



## DEVELOPMENT REVIEW BOARD PANEL B AGENDA

August 26, 2024 at 6:30 PM

Wilsonville City Hall & Remote Video Conferencing

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### PARTICIPANTS MAY ATTEND THE MEETING AT:

City Hall, 29799 SW Town Center Loop East, Wilsonville, Oregon

Zoom: <https://us02web.zoom.us/j/81495007189>

### TO PROVIDE PUBLIC TESTIMONY:

Individuals must submit a testimony card online:  
<https://www.ci.wilsonville.or.us/DRB-SpeakerCard>  
and email testimony regarding Resolution No. 435  
to Georgia McAlister, Associate Planner at  
[gmcaster@ci.wilsonville.or.us](mailto:gmcaster@ci.wilsonville.or.us)  
by 2:00 PM on August 26, 2024.

### CALL TO ORDER

### CHAIR'S REMARKS

### ROLL CALL

John Andrews	Rachelle Barrett
Megan Chuinard	Alice Galloway
Kamran Mesbah	

### CITIZEN INPUT

*This is an opportunity for visitors to address the Development Review Board on items not on the agenda. Staff and the Board will make every effort to respond to questions raised during citizens input before tonight's meeting ends or as quickly as possible thereafter.*

### CONSENT AGENDA

1. Approval of minutes of the June 24, 2024 DRB Panel B meeting

### PUBLIC HEARINGS

2. **Resolution No. 435. Lamborghini Dealership.** The applicant is requesting approval of a Stage I Preliminary Plan, Stage 2 Final Plan, Site Design Review, Type C Tree Removal Plan, Class 3 Sign Permit, SRIR Review, Waiver Request and Variance for development of a Lamborghini dealership and associated site improvements at 25239 SW Parkway Avenue.

Case Files:

- DB24-0006 Lamborghini Dealership
- Stage 1 Preliminary Plan (STG124-0002)
- Stage 2 Final Plan (STG224-0002)
- Site Design Review (SDR24-0003)
- Type C Tree Removal Plan (TPLN24-0003)
- Class 3 Sign Permit (SIGN24-0008)
- SRIR Review (SRIR24-0002)
- Waiver Request (WAIV24-0001)
- Variance (VAR24-0002)

## **BOARD MEMBER COMMUNICATIONS**

- [3.](#) Recent City Council Action Minutes

## **STAFF COMMUNICATIONS**

### **ADJOURN**

*The City will endeavor to provide the following services, without cost, if requested at least 48 hours prior to the meeting by contacting Shelley White, Administrative Assistant at 503-682-4960: assistive listening devices (ALD), sign language interpreter, and/or bilingual interpreter. Those who need accessibility assistance can contact the City by phone through the Federal Information Relay Service at 1-800-877-8339 for TTY/Voice communication.*

*Habr  interpretes disponibles para aqu llas personas que no hablan Ingl s, previo acuerdo. Comun quese al 503-682-4960.*

**DEVELOPMENT REVIEW BOARD MEETING**

**MONDAY, AUGUST 26, 2024  
6:30 PM**

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Consent Agenda:

1. Approval of minutes of the June 24, 2024 DRB Panel B meeting



**DEVELOPMENT REVIEW BOARD PANEL B  
MEETING MINUTES**

**June 24, 2024 at 6:30 PM**

**City Hall Council Chambers & Remote Video Conferencing**

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**CALL TO ORDER**

A regular meeting of the Development Review Board Panel B was held at City Hall beginning at 6:30 p.m. on Monday, June 24, 2024. Chair Rachelle Barrett called the meeting to order at 6:30 p.m., followed by roll call.

**CHAIR'S REMARKS**

The Conduct of Hearing and Statement of Public Notice were read into the record.

**ROLL CALL**

Present for roll call were: Rachelle Barrett, John Andrews, Megan Chuinard and Kamran Mesbah. Alice Galloway was absent.

Staff present: Daniel Pauly, Stephanie Davidson, Amy Pepper, Kimberly Rybold, Cindy Luxhoj, and Shelley White

**CITIZEN INPUT**

This is an opportunity for visitors to address the Development Review Board (DRB) on items not on the agenda. There were no comments.

**CONSENT AGENDA**

1. Approval of minutes of February 26, 2024 DRB Panel B meeting

**Kamran Mesbah moved to approve the February 26, 2024 DRB Panel B meeting minutes as presented. Megan Chuinard seconded the motion, which was approved by a 4 to 0 vote.**

2. Approval of minutes of March 25, 2024 DRB Panel B meeting

**John Andrews moved to approve the March 25, 2024 DRB Panel B meeting minutes as presented. Megan Chuinard seconded the motion, which was approved by a 3 to 0 to 1 vote with Kamran Mesbah abstaining.**

3. Approval of minutes of April 8, 2024 DRB Panel B meeting

**John Andrews moved to approve the April 8, 2024 DRB Panel B meeting minutes as presented. Kamran Mesbah seconded the motion, which was approved by a 3 to 0 to 1 vote with Megan Chuinard abstaining.**

4. Approval of minutes of April 24, 2024 DRB Panel B meeting

**John Andrews** moved to approve the April 24, 2024 DRB Panel B meeting minutes as presented. **Megan Chuinard** seconded the motion, which was approved by a 3 to 0 to 1 vote with **Rachelle Barrett** abstaining.

## PUBLIC HEARINGS

5. **Resolution No. 434. Frog Pond Neighborhood Park.** The applicant is requesting approval of a Site Design Review of Parks and Open Space, Type C Tree Removal Plan, Class 3 Sign Permit, Abbreviated SROZ Map Verification and Abbreviated SRIR Review for a new 2.93-acre neighborhood park with associated landscaping and other site improvements in Frog Pond West.

Case Files:

- DB24-0004 Frog Pond Neighborhood Park
- Site Design Review (SDR24-0002)
- Type C Tree Removal Plan (TPLN24-0002)
- Class 3 Sign Permit (SIGN24-0007)
- Abbreviated SROZ Map Verification (SROZ24-0001)
- Abbreviated SRIR Review (SRIR24-0001)

**Chair Barrett** called the public hearing to order at 6:41 p.m. and read the conduct of hearing format into the record. **John Andrews** declared for the record that he had visited the site. No board member, however, declared a conflict of interest, bias, or conclusion from a site visit. No board member participation was challenged by any member of the audience.

