	3	clay
6.726	54.66	3.0979	5.669	6.704	52	3	clay
6.890	51.05	2.5917	5.078	6.728	49	3	clay
7.054	49.17	2.3787	4.839	7.444	31	4	silty clay to clay
7.218	47.40	2.3519	4.963	7.788	30	4	silty clay to clay
7.382	47.54	2.5177	5.297	7.508	46	3	clay
7.546	45.23	2.3946	5.295	7.274	43	3	clay
7.710	37.50	2.0211	5.391	7.496	36	3	clay
7.874	30.51	1.7292	5.668	7.891	29	3	clay
8.038	31.05	1.0845	3.494	7.877	15	5	clayey silt to silty clay
8.202	29.86	1.2463	4.175	7.494	19	4	silty clay to clay

Depth ft	Tip (Qt) (tsf)	Sleeve (Fs) TSF	Fr (Fs/Qt) (%)	Pressure (U2) PSI	SPT N* (blows/ft)	Zone	Soil Behavior Type UBC-1983
8.366	23.09	1.2396	5.371	6.874	22	3	clay
8.530	29.11	2.7485	9.443	7.226	28	3	clay
8.694	62.64	3.2722	5.226	7.630	60	11	very stiff fine grained (*)
8.858	93.29	4.9064	5.261	8.198	89	11	very stiff fine grained (*)
9.022	328.21	5.6906	1.734	7.654	79	8	sand to silty sand
9.186	361.90	7.8734	2.176	6.287	87	8	sand to silty sand
9.350	390.09	8.8737	2.275	5.561	93	8	sand to silty sand
9.514	450.70	7.6594	1.700	4.977	108	8	sand to silty sand
9.678	407.13	5.9974	1.473	5.006	78	9	sand
9.843	405.01	7.5717	1.870	8.414	97	8	sand to silty sand
10.007	407.18	5.0361	1.237	6.313	78	9	sand
10.171	387.34	5.1618	1.333	8.483	74	9	sand
10.335	253.16	8.0260	3.171	10.651	121	12	sand to clayey sand (*)
10.499	337.20	9.2250	2.736	5.631	161	12	sand to clayey sand (*)
10.663	411.93	9.0245	2.191	-0.730	99	8	sand to silty sand
10.827	408.13	12.3955	3.038	-1.284	195	12	sand to clayey sand (*)
10.991	215.30	8.8193	4.097	3.892	103	12	sand to clayey sand (*)
11.155	290.29	9.5100	3.277	4.483	139	12	sand to clayey sand (*)
11.319	385.58	9.9400	2.579	-0.776	185	12	sand to clayey sand (*)

APPENDIX B - STORM FACILITY SIZING AND ANALYSIS

(1) WES BMP SIZING REPORT

(2) ST-6010, ST-6050, ST-6060, ST-6110

WES BMP Sizing Software Version 1.6.0.2, May 2018

WES BMP Sizing Report

Project Information

Project Name	iONNA Site Developement -Wilsonville, OR
Project Type	Commercial
Location	9025 SW Barber St
Stormwater Management Area	13899
Project Applicant	iONNA
Jurisdiction	OutofDistrict

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
Impervious OFFSITE	800	Grass	ConventionalConcrete	D	BMP
Impervious ONSITE	13,899	Grass	ConventionalConcrete	D	Detention Pond

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
BMP	FlowControlAndTreatment	Stormwater Planter - Filtration	D1	24.0	45.0	0.3

Pond Sizing Details

Pond ID	Design Criteria(1)	Facility Soil Type	Max Depth (ft)(2)	Top Area (sq-ft)	Side Slope (1:H)	Facility Vol. (cu-ft)(3)	Water Storage Vol. (cu-ft)(4)	Adequate Size?
Detention Pond	FCWQT	D1	4.00	787.0	0.33	2,861.4	1,605.7	Yes

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only

2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).

3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.