**Cindy Luxhoj, AICP, Associate Planner**, announced that the criteria applicable to the application were stated starting on page 2 of the Staff report, which was entered into the record. Copies of the report were made available to the side of the room and on the City's website.

The following exhibit was entered into the record:

- Exhibit B3: Updated plan set with minor revisions and an explanatory memorandum submitted by the Applicant after the Staff report was published.

**Ms. Luxhoj** presented the Staff report via PowerPoint, reviewing the site's location, background, and requested applications as follows:

- The 2.93-acre site is located in Frog Pond West at 7042 SW Brisband Street, formerly 7035 SW Boeckman Road, and is adjacent to the new primary school site being constructed to the west with residential subdivisions to the north, east, and south. The subject property is located within the city and zoned Public Facility (PF). (Slide 2)
- The City adopted the Frog Pond Area Plan in November 2015 to guide development of the 2002 Urban Growth Boundary (UGB) Area of Frog Pond West, and the Urban Reserve Areas in Frog Pond East and South, to help ensure the continued development of high quality neighborhoods in Wilsonville. As a follow-up to the Area Plan, and in anticipation of future development, the City adopted the Frog Pond West Master Plan in July 2017 for the area within the UGB. (Slide 3)
  - A neighborhood park was one of five key projects identified in the Frog Pond West Master Plan, which included preliminary designs, estimated costs, and proposed funding strategies. The new

neighborhood park proposed in the current application met the stated intent in the Master Plan and was located on the previously land-banked parcel identified as a potential site for a park.

- As part of the Frog Pond Meadows subdivision, the future park property was annexed into the City in 2019 and zoned PF, consistent with the Frog Pond West Master Plan. In 2002, land use review of the new primary school to the west included some discussion of the future park. The City purchased the property from the West Linn-Wilsonville School District in 2023 for development of the proposed park.
- Proper noticing was followed with the public hearing notice being mailed to property owners within 250 ft of the subject property, posted onsite, and published in the Wilsonville Spokesman. One public comment was received during the comment period and is included as Exhibit D1 in the Staff report. (Slide 4)
- The five requests before the DRB tonight were objective in nature and only involved verification of compliance with Code standards. None of the requests required discretionary review. (Slide 5)
- The Site Design Review of Parks and Open Space included review of the design of the new park, landscaping and site furnishings, and the adjacent streetscape on the north side of the property to ensure consistency with the Site Design Review standards and the Frog Pond West Master Plan.
  - The park was proposed to include a picnic shelter, playground, central lawn area, and both paved and unpaved walking paths weaving through existing stands of trees, lawns, and meadows on the site. Landscaping, lighting, and site furnishings were also included in the park design, as well as completion of the right-of-way improvements on the SW Brisband St frontage along the park's north boundary. (Slide 6)
  - A Traffic Impact Analysis was not required for the current application and no parking was proposed. The park was designed for use by residents in the surrounding Frog Pond West neighborhood who were expected to walk or use other nonmotorized means to access the park. Any park visitors from outside the neighborhood could utilize on-street parking on both sides of SW Brisband St ~~on the north side of the park site~~ as well as in the adjacent neighborhood.
  - The proposed site furnishings were typical of park areas, appropriate for the site's function, and were well designed. (Slides 7)
  - Landscaping was proposed throughout the site and designed to provide a pleasing environment for users while blending with and complementing retained trees and other vegetation on the site. The proposed layout for the park would allow the landscaping requirements to be met, support recreational use of the site, and create a visual environment that was compatible with the surrounding residential neighborhood and primary school to the west. (Slides 8)
- Type C Tree Removal Plan. Inventoried for the subject site were 29 on-site and 20 off-site trees. [not start sentence with a #] Nine on-site trees, marked with an X on the map, were proposed for removal. Preserved trees were indicated with a dashed green line with most being located either in a dense grove in the southwest part of the site or in the Significant Resource Overlay Zone (SROZ) immediately to the east. (Slide 9)
  - A 40-inch DBH giant Sequoia that was previously preserved with construction of the primary school to the west was located at the northwest corner of the site. An Oregon white oak, located just off-site in the SROZ to the east, was planned for protection and preservation with site development.

- The Applicant proposed planting nine mitigation trees, seven street trees along the SW Brisband right-of-way, and 32 smaller restoration trees, for a total of 48 trees, which would exceed the mitigation required.
- The Class 3 Sign Permit reviewed the proposed monument sign on the north side of the site for consistency with sign standards, the Frog Pond West Master Plan, and the adopted Citywide Signage and Wayfinding Plan. The maximum allowed area for a sign on PF-zoned properties adjacent to residential-zoned land was 32 sq ft. As shown on the Applicant's plans, the proposed rectangular sign cabinet only had an area of 6.42 sq ft. (Slide 10)
  - The proposed sign design was not consistent with other signs recently installed in City parks, which reflected design modifications made for aesthetic and readability purposes in the Citywide Signage and Wayfinding Plan adopted in March of 2019. The modified sign, as shown on the right of Slide 10, had the same dimensions as the proposed sign, but centered the park name in the cabinet and included a 1-sq-ft logo on the base, resulting in a total area of 7.42 sq ft. A condition of approval would ensure the park sign would be consistent with the design of other City park signs and reflect the Wayfinding Plan.
- The Abbreviated SROZ Map Verification reviewed the proposed park improvements for consistency with the Development Code requirements, specifically the SROZ Ordinance. The Applicant had conducted a detailed site analysis consistent with the requirements of that section, which the City's Natural Resources Manager reviewed and approved.
- The Significant Resource Impact Report (SRIR) included review and approval by the City's Natural Resources Manager of exempt development located within the SROZ and its associated 25-ft impact area. The Applicant's submittal delineated specific resource boundaries and included the wetland boundary in green, 50-ft wetland buffer in red, and 25-ft Significant Resource Impact Area in blue. (Slide 11)
  - The impacts of exempt development within the SROZ, including a pedestrian path of pervious gravel paving, associated grading, and seating, also were analyzed. The proposed aggregate path and seating area would provide access to the eastern edge of the park and would not negatively impact the adjacent wetland and riparian corridor. Mitigation would include the removal of invasive plant species and the installation of native plants.

**John Andrews** asked if only one road would provide access the park.

**Ms. Luxhoj** explained that SW Brisband St would go all the way through along the north sides of both the park and the primary school to connect with the Morgan Farm Subdivision and would provide access to the park, as would Wehler Way and a small residential access on the south side. (Slide 2) SW Willow Creek Dr ran along the eastern side of the park, but technically had no frontage due to the presence of the SROZ.