4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

Simple Pond Geometry Configuration

Pond ID: Detention Pond
Design: FlowControlAndTreatment

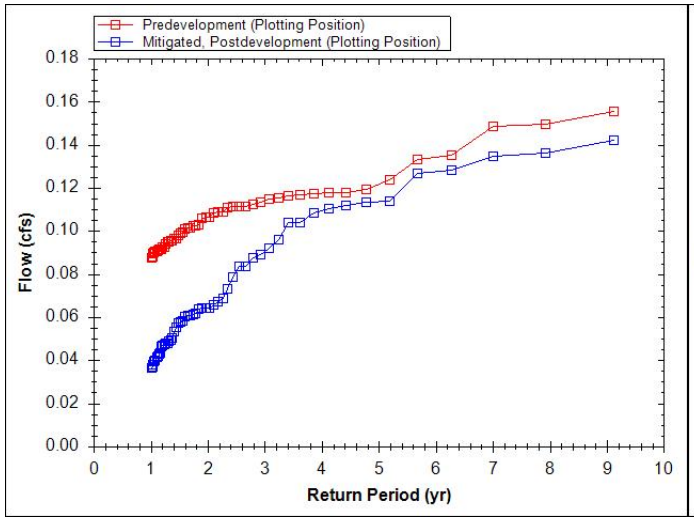
Shape Curve

Depth (ft)	Area (sq ft)
4.0	787.0

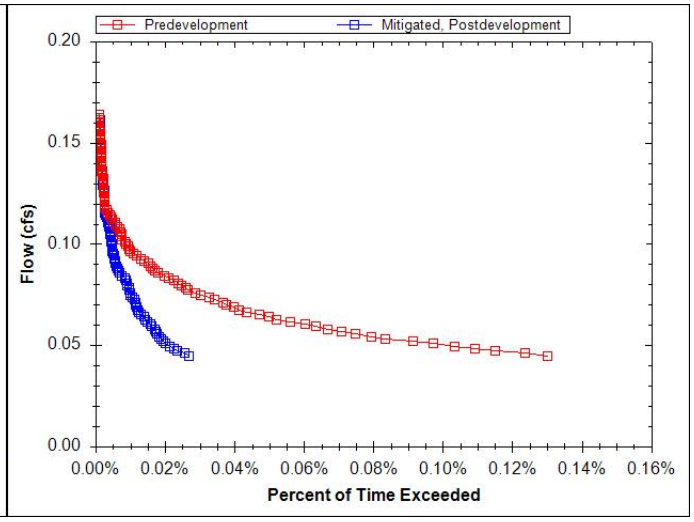
Outlet Structure Details

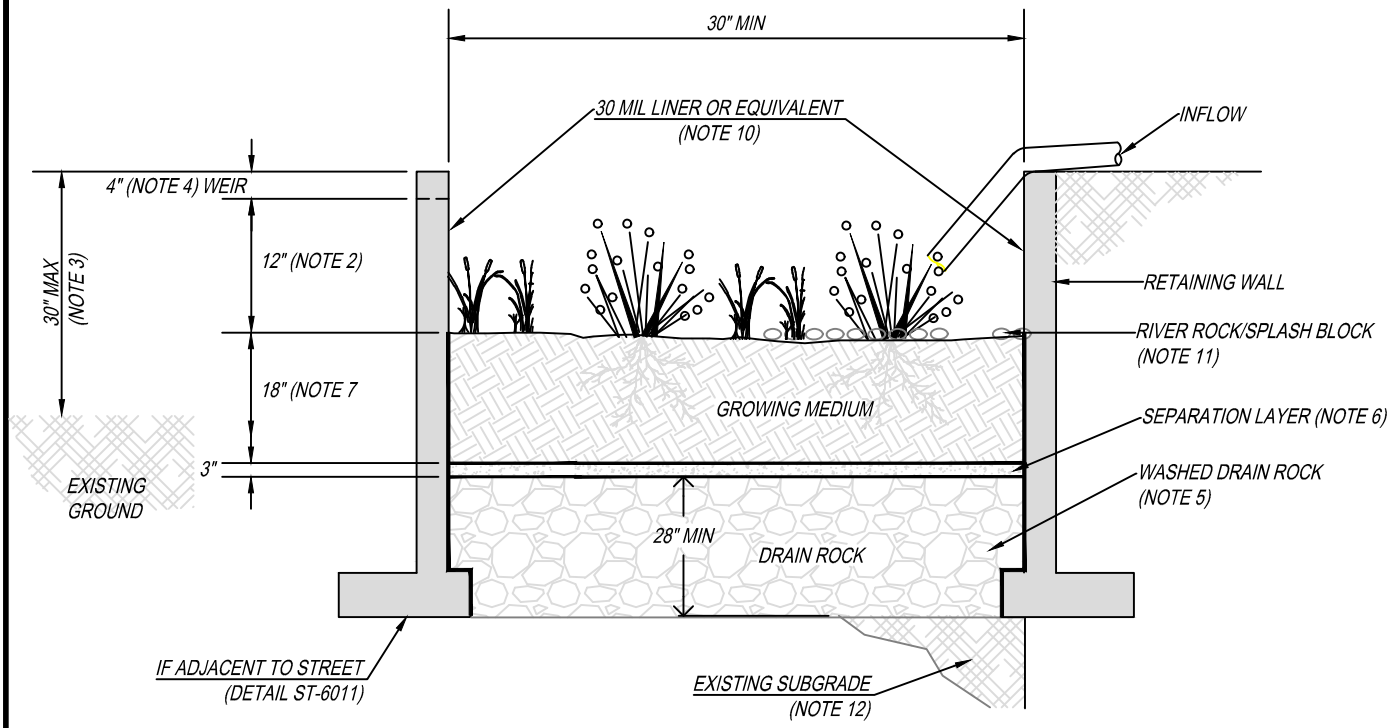
Lower Orifice Invert (ft)	0.0
Lower Orifice Dia (in)	0.9
Upper Orifice Invert(ft)	2.7
Upper Orifice Dia (in)	2.0
Overflow Weir Invert(ft)	3.0
Overflow Weir Length (ft)	6.3

Flow Frequency Chart



Flow Duration Chart





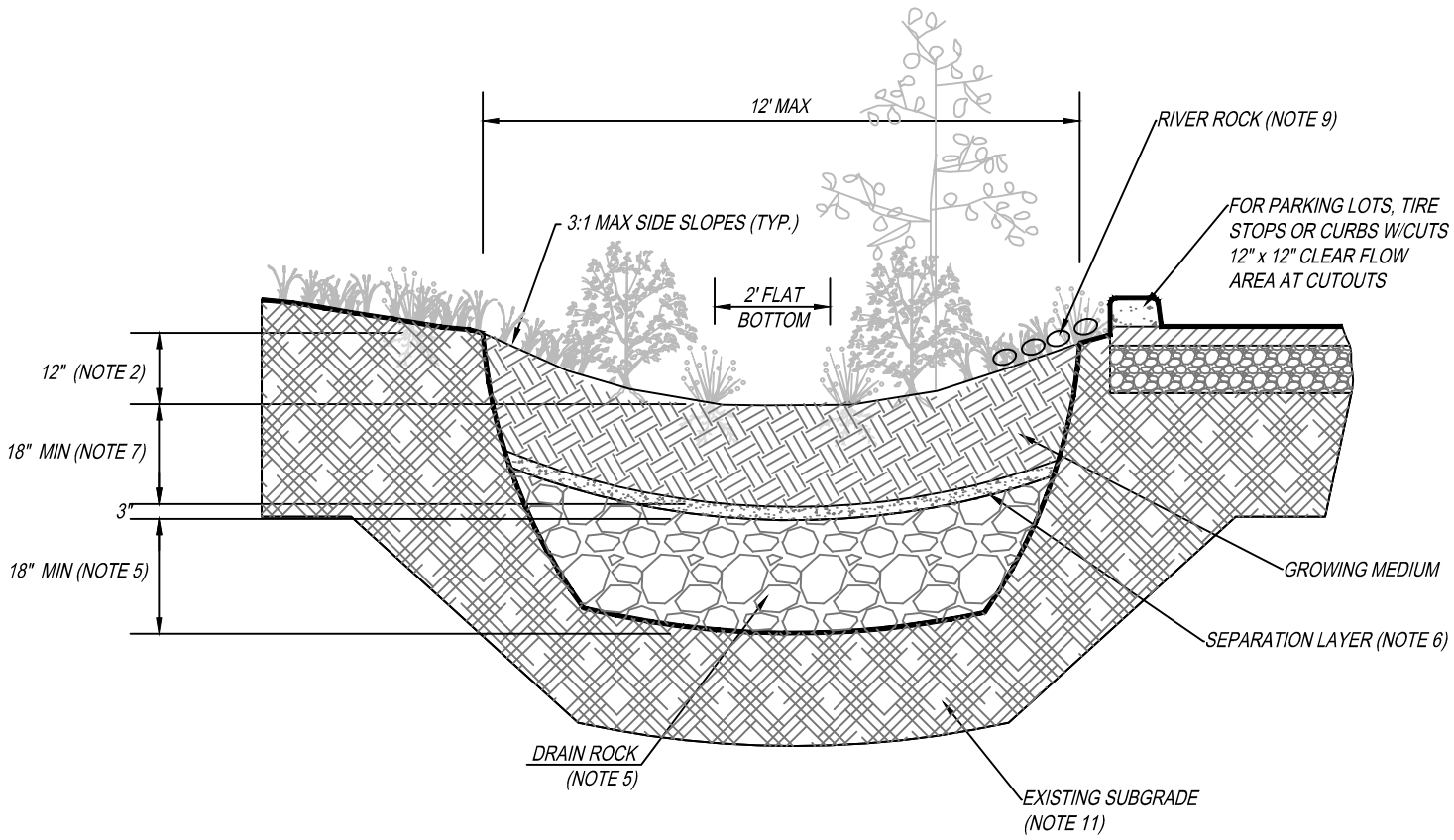
GENERAL NOTES:

1. **PROVIDE PROTECTION** FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION.
2. **DIMENSIONS:**
   -WIDTH: 30" MINIMUM
   -DEPTH OF PLANTER (FROM TOP OF GROWING MEDIUM TO OVERFLOW WEIR ELEVATION): 12"
   -SLOPE OF PLANTER: 0.5% OR LESS
3. **SETBACKS:**
   -PLANTERS SHALL BE LESS THAN 30" IN HEIGHT ABOVE SURROUNDING AREA
   -PLANTERS SHALL BE MINIMUM OF 5 FEET FROM PROPERTY LINE
4. **OVERFLOW:**
   -WIER ELEVATION SHALL ALLOW FOR 4" OF FREEBOARD, MINIMUM
   -SIZE OVERFLOW WEIR FOR 100 YEAR DESIGN STORM. IDENTIFY EMERGENCY OVERFLOW ROUTE ON STORMWATER MANAGEMENT PLAN.
5. **DRAIN ROCK:**
   -SIZE: 1 1/2" - 3/4" WASHED
   -DEPTH: 28" MINIMUM
6. **SEPARATION** BETWEEN DRAIN ROCK AND GROWING MEDIUM: SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE.
7. **GROWING MEDIUM:**
   -DEPTH: 18" MINIMUM
   -SEE APPENDIX A FOR SPECIFICATION OR USE SAND/LOAM/COMPOST 3-WAY MIX.
   -FACILITY SURFACE AREA MAY BE REDUCED BY 25% WHEN GROWING MEDIA DEPTH IS INCREASED TO 30" OR MORE.
8. **VEGETATION:** FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
9. **PLANTER WALLS:**
   -MATERIALS SHALL BE STONE, BRICK, CONCRETE OR OTHER DURABLE MATERIAL.
   -CONCRETE, BRICK, OR STONE WALLS SHALL BE INCLUDED ON FOUNDATION PLANS.
   -INSTALL INVERTED CURB AS NEEDED BETWEEN PLANTERS AND ROAD SUBGRADE.
   -SUBMIT RETAINING WALL DESIGN IN ACCORDANCE WITH APPLICABLE STRUCTURAL CODES FOR REVIEW AND APPROVAL.
10. **WATERPROOF LINER:**
    -LINER SHALL BE 30 MIL PVC OR EQUIVALENT, FOR FLOW THROUGH FACILITIES.
    -A WATERPROOF LINER IS NOT REQUIRED IF THE FOUNDATION OR WALL MATERIAL IS WATERPROOF REINFORCED CONCRETE OR APPROVED EQUAL.
11. **INSTALL RIVER ROCK** SPLASH PAD OVER A NON WOVEN GEO TEXTILE FABRIC TO TRANSITION FROM INLETS TO GROWING MEDIUM. SIZE OF ROCK SHALL BE 1" - 3", 4 SQUARE FEET, 6" DEEP.
12. **SEASONAL HIGH GROUNDWATER SEPARATION:**
    -SEPARATION DISTANCE AS REQUIRED BY CITY.

Stormwater Planter - Infiltration		
DRAWING NUMBER: ST-6010	DRAWN BY: SR	SCALE: N.T.S.
FILE NAME: ST-6010.DWG	APPROVED BY: NK	DATE: 6/3/16

CITY OF WILSONVILLE

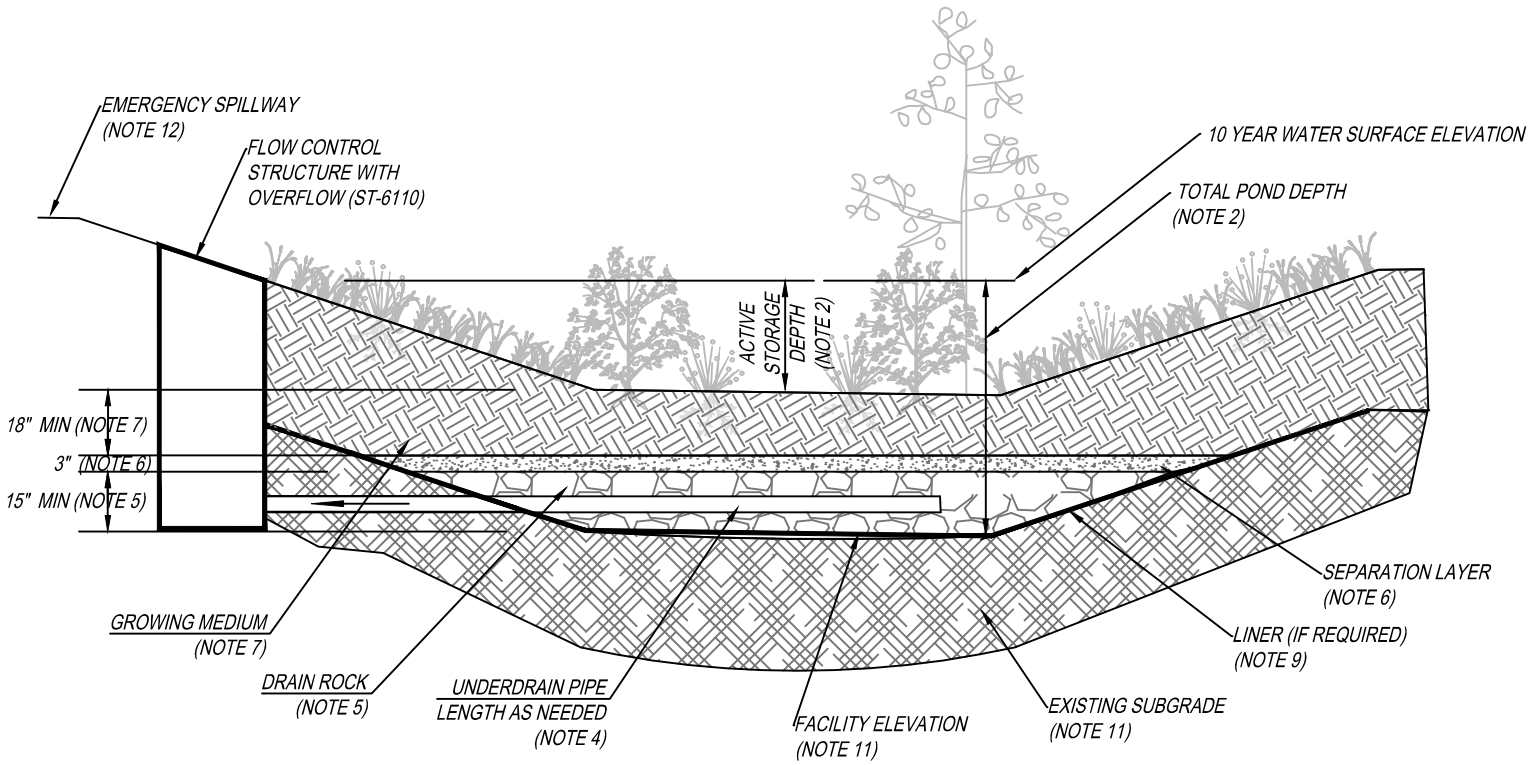
PUBLIC WORKS STANDARDS



GENERAL NOTES:

1. **PROVIDE PROTECTION** FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION. UNLESS REQUIRED BY SITE CONDITIONS, UNLINED SWALES ARE PREFERRED TO ALLOW MAXIMUM INFILTRATION.
2. **DIMENSIONS:**
   -DEPTH OF SWALE (FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION); 12"
   -LONGITUDINAL SLOPE OF SWALE: 6.0% OR LESS
   -FLAT BOTTOM WIDTH: 2'
   -SIDE SLOPES OF SWALE: 3:1 MAXIMUM
3. **SETBACKS (FROM MIDPOINT OF FACILITY):**
   -INFILTRATION VEGETATED SWALES SHALL BE 10' FROM FOUNDATIONS AND 5' FROM PROPERTY LINES.
4. **OVERFLOW:**
   -EMERGENCY OVERFLOW PATH SHALL BE IDENTIFIED ON THE STORMWATER MANAGEMENT PLAN.
5. **DRAIN ROCK:**
   -SIZE: 1 1/2" - 3/4" WASHED
   -DEPTH: 18"
6. **SEPARATION** BETWEEN DRAIN ROCK AND GROWING MEDIUM: SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE.
7. **GROWING MEDIUM:**
   -18" MINIMUM
   -SEE APPENDIX C FOR SPECIFICATION OR USE SAND/LOAM/COMPOST 3-WAY MIX.
   -FACILITY SURFACE AREA MAY BE REDUCED BY 25% WHEN GROWING MEDIA DEPTH IS INCREASED TO 30" OR MORE.
8. **VEGETATION:** FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
9. **INSTALL RIVER ROCK** SPLASH PAD OVER NON WOVEN GEO TEXTILE FABRIC TO TRANSITION FROM INLETS TO GROWING MEDIUM. SIZE OF ROCK SHALL BE 1" TO 3", 4 SQUARE FEET, 6" DEEP.
10. **CHECK DAMS:** SHALL BE PLACED ACCORDING TO FACILITY DESIGN. REFER TO DETAIL ST-6100 FOR PROFILE AND SPACING.
11. **SEASONAL HIGH GROUNDWATER SEPARATION:**
    -SEPARATION DISTANCE AS REQUIRED BY CITY.

Vegetated Swale - Infiltration			CITY OF WILSONVILLE
DRAWING NUMBER: ST-6050	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: ST-6050.DWG	APPROVED BY: NK	DATE: 6/3/16	PUBLIC WORKS STANDARDS