- She clarified Wehler Way could not access Boeckman Rd because it was blocked with a gate that provided emergency access only.

**Chair Barrett** confirmed there were no further questions from the Board and called for the Applicant's presentation.

**Kris Ammerman, Wilsonville Parks and Recreation Director**, introduced members of the project team and thanked City Staff for the Staff report, presentation, and collaboration on the proposed park. He presented the Applicant's presentation via PowerPoint with the following key comments:

- The Applicant was requesting approval for a new 2.93-acre neighborhood park with associated landscaping and other site improvements in Frog Pond West. The planning process for the Frog Pond Neighborhood Park began many years ago culminating in the Frog Pond West Master Plan, adopted in July 2017 which created the vision and intent for this area of the city with a goal of creating high-quality community design.
  - Identified in the Master Plan was the subject property, which was land-banked by the West Linn-Wilsonville School District. The Master Plan had established that the School District had the option to use the subject property for school facilities, residential use, or a neighborhood park. The City's stated intent was to work with the District to acquire a site for a neighborhood park at the subject location.
  - The Master Plan described the idea of a potential neighborhood park in the subject location as follows: homes fronting the park to create eyes on the park, paths connecting to the neighborhood, and play areas and shelters.
- In an online survey by the City, the Wilsonville Community expressed overwhelming support for the new park. After sharing three draft designs developed by the City with its partner firm Mayer/Reed, the City received feedback from nearly 150 community members and that process informed the final design before the DRB tonight. The City purchased the property from the School District and finalized the proposed design.
- Some community concerns throughout the planning and public input process related to parking and potential noise.
  - The subject park was intended to be a neighborhood park where most, if not all users would arrive on foot or via other nonmotorized options. Any parkgoers from outside the surrounding neighborhood could utilize on-street parking on both sides of SW Brisband St or the adjacent neighborhood to the north.
  - A small stage, an extension of the play area provided for spontaneous use, would be centrally located within the park to minimize any noise that might be created. There would be no scheduled programming on the stage and no access to power for music or amplified sound.

**Anne Samuel, Landscape Architect, Mayer/Reed, Inc.** stated the main design feature of the proposed park was a quarter-mile walking path, indicated as loops throughout the center of the site which also drove most of the design. (Slide 4) The western side of the site was more active, while the eastern side was more passive and naturalistic. All pathways were ADA compliant with an under 5% slope.

- Access into the park would be from SW Brisband St and Wehler Way only, as the SROZ on the east side along Willow Creek Dr was a wetland area and the headwaters of Meridian Creek, which led to Boeckman Creek, and ultimately, the Willamette River. The proposed park was a part of that watershed system. The steep slope on the east side provided no practical way to create a connection along Willow Creek Dr.
- Other site amenities included the shelter to the north, the 2- to 5-year-old play area, which supported community-wide features, and a 5- to 12-year-old play area within the primary school. Tucked away behind existing trees on the south side was an adult fitness area.
- There were three connections directly from the right-of-way on the north side, and on the south side, the connection between the school and right-of-way was the only area that would be lit using



three solar-powered, Dark Sky compliant light poles along that edge. She noted no power was provided to the park site.

- The ground plane of the 2 to 5-year-old play area was comprised of engineered wood fiber bark chips, shaped like a frog pond or jelly bean, and featured a boardwalk on the south side out to a concrete deck area.
  - The play equipment utilized a natural color palette and featured a 3-ft-tall frog. Like the primary school, the Applicant focused on universal accessibility. Mayer/Reed was the landscape architect for the primary school also, but there were some elements in the park design that Mayer/Reed was not able to include in the primary school project.
  - The play area featured a rocker, swings, a roller slide, a STEM (science, technology, engineering, math) panel for passive education, spinners, a spider web, and climbers.
- The adult fitness area was tucked away outside the view shed and featured five pieces of equipment. Some were fixed, some had moving parts, and all were within engineered wood fiber.
  - Equipment included machines for pullups, pushups, core exercises, an elliptical, a chest press, and an arm cycle. Pieces that would complement the varying abilities of users were chosen and equipment colors were muted and matched to the natural environment.
- The Applicant's approach to the site's design for landscaping and planting involved a lot of restoration planting. Minimal irrigation was required as only the lawn and high-use areas utilized it while the remainder of the park would be allowed to go back to a natural environment.
  - The Applicant had used a new and unique approach to landscape restoration for the project that was not shrub-based but instead, brought back the oak savanna, only 1 percent of which currently existed within the Willamette Valley. The one acre of oak savanna in the proposed park would connect to 2.5 acres of oak savanna on the primary school property.

**Sam Huck, Planning Consultant, 3J Consulting**, thanked Staff for covering much of the material already, noting that the site's Public Facility (PF) Zoning designation provided for uses such as schools, churches, public buildings, hospitals, public utilities, and parks. The PF designation matched the zoning for the adjacent Frog Pond Elementary School, currently under construction, while the remainder of the surrounding neighborhood was zoned as Residential Neighborhood (RN).

- Forty trees would be retained on the site and of the nine trees that would be removed, three were considered invasive species; four were in Poor condition; one was in Fair condition, but the species had a history of branch failure and lower trunk decay; and one tree was in generally Good condition but was not expected to be a long-term site amenity due to a pest that had become common in the region and targeted ash trees specifically.
  - Professional Architect Morgan Holen had completed the tree inventory and recommended the nine trees be removed and replaced with a range of large shade tree species that would support long-term ecological diversity, resiliency on the site, and generally be good park trees.
  - In total, 40 new trees would be planted on the site, in addition to the 40 trees being retained. Nine of the new 40 trees would be the mitigation trees planted in place of the nine removed.
  - The other 31 trees that would be planted would be dispersed across the park as well as near the SROZ for ecological restoration. Seven trees on the north right-of-way at SW Brisband would be salvaged and replanted.
- A few minor revisions to the Site Plan were sent on June 17<sup>th</sup>, right after the Staff report publication and entered into the record as a replacement to the Land Use Set as Exhibit B3.

- The revisions included some path rounding on the site, widening in some areas to protect the landscaping from normal usage over time so plantings would not get cut off. Additional details were also added to the plan set.

**Megan Chuinard** noted comments about residents accessing via nonmotorized means and asked if the park would have bicycle racks.

**Ms. Samuel** confirmed a bike rack was located on the north side near the site sign.

**Mr. Andrews** noted one sign was proposed that would be in the park and asked if there would be any other signage elsewhere to indicate a park was located there.

**Mr. Ammerman** replied one sign was planned for the main entrance on the north side of the park. No other signs were planned.

**Daniel Pauly, Planning Manager**, added that Staff had looked at the comprehensive Signage and Wayfinding Program/Plan for parks throughout the city, and the signs were being installed consistent with that Plan as adopted by City Council. To his knowledge, the Plan did not include any additional signs for the subject park, which had been a purposeful decision because not every small park or destination could be included on a larger wayfinding signs, as the signs would become too cluttered. Regional parks and destinations had to be sorted through for prioritization regarding offsite signage.

**Mr. Andrews** commented it was a fairly large, beautifully designed park but he was a bit concerned that it was sequestered in the area and no one else in town would know about it, unless they studied a map. It might be useful for people in the community to know the park was there and make use of it.

**Chair Barrett** called for public testimony regarding the application.

**Jeff Solomon, 27790 Willow Creek Dr, Wilsonville, OR, 97070** stated his main concern was the stage area adjacent to the play area. He asked for further elaboration on sound carrying, how the stage would be used and whether there would be any microphone hookups, for example.

**Mr. Ammerman** clarified that there would be no power in the park at all, so no opportunity for music or amplified sound in the stage area. There would be no formal programming of any kind. It was an extension of the play area, an added space intended for impromptu, informal gathering. The stage was not elevated, but a widened part of the adjacent concrete path.

**Ms. Samuel** added it was just a flat area, a widening of the path, and a place for a magician, storyteller, or clown might perform at a birthday party, for example.

**Mr. Solomon** stated he was satisfied with that explanation and that his concerns about parking, traffic, and the tree had been addressed. He thanked Staff and the Applicant.

**Chair Barrett** confirmed the Applicant had no rebuttal and called for additional questions.

**Kamran Mesbah** understood the park was labeled as a neighborhood park, meaning for the adjacent neighborhood and not for the rest of the city.

**Mr. Pauly** confirmed that was the intent. It was not a regional park. There was a hierarchy of park types within the city and the use of the term neighborhood park was purposeful.

**Mr. Mesbah** asked how many homes the park would serve.

**Kimberly Rybold, Senior Planner**, replied that at full build-out, Frog Pond West would have 550 to 600 homes, giving the park approximately 1,200 to 1,400 neighborhood users.

**Mr. Solomon** asked when construction of the park would begin.

**Mr. Ammerman** replied that construction would begin early next spring with completion anticipated prior to the beginning of the 2025/2026 school year.

**Chair Barrett** closed the public hearing at 7:20 pm.

**Megan Chuinard moved to approve the Staff report with the addition of Exhibit B3. Kamran Mesbah seconded the motion, which passed unanimously.**

**Kamran Mesbah moved to adopt Resolution No. 434. Rachele Barrett seconded the motion, which passed unanimously.**

**Chair Barrett** read the rules of appeal into the record.

#### **BOARD MEMBER COMMUNICATIONS**

6. Results of the April 22, 2024 DRB Panel A meeting
7. Recent City Council Action Minutes

**Chair Barrett** asked if City Council had discussed the DRB's previous Home Depot decision.

**Kimberly Rybold, Senior Planner**, replied that Home Depot had its appeal hearing on May 17, 2024 and City Council had voted to uphold the DRB's decision.

**John Andrews** asked what the next steps were regarding the Home Depot decision.

**Stephanie Davidson, Assistant City Attorney**, responded that the Appellant had filed a Notice of Intent to Appeal with the Oregon Land Use Board of Appeals (LUBA). Staff had to supplement the record for the Class II matter. There was a motion, and LUBA provided an order combining the two matters at the LUBA level, which was a positive; however, it was an ongoing appeal. She said she would be happy to provide updates as the process unfolded, noting City Council would certainly be updated and that it was active litigation. She advised Board members that it was a slower process than what DRB experienced.

**STAFF COMMUNICATIONS**

There were no comments.

**ADJOURNMENT**

The meeting adjourned at 7:26 p.m.

MONDAY, AUGUST 26, 2024  
6:30 PM

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Public Hearing:

2. **Resolution No. 435. Lamborghini Dealership.** The applicant is requesting approval of a Stage I Preliminary Plan, Stage 2 Final Plan, Site Design Review, Type C Tree Removal Plan, Class 3 Sign Permit, SRIR Review, Waiver Request and Variance for development of a Lamborghini dealership and associated site improvements at 25239 SW Parkway Avenue.

Case Files:

DB24-0006 Lamborghini Dealership

- Stage 1 Preliminary Plan (STG124-0002)
- Stage 2 Final Plan (STG224-0002)
- Site Design Review (SDR24-0003)
- Type C Tree Removal Plan (TPLN24-0003)
- Class 3 Sign Permit (SIGN24-0008)
- SRIR Review (SRIR24-0002)
- Waiver Request (WAIV24-0001)
- Variance (VAR24-0002)

**DEVELOPMENT REVIEW BOARD  
RESOLUTION NO. 435**

**A RESOLUTION ADOPTING FINDINGS AND CONDITIONS OF APPROVAL, APPROVING A STAGE 1 PRELIMINARY PLAN, STAGE 2 FINAL PLAN, SITE DESIGN REVIEW, TYPE C TREE REMOVAL PLAN, CLASS 3 SIGN PERMIT, SRIR REVIEW, WAIVER REQUEST AND VARIANCE FOR DEVELOPMENT OF A LAMBORGHINI DEALERSHIP AND ASSOCIATED SITE IMPROVEMENTS AT 25239 SW PARKWAY AVENUE.**

WHEREAS, an application, together with planning exhibits for the above-captioned development, has been submitted by the City of Wilsonville, Parks and Recreation – Owner/Applicant, in accordance with the procedures set forth in Section 4.008 of the Wilsonville Code; and

WHEREAS, the subject site is located at 25239 SW Parkway Avenue on Tax Lot 01000, Section 02DA, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, Washington County, Oregon; and

WHEREAS, the Planning Staff has prepared the staff report on the above-captioned subject dated August 13 2024; and

WHEREAS, said planning exhibits and staff report were duly considered by the Development Review Board Panel B at a scheduled meeting conducted on August 26, 2024, at which time exhibits, together with findings and public testimony were entered into the public record; and

WHEREAS, the Development Review Board considered the subject and the recommendations contained in the staff report; and

WHEREAS, interested parties, if any, have had an opportunity to be heard on the subject.