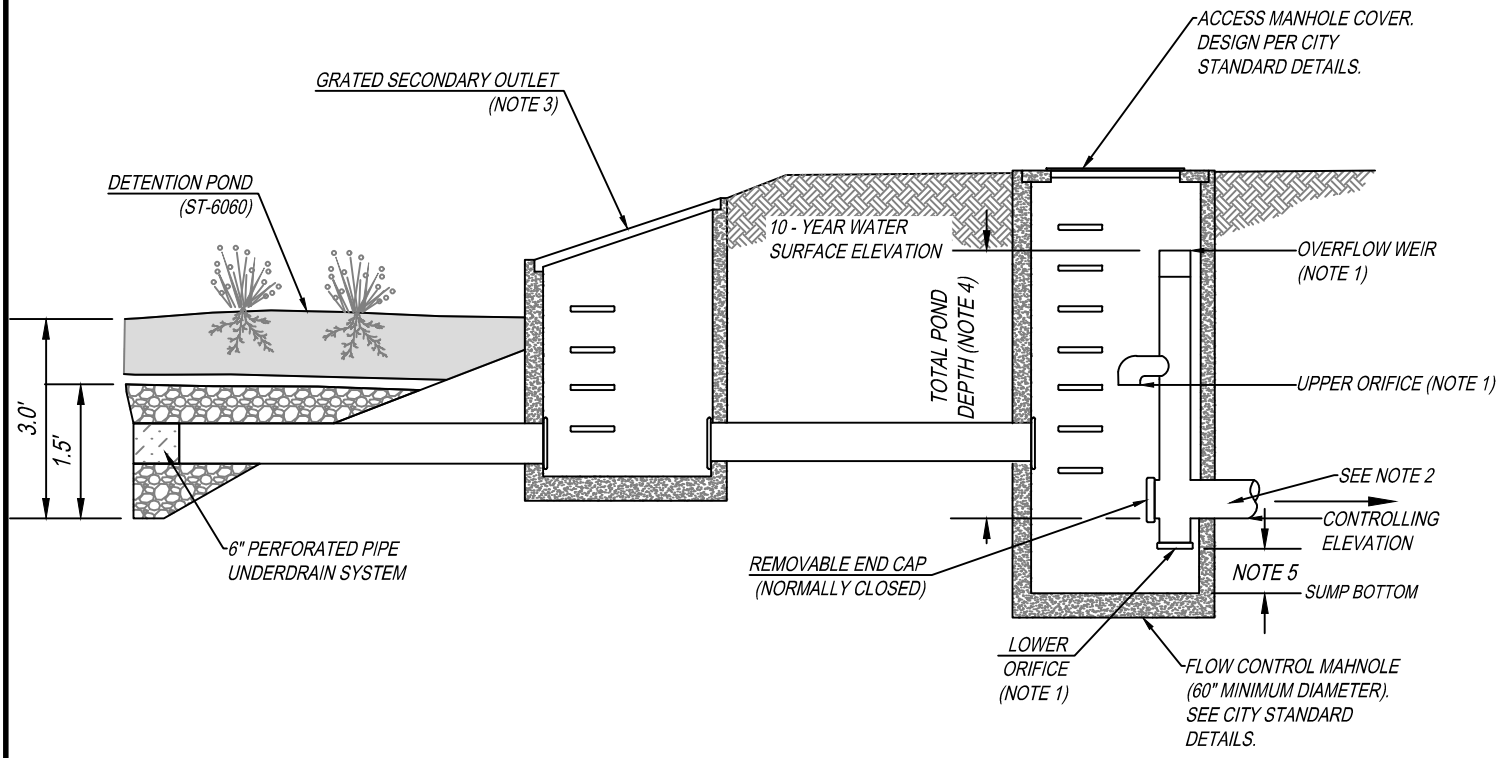


GENERAL NOTES:

1. **PROVIDE PROTECTION** FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION. UNLESS REQUIRED BY SITE CONDITIONS, UNLINED PONDS ARE PREFERRED TO ALLOW MAXIMUM INFILTRATION.
2. **DIMENSIONS:**
   -ACTIVE STORAGE DEPTH: (FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION); PER FACILITY SIZING MODEL
   -TOTAL POND DEPTH: 4' MINIMUM, PER FACILITY SIZING MODEL
   -BOTTOM SLOPE: 2.0% OR LESS
   -SIDE SLOPES OF DETENTION POND: 3:1 MAXIMUM
3. **LOCATION/SETBACKS:**
   -DETENTION POND SHALL BE 10' FROM FOUNDATIONS AND 5' FROM PROPERTY LINES UNLESS APPROVED BY BUILDING OFFICIAL.
4. **PIPING:**
   -PERFORATED UNDER-DRAIN PIPING: SHALL BE ABS SCH. 40, CAST IRON OR PVC SCH. 40. 6" MINIMUM DIAMETER. PIPING SHALL HAVE 1% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND. WRAP UNDER-DRAIN PIPE IN FILTER FABRIC TO REDUCE TRANSPORT OF FINES.
   -OVERFLOW PIPING: SHALL BE ABS SCH. 40, CAST IRON OR PVC SCH. 40 AND SHALL NOT BE PERFORATED. MINIMUM DIAMETER IS 6". PIPING SHALL HAVE 1% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND.
5. **DRAIN ROCK:**
   -SIZE: 1 1/2" - 3/4"-0 WASHED
   -DEPTH: 15" MINIMUM
6. **SEPARATION** BETWEEN DRAIN ROCK AND GROWING MEDIUM: SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE.
7. **GROWING MEDIUM:**
   -18" MINIMUM
   -SEE APPENDIX C FOR SPECIFICATION OR USE SAND/LOAM/COMPOST 3-WAY MIX.
8. **VEGETATION:** FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
9. **WATERPROOF LINER (IF REQUIRED):** SHALL BE 30 MIL PVC OR EQUIVALENT FOR DETENTION POND.
10. **INSTALL RIVER ROCK** SPLASH PAD OVER A NON WOVEN GEO TEXTILE FABRIC TO TRANSITION FROM INLETS TO GROWING MEDIUM. SIZE OF ROCK SHALL BE 1" TO 3", 4 SQUARE FEET 6" DEEP.
11. **SEASONAL HIGH GROUNDWATER SEPARATION:**
    -SEPARATION DISTANCE AS REQUIRED BY CITY.
12. **EMERGENCY SPILLWAY** SIZED TO CONVEY THE 100 YEAR DESIGN STORM (S-2275). SEE PUBLIC WORKS STANDARDS 301.4.09

Detention Pond			CITY OF WILSONVILLE
DRAWING NUMBER: ST-6060	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: ST-6060.DWG	APPROVED BY: NK	DATE: 6/3/16	PUBLIC WORKS STANDARDS

DETENTION POND FLOW CONTROL STRUCTURE



NOTES:

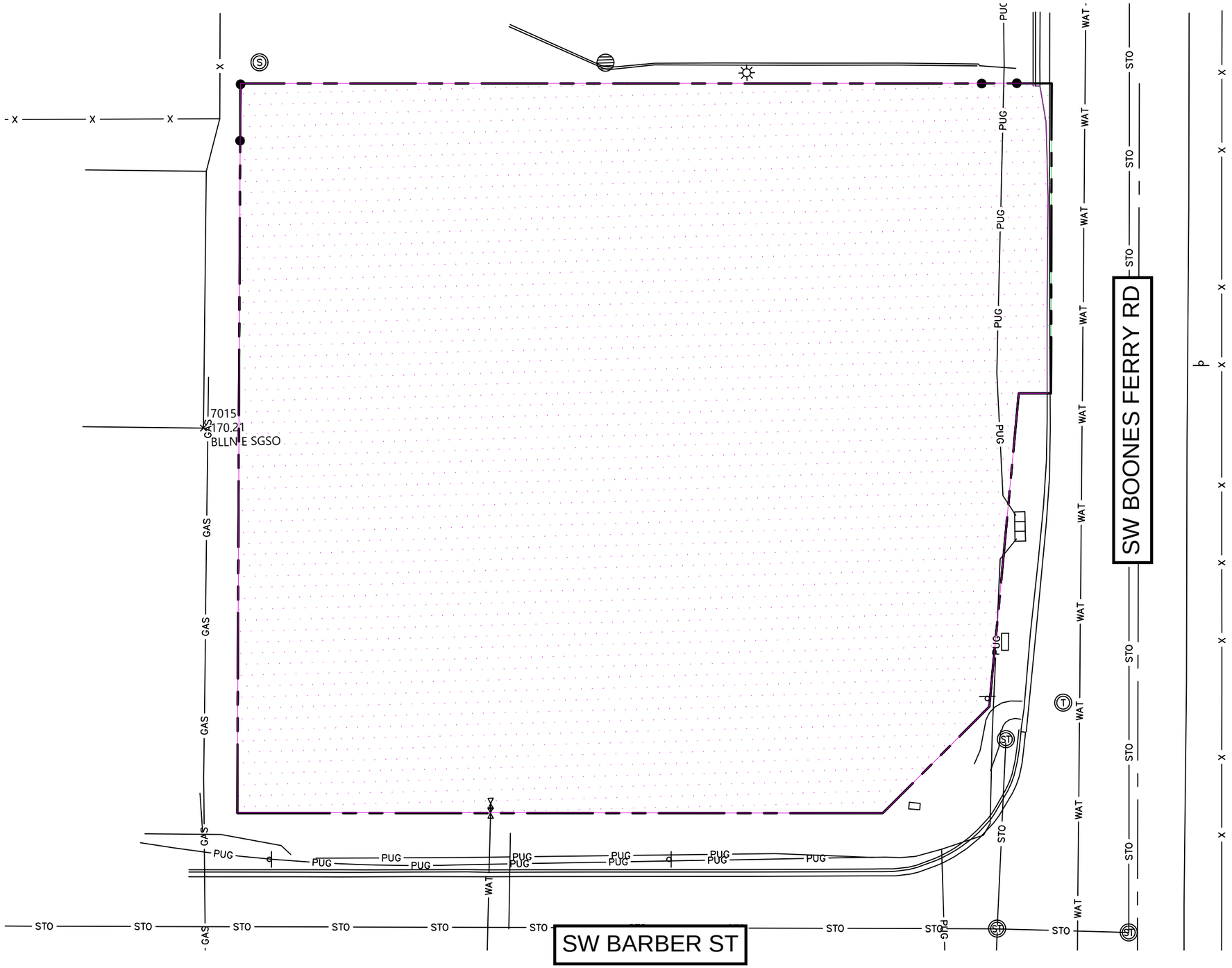
1. ORIFICE AND WEIR DIMENSIONS AND ELEVATION DETERMINED THROUGH FACILITY SIZING MODEL.
2. PIPE SIZING DETERMINED BY ENGINEER.
3. SECONDARY OUTLET SIZED FOR PEAK DESIGN STORM.
4. TOTAL POND DEPTH, PER FACILITY SIZING MODEL, INCLUDES GROWING MEDIA, SEPARATION LAYER, AND DRAIN ROCK AS SHOWN ON ST-6060.
5. SEE DETAIL S-2049 FOR SUMP DEPTH

Detention Pond Flow Control Structure			CITY OF WILSONVILLE
DRAWING NUMBER: ST-6110	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: ST-6110.dwg	APPROVED BY: NK	DATE: 6/29/16	PUBLIC WORKS STANDARDS