NOW, THEREFORE, BE IT RESOLVED that the Development Review Board of the City of Wilsonville does hereby incorporate as part of this resolution, as if fully set forth herein, the staff report, as adopted with any amendments and attached hereto, with findings and recommendations contained therein, and authorizes the Planning Director to issue permits consistent with said recommendations for:

DB24-0006 Lamborghini Dealership: Stage 1 Preliminary Plan (STG124-0002), Stage 2 Final Plan (STG224-0002), Site Design Review of Parks and Open Space (SDR24-0003), Type C Tree Removal Plan (TPLN24-0003), Class 3 Sign Permit (SIGN24-0007), SRIR Review (SRIR24-0002), Waiver Request (WAIV24-0001) and Variance (VAR24-0002).

ADOPTED by the Development Review Board of the City of Wilsonville at a regular meeting thereof this 26<sup>th</sup> day of August, 2024, and filed with the Planning Administrative Assistant on \_\_\_\_\_. This resolution is final on the 15<sup>th</sup> calendar day after the postmarked date of the written notice of decision per *WC Sec 4.022(.09)* unless appealed per *WC Sec 4.022(.02)* or called up for review by the Council in accordance with *WC Sec 4.022(.03)*.

\_\_\_\_\_  
Rachelle Barrett, Chair - Panel B  
Wilsonville Development Review Board

Attest:

\_\_\_\_\_  
Mandi Simmons, Planning Administrative Assistant



Exhibit A1  
Staff Report  
Wilsonville Planning Division  
Lamborghini Dealership Development

Development Review Board Panel 'B'  
Quasi-Judicial Public Hearing

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<b>Hearing Date:</b>	August 26, 2024
<b>Date of Report:</b>	August 13, 2024

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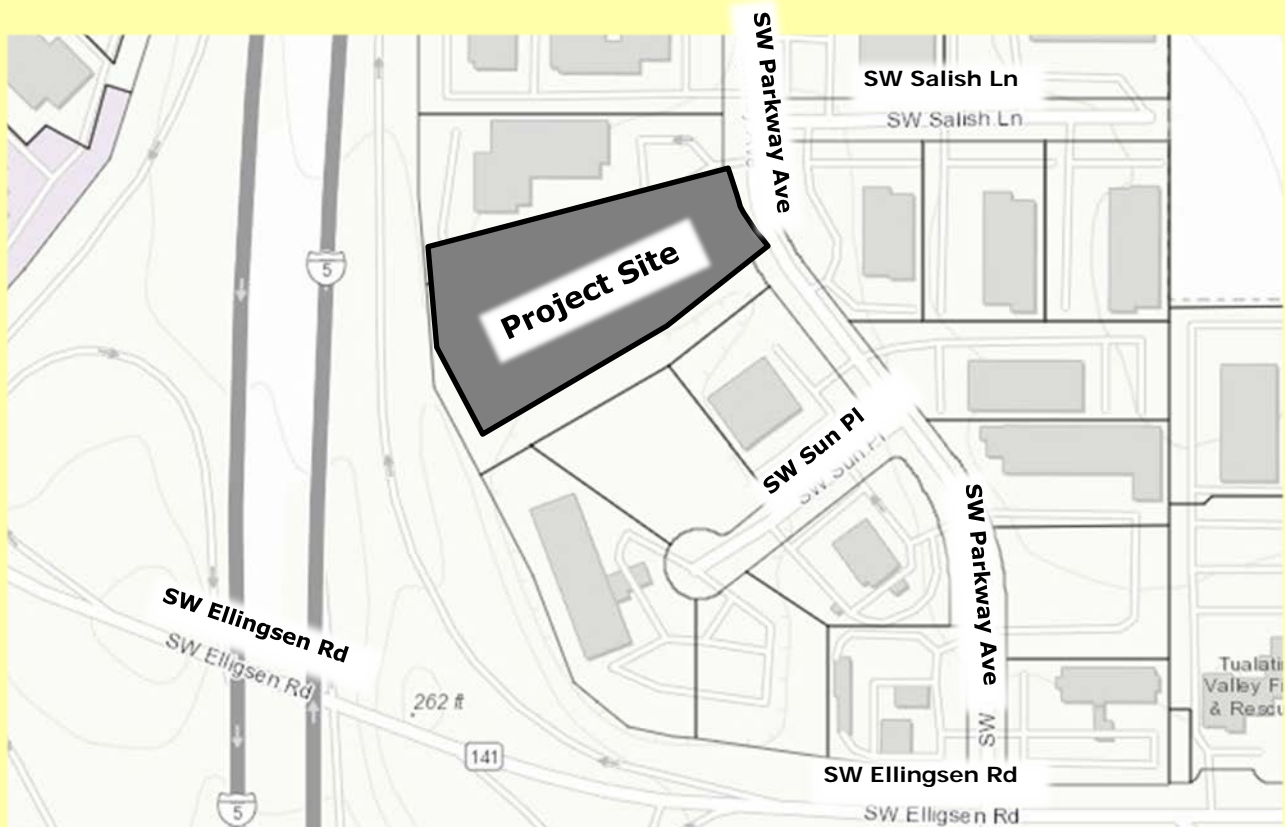
<b>Application No.:</b>	DB24-0006 Lamborghini Dealership Development
<b>Request/Summary:</b>	The requests before the Development Review Board include a Stage 1 Preliminary Plan, Stage 2 Final Plan, Site Design Review, Waiver, Class 3 Sign Permit, Type C Tree Removal Plan, Standard SROZ Map Verification, Standard SRIR Review, and Variance.
<b>Location:</b>	25239 SW Parkway Avenue, Tax Lot 01000, Section 02DA, Township 3 South, Range 1 West, Willamette Meridian, Washington County, Oregon
<b>Owner:</b>	Bradley Tonkin (Casa Tonchinni LLC)
<b>Applicant:</b>	Celia Tonkin (Ron Tonkin Gran Turismo)
<b>Authorized Representative:</b>	Brad Kilby (Harper Houf Peterson Righelles, Inc)
<b>Comprehensive Plan Designation:</b>	Commercial
<b>Zone Map Classification:</b>	Planned Development Commercial
<b>Staff Reviewers:</b>	Georgia McAlister, Associate Planner Amy Pepper, Development Engineering Manager Kerry Rappold, Natural Resources Program Manager
<b>Staff Recommendation:</b>	<u>Approve with conditions</u> the requested Stage 1 Master Plan, Stage 2 Final Plan, Site Design Review, Waivers, Class 3 Sign Permit, Type C Tree Removal Plan, Standard SROZ Map Verification, Standard SRIR Review, and Variance request.



**Applicable Review Criteria:**

<b><u>Development Code:</u></b>	
Section 4.008	Application Procedures-In General
Section 4.009	Who May Initiate Application
Section 4.010	How to Apply
Section 4.011	How Applications are Processed
Section 4.014	Burden of Proof
Section 4.031	Authority of the Development Review Board
Subsection 4.035 (.04)	Site Development Permit Application
Subsection 4.035 (.05)	Complete Submittal Requirement
Section 4.110	Zones
Section 4.116	Standards applying to Commercial Development in Any Zone
Section 4.118	Standards Applying to Planned Development Zones
Section 4.131	Planned Development Commercial Zone
Sections 4.139 through 4.139.11 as applicable	Significant Resource Overlay Zone (SROZ) Ordinance
Section 4.140	Planned Development Regulations
Section 4.154	On-site Pedestrian Access and Circulation
Section 4.155	Parking, Loading, and Bicycle Parking
Sections 4.156.01 through 4.156.11	Sign Regulations
Section 4.167	Access, Ingress, and Egress
Section 4.171	Protection of Natural Features and Other Resources
Section 4.175	Public Safety and Crime Prevention
Section 4.176	Landscaping, Screening, and Buffering
Section 4.177	Street Improvement Standards
Section 4.178	Sidewalk and Pathway Standards
Section 4.179	Mixed Solid Waste and Recyclables Storage
Section 4.196	Variances
Sections 4.199.20 through 4.199.60	Outdoor Lighting
Sections 4.300 through 4.320	Underground Utilities
Sections 4.400 through 4.450 as applicable	Site Design Review
Sections 4.600-4.640.20	Tree Preservation and Protection
<b><u>Other Planning Documents:</u></b>	
Wilsonville Comprehensive Plan	

## Vicinity Map



### Background:

The subject property, located at 25239 SW Parkway Avenue, was created as a part of the Stafford Park zone change and subdivision, Case File 76RZ03, in 1976. At this time the land was designated for commercial use and has remained a commercially zoned parcel. Despite high demand for commercial development in Wilsonville, the lot has remained vacant since its creation in 1976 despite development moving forward in the surrounding area. The lot is one of two remaining undeveloped lots from the original subdivision.

The most likely explanation for the delay in development of the site is the challenging topography and presence of a locally significant wetland. Today much of the site is located within the Significant Resource Overlay Zone (SROZ), created in the late 90s for the protection of Wilsonville's water ways. Given the site was not developed prior to the creation of the SROZ one can conclude the restrictions relating to development in the SROZ are not the only limiting factors to development but the nature of the site itself is not ideal for those wishing to develop a commercial site within Wilsonville.

In recent years the City hosted several Pre-Application meetings regarding the potential development of the site. The limitations resulting from the existing conditions and requirements

for development within and adjacent to the SROZ likely prevented the potential projects from moving forward.

The current application accomplishes the difficult task of designing an attractive and functional development that properly balances the environmental considerations and topography challenges with the proposal for a three-story 37,508 SF Lamborghini Dealership in the northwest corner of the site. The proposed development is designed to address the various concerns including a large retaining wall to create a functional site without excessive grading and a robust mitigation planting in the SROZ to restore any areas impacted within development and enhance the existing wetland and upland area.

## **Summary:**

### Stage 1 Preliminary Plan

The Stage 1 Preliminary Plan proposes a three-story 37,508 SF Lamborghini Dealership in the northwest corner of the site with associated site improvements including a small parking area and natural resource mitigation to the south of the development in the Significant Resource Overlay Zone. The proposed development and layout are consistent with Planned Development Commercial Zone and the Significant Resource Overlay Zone.

### Stage 2 Final Plan

The proposed Stage 2 Final Plan reviews the function and design of the proposed project, including assuring the proposal meets all the applicable design and development standards of the Planned Development Commercial Zone. The proposed project demonstrates compliance with the Planned Development Commercial Zone.

### Site Design Review

The proposed building is consistent with the building design standards in the Planned Development Commercial Zone, with exception to the 35' height limitation as noted in the waiver request. The applicant proposes a three-story 37,508 SF Lamborghini Dealership in the northwest corner of the site with associated site improvements. The building location and site design accounts for topographic and natural resource constraints on the site with the southeast portion of the site located with the Significant Resource Overlay Zone and substantial sloping. Due to these constraints the development's façade is setback from Parkway Avenue with an access way leading into a small parking area along the north property line to the east of the proposed building. While the proposed site design requires both a Waiver and Variance to design standards, the unique constraints of the site support the proposed configuration. Landscaping is provided throughout the parking area and site surrounding the building. The project will provide dense native landscape plantings to create a natural character to the south of the building and parking area within the SROZ to both mitigate construction and enhance the natural area.

## Waiver

The applicant requests one waiver to the 35' maximum height allowance for commercial development included in Section 4.116(.10) E., Standards Applying to Commercial Developments in any Zone. The requested waiver addresses the highest point of the roofline which surpasses the 35' limitation by 9' at 44'. The waiver requests are discussed in more detail in the Discussion Points – Discretionary Review of this staff report. See also Request D.

## Class 3 Sign Permit

The subject development's east façade fronts SW Parkway Avenue and public entrance and the west façade fronts I-5, allowing for two wall signs and one monument sign. The applicant proposes a wall sign on the east façade, west façade, and one free standing sign.

## Type C Tree Removal Plan

The applicant inventoried sixty-five (65) trees which includes a total of fifty-four (54) onsite trees and eleven (11) offsite trees, twenty-seven (27) of which are proposed for retention within the Significant Resource Overlay Zone. The applicant proposes the removal of twenty-seven (27) trees on the proposed development site and two (2) trees offsite to the north of the development site for a total of twenty-nine (29) trees. The tree species on site are a mix of native and non-native trees including Douglas fir, red alder, cottonwood, spruce, willow, sweet cherry, domestic apple, deodar cedar, and black locust. The trees proposed for removal are not high-quality trees and removal is necessary for the development of the site. The applicant proposes replanting forty-six (46) new trees on the subject property, which is in excess of the 1:1 mitigation ratio as required by the development code.