APPENDIX C – SITE AND BASIN MAPS

(1) PRE-DEVELOPED SITE MAP

(2) POST-DEVELOPED BASIN MAP



PROPOSED LAND USE	AREA (SF)
IMPERVIOUS	0
PERVIOUS	46,001
OFF-SITE IMPERVIOUS	800

Existing Pervious Surface

Existing Impervious Surface

Kimley»Horn

IONNA EV CHARGING SITE

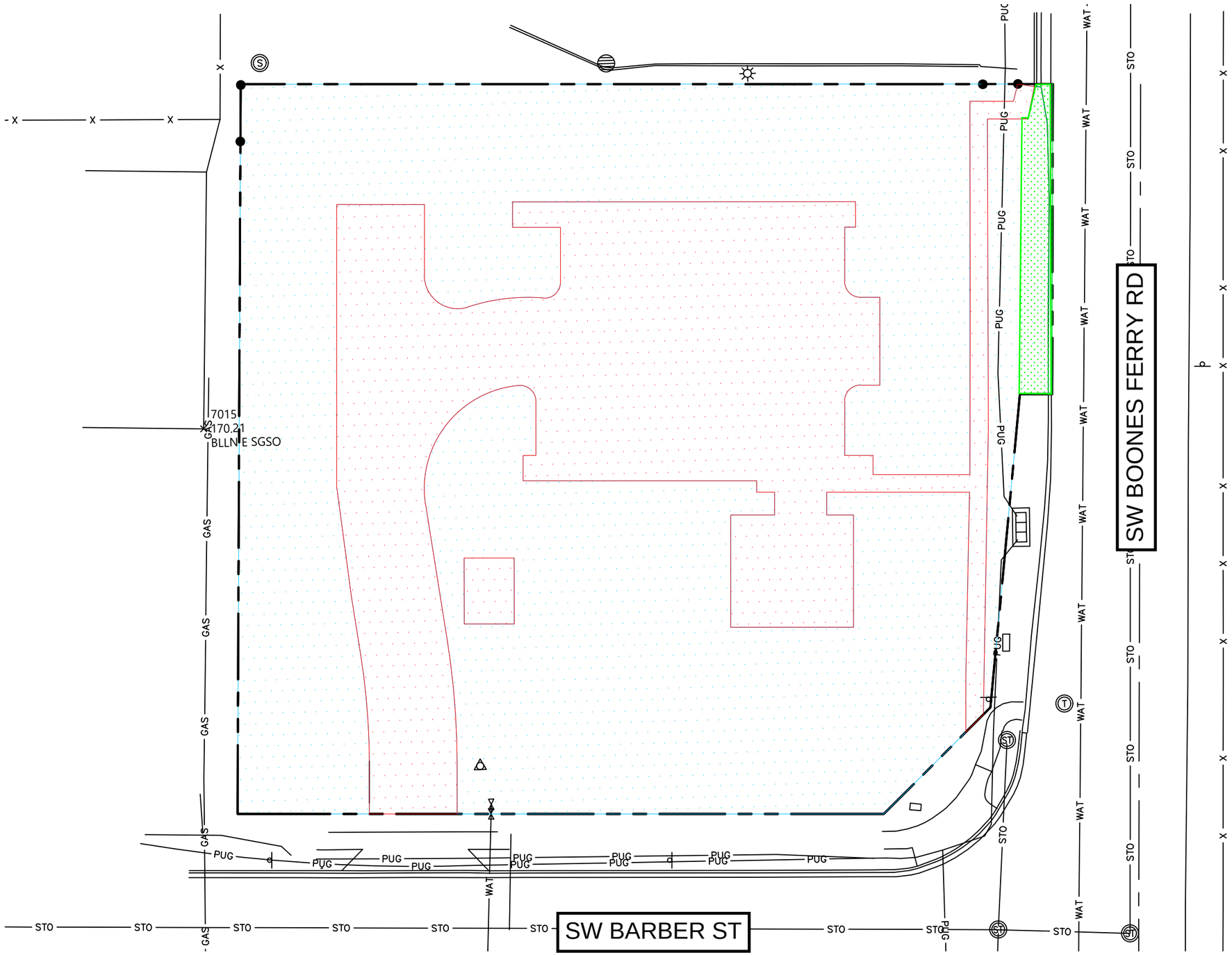
POST-DEVELOPED DRAINAGE AREA MAP

016895063
9025 SW BARBER ST
WILSONVILLE, OR

DECEMBER 29TH, 2025

GRAPHIC SCALE IN FEET
0 15 30 60

NORTH



PROPOSED LAND USE	AREA (SF)
IMPERVIOUS	13,899
PERVIOUS	32,102
OFF-SITE IMPERVIOUS	800

New Impervious Surface

Pervious Surface

Off-Site Impervious Surface

Kimley»Horn

IONNA EV CHARGING SITE

POST-DEVELOPED DRAINAGE AREA MAP

016895063
9025 SW BARBER ST
WILSONVILLE, OR

DECEMBER 29TH, 2025

GRAPHIC SCALE IN FEET
0 15 30 60

NORTH

RE: DB25-0004 Variance Meeting

Summarize

Reply | Reply All | Forward

AM

Amy Maag <amaag@wilsonvilleoregon.gov>
To Perkins, Samuel; Cindy Luxhoj
Cc Kim Rybold; Duffy, Quinn; Andres Villacres; Delacruz, Evan

Tue 12/9/2025 11:41 AM

Retention Policy KH - Mailbox - 12years1day (12 years) Expires 12/7/2037

This sender amaag@wilsonvilleoregon.gov is from outside your organization.

You replied to this message on 12/10/2025 10:20 AM.

You don't often get email from amaag@wilsonvilleoregon.gov. Learn why this is important

Sam ~

As indicated in the TIA, the driveway location is in the best spot as is, even though it does not meet the driveway spacing with the adjacent driveway. As part of the land use decision, staff will craft findings recognizing that the driveway does not meet all spacing requirements but is located in the best location. This is a variance to the City's Public Works Standards, which are handled administratively, with findings adopted in the staff report. No further action is needed from the applicant team.

I don't believe there is a need for a meeting on this item. If you have any other topics to discuss, feel free to reach out to set up a time to discuss those items.

Amy

From: Perkins, Samuel <Samuel.Perkins@kimley-horn.com>
Sent: Tuesday, December 9, 2025 7:50 AM
To: Cindy Luxhoj <luxhoj@wilsonvilleoregon.gov>
Cc: Kim Rybold <rybold@wilsonvilleoregon.gov>; Amy Maag <amaag@wilsonvilleoregon.gov>; Daniel Pauly <pauly@wilsonvilleoregon.gov>; Duffy, Quinn <Quinn.Duffy@kimley-horn.com>; Andres Villacres <andres.villacres@ionna.com>; Delacruz, Evan <Evan.Delacruz@kimley-horn.com>
Subject: DB25-0004 Variance Meeting

Good morning Cindy,

Hope you are doing well. We have been working on revisions to project DB25-0004 – iONNA Wilsonville but had a few questions and would like to meet with the review team if possible. We would like to determine if a variance would be required for our driveway in its current location and what the process for this would be, or if revisions to the driveway and site layout would make more sense.

Please let us know of some dates and times that would work for you and hopefully we can set up a call. Thank you for your help.

Best,
Sam

Samuel Perkins
Kimley-Horn | 1125 17th Street, Suite 1400, Denver, CO 80202

November 13, 2025

Samuel Perkins
Kimely-Horn

Re: Trash/Recycle Enclosure
9025 SW Barber Street
Wilsonville, OR 97070

Dear Samuel,

Thank you for sending us the preliminary site plans for this proposed development in Wilsonville OR.

My Company: Republic Services of Clackamas and Washington Counties has the franchise agreement to service this area with the City of Wilsonville. We will provide complete commercial waste removal and recycling services as needed on a weekly basis for this location

Access and navigation of the site as detailed in the traffic pattern diagram sent to you on 11/10/2025, is adequate for our trucks. The dedicated enclosure of 21'Ft. wide free space opening X 7'Ft. deep, will provide adequate clearance for our trucks to service trash and recycling receptacles. Additionally, the two gates that open a minimum of 120 degrees, with gate wind-pins installed to secure gates in the open and closed positions, is adequate for our trucks to service the receptacles.

Service levels are available as follows:

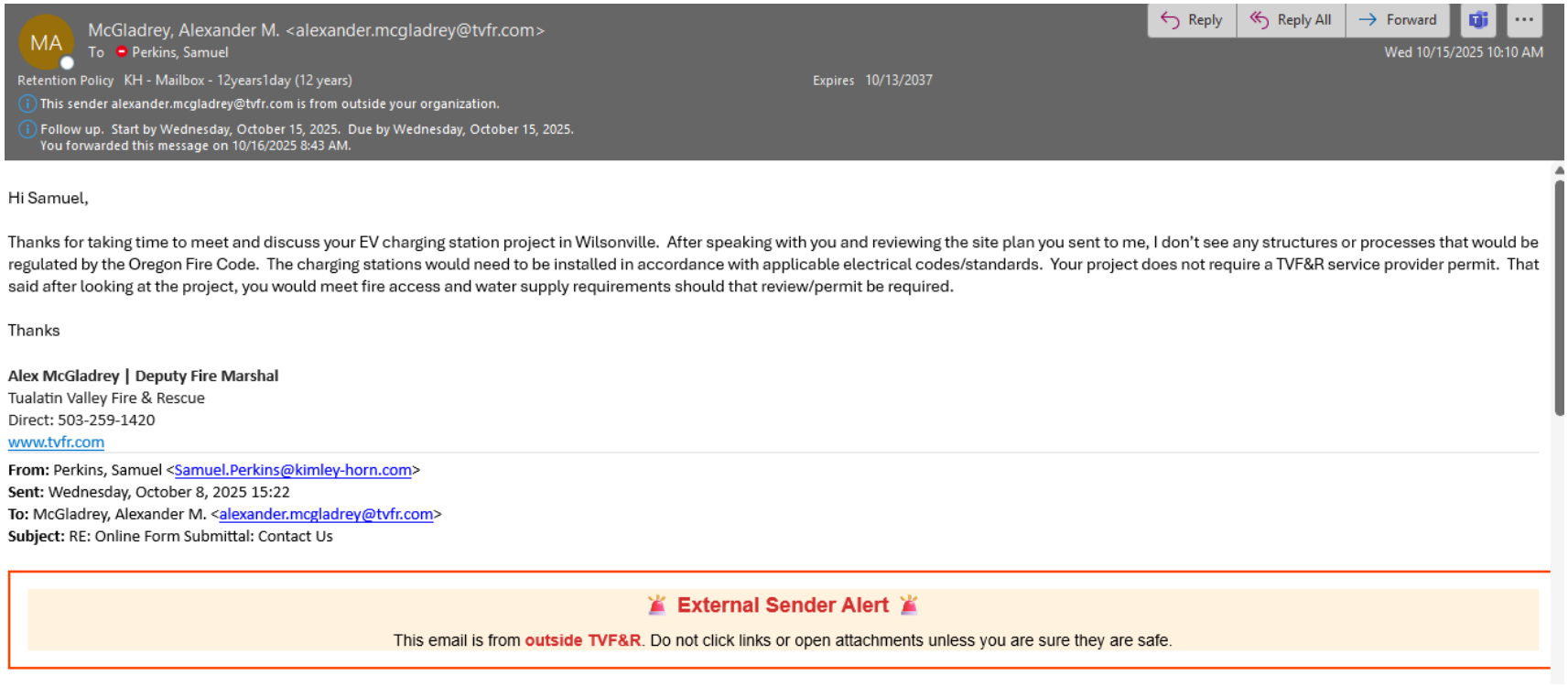
Trash –	5-6 days per week
Recycle –	5 days per week
Food Waste –	5 days per week
Glass –	1 day per week

Thanks Samuel, for your help and concerns for our services prior to this project being developed.

Sincerely,

Kelly Herrod
Operations Supervisor
Republic Services Inc.

TVF&R Correspondence and written approval:



MA

McGladrey, Alexander M. <alexander.mcgladrey@tvfr.com>
To Perkins, Samuel

Reply | Reply All | Forward

Wed 10/15/2025 10:10 AM

Retention Policy KH - Mailbox - 12years1day (12 years) Expires 10/13/2037

This sender alexander.mcgladrey@tvfr.com is from outside your organization.

Follow up. Start by Wednesday, October 15, 2025. Due by Wednesday, October 15, 2025.
You forwarded this message on 10/16/2025 8:43 AM.

Hi Samuel,

Thanks for taking time to meet and discuss your EV charging station project in Wilsonville. After speaking with you and reviewing the site plan you sent to me, I don't see any structures or processes that would be regulated by the Oregon Fire Code. The charging stations would need to be installed in accordance with applicable electrical codes/standards. Your project does not require a TVF&R service provider permit. That said after looking at the project, you would meet fire access and water supply requirements should that review/permit be required.

Thanks

Alex McGladrey | Deputy Fire Marshal
Tualatin Valley Fire & Rescue
Direct: 503-259-1420
www.tvfr.com

From: Perkins, Samuel <Samuel.Perkins@kimley-horn.com>
Sent: Wednesday, October 8, 2025 15:22
To: McGladrey, Alexander M. <alexander.mcgladrey@tvfr.com>
Subject: RE: Online Form Submittal: Contact Us

External Sender Alert

This email is from **outside TVF&R**. Do not click links or open attachments unless you are sure they are safe.