## Standard SROZ Map Verification and SRIR Review

The applicant conducted a detailed site analysis consistent with the requirements of the Significant Resource Overlay Zone (SROZ) ordinance, which the City's Natural Resources Manager reviewed and approved. The applicant's standard Significant Resource Impact Report (SRIR) delineated specific resource boundaries and analyzed the impacts of exempt development within the SROZ. The applicant's SRIR contained the required information, including an analysis and development recommendations for mitigating impacts. The proposed development includes minor but necessary encroachments within the SROZ. A native planting plan including 40 native trees is proposed to mitigate the impacts of development.

## Variance

The applicant requests a variance to parking landscaping standards outlined in Section 4.155(.03) B.1. which require a screening landscape buffer between the parking area and the property to the north. The buffer is intended to minimize the visual dominance of parking areas. The applicant proposes an alternative to minimizing the visual dominance as a variance is necessary due to site constraints limiting the developable area of the lot. This request is discussed in more detail in the Discussion Points – Discretionary Review of this staff report. See also Request I.

**Public Comments:**

No public comments were received during the comment period for the project.

**Discussion Points – Verifying Compliance with Standards:**

This section provides a discussion of key clear and objective development standards that apply to the proposed applications. The Development Review Board will verify compliance of the proposed applications with these standards. The ability of the proposed applications to meet these standards may be impacted by the Development Review Board’s consideration of discretionary review items as noted in the next section of this report.

**Traffic Impacts and Concurrency**

The Traffic Impact Analysis (see Exhibit B10) performed by the City’s consultant, DKS Associates, identifies the most probable used intersections for evaluation as:

- Signalized:
  - I-5 Southbound Ramps/SW Elligsen Road
  - I-5 Northbound Ramps/SW Elligsen Road
  - SW Parkway Ave/SW Elligsen Road

The Level of Service (LOS) D standard will continue to be met by existing street improvements at the studied intersections with existing, planned, and this proposed development as follows:

**TABLE 3: EXISTING (2023) INTERSECTION OPERATIONS (PM PEAK)**

INTERSECTION	OPERATING STANDARD	EXISTING PM PEAK HOUR		
		V/C	DELAY	LOS
<b>SIGNALIZED</b>				
I-5 SB RAMPS/ELLIGSEN RD	v/c ≤ 0.99 (ODOT)	0.46	13.2	B
I-5 NB RAMPS/ELLIGSEN RD	v/c ≤ 0.99 (ODOT)	0.41	8.8	A
PARKWAY AVE/ELLIGSEN RD	LOS D (City)	0.50	21.1	C
<b>SIGNALIZED INTERSECTION:</b> Delay = Average Intersection Delay (secs) v/c = Total Volume-to-Capacity Ratio LOS = Total Level of Service		<b>TWO-WAY STOP-CONTROLLED INTERSECTION:</b> Delay = Critical Movement Delay (secs) v/c = Critical Movement Volume-to-Capacity Ratio LOS = Critical Levels of Service (Major/Minor Road)		

**TABLE 5: FUTURE INTERSECTION OPERATIONS (PM PEAK)**

INTERSECTION	OPERATING STANDARD	EXISTING + PROJECT			EXISTING + STAGE II			EXISTING + STAGE II + PROJECT		
		V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS
<b>SIGNALIZED</b>										
I-5 SB RAMP/ELLIGSEN RD	v/c ≤ 0.99 (ODOT)	0.47	14.6	B	0.51	15.5	B	0.52	15.9	B
I-5 NB RAMP/ELLIGSEN RD	v/c ≤ 0.99 (ODOT)	0.42	8.6	A	0.42	8.9	A	0.43	8.7	A
PARKWAY AVE/ELLIGSEN RD	LOS D (City)	0.51	22.6	C	0.50	21.8	C	0.54	23.9	C
<b>SIGNALIZED INTERSECTION:</b>		<b>TWO-WAY STOP-CONTROLLED INTERSECTION:</b>								
Delay = Average Intersection Delay (secs)		Delay = Critical Movement Delay (secs)								
v/c = Total Volume-to-Capacity Ratio		v/c = Critical Movement Volume-to-Capacity Ratio								
LOS = Total Level of Service		LOS = Critical Levels of Service (Major/Minor Road)								

The project will add an additional 89 PM peak hour trips (36 in, 53 out) with a total of 1,045 daily trips. Of the additional trips, 67 new PM peak hour trips, or approximately 75%, are estimated to pass through the I-5/ Elligsen Road interchange area and 0% of the additional trips through the I-5/Wilsonville Road interchange area are anticipated.

**TABLE 4: VEHICLE TRIP GENERATION RATES**

DATA SOURCE	SIZE <sup>a</sup>	PM PEAK HOUR TRIP GENERATION RATE	PM PEAK HOUR VEHICLE TRIPS			AVERAGE WEEKDAY TRIPS
			IN	OUT	TOTAL	
AUTOMOBILE SALES (NEW) (ITE CODE 840)	37.5 KSF	2.37 Trips per KSF	36	53	89	1,045

<sup>a</sup> KSF = 1,000 square feet

### Natural Resources Impact and Mitigation

The proposed development site is a unique property with nearly 1 acre of the 2.3 acre site located within the Significant Resource Overlay Zone (SROZ). See below:



With approximately 43% of the site a within this resource overlay zone intended to protect water resources and native vegetation to support a healthy environment, the impact on natural resources is carefully considered in the site design and the importance of the wetland area is acknowledged by the applicant. As such, the development is proposed to be focused on the northwest corner of the site, In addition, a 24- space parking area is placed near the building. The parking area is designed to meet customer and employee needs while minimizing grading. The single access to the developed northwest portion of the site is located along the north property line avoiding the wetland to the south. To achieve this design that both maximizes natural resource conservation and development potential the applicant has applied for a Waiver to the maximum height of the building and a Variance to parking landscape standards. To avoid encroachment into the SROZ in its entirety would severely limit the development potential of the site. The applicant has proposed only minor encroachments within the SROZ totaling 89 square feet, which is less than the allowed 120 square feet, including a stormwater facility and small portion of the parking area. In addition to the encroachment the developments fire access, which is the only vehicular access, is within the SROZ, which is exempt from development restrictions. However, it is placed as close as possible to the northern boundary to minimize impact.

To mitigate any impacts on the natural resources and SROZ the applicant has worked with the City’s Natural Resources team to develop a mitigation planting of a variety of native species. The native plantings are to be installed to the south of the parking area and will buffer the development from the wetland on the southern portion of the property. The planting includes a diverse mix of native trees, shrubs, and ground cover for a complete and complex restoration area shown in the mitigation table below from the applicants’ materials:

### MITIGATION PLANTING TABLE

BOTANICAL NAME	COMMON NAME	WETLAND INDICATOR STATUS	Minimum Rooting Size	UPLAND PLANTING AREA	WETLAND PLANTING AREA
<b>TREES</b>					
<i>Acer macrophyllum</i>	Bigleaf Maple	FACU	2 Gallon	5	
<i>Quercus garryana</i>	Oregon White Oak	UPL	2 Gallon	10	
<i>Populus balsamifera</i>	Balsam Poplar	FAC	2 Gallon		5
<i>Pinus ponderosa</i> var. <i>willamettensis</i>	Willantte Valley Ponderosa Pine	FACU	2 Gallon	5	
<i>Fraxinus latifolia</i>	Oregon Ash	FACW	2 Gallon		15
			Total trees	20	20
<b>SHRUBS</b>					
<i>Amelanchier alnifolia</i>	Western Serviceberry	FACU	1 Gallon	5	
<i>Symphoricarpos alba</i>	Snowberry	FACU	1 Gallon	5	
<i>Mahonia aquifolium</i>	Tall Oregon Grape	UPL	1 Gallon	10	
<i>Polystichum munitum</i>	Pacific Sword Fern	FACU	1 Gallon		
<i>Cornus sericea</i> ssp. <i>sericea</i>	Red-osier Dogwood	FACW	1 Gallon		5
<i>Salix hookeriana</i>	Hooker's Willow	FACW	1 Gallon		10
<i>Spiraea douglasii</i>	Douglas spirea	FACW	1 Gallon		5
			Total shrubs	20	20
<b>GRASSES AND FORBS*</b>					
<i>Elymus glaucus</i>	Blue Wild-rye	FACW	5 lbs		X
<i>Festuca idahoensis</i>	Idaho Fescue	FACU	5 lbs	X	
*Grass seed to be applied in all temporary disturbed areas following construction at 7-10 PLS / Acre					

### Parking

Pursuant to Oregon Administrative Rules (OAR) 660-012-0440 parking mandates, or the minimum vehicle parking requirements in Table 5, are not applicable due to the site being within 1/2 mile of SMART Route 2X, among the City’s most frequent transit routes. With no minimum vehicle parking requirements, the number of total vehicle parking spaces is at the complete discretion of the applicant, so long as the total number of spaces does not exceed the maximum and other non-parking requirements are still met. The applicant proposes 24 parking spaces and 8 bicycle parking spaces to serve the anticipated customer needs of the development.

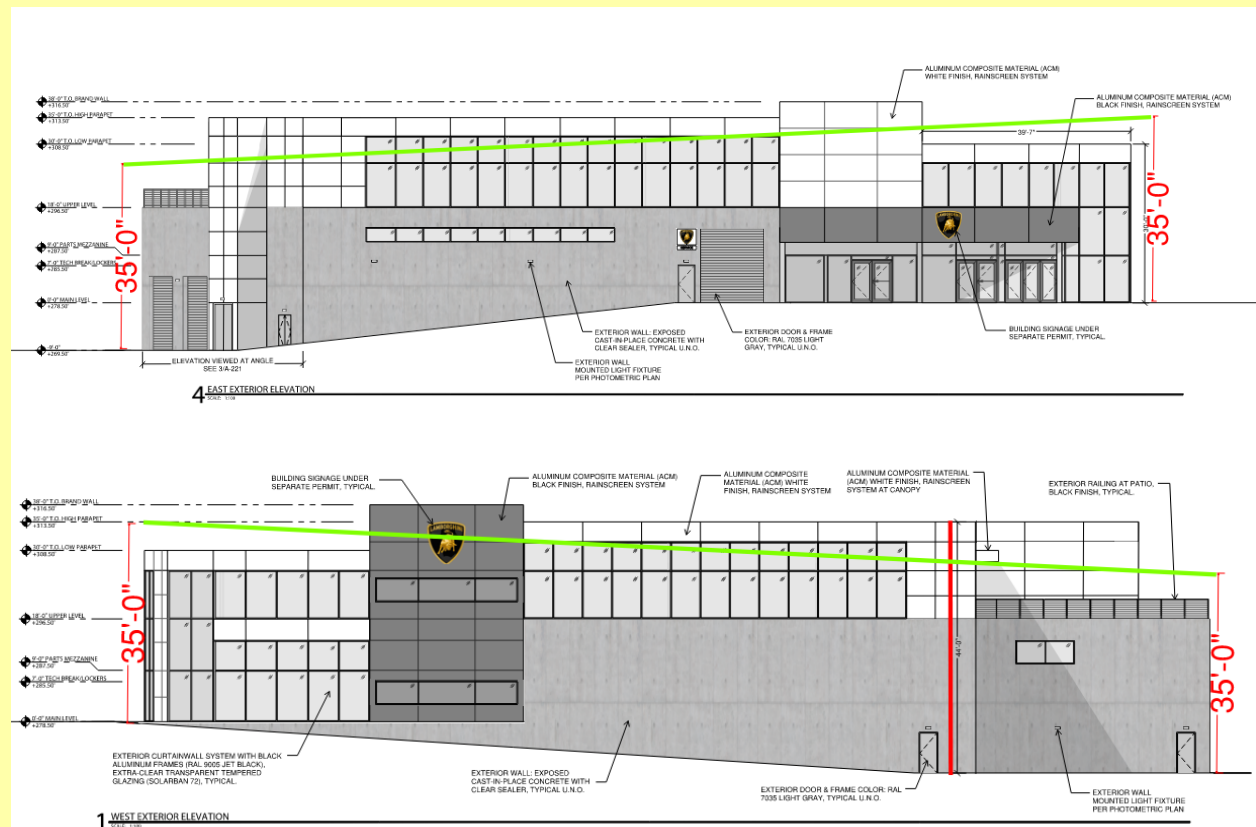
### Discussion Points – Discretionary Review:

This section provides a discussion of discretionary review requests that are included as part of the proposed applications. The Development Review Board may approve or deny items in this section based upon a review of evidence submitted by the applicant.



### Waiver to Height

The applicant requests a waiver from the maximum height allowed of 35' for commercial development included in Section 4.116(.10) E., Standards Applying to Commercial Developments in any Zone. Due to variations in the site's topography, it is not feasible to create a flat grade. As a result, the proposed structure varies in height, correlating with the variation in grade. The southeastern most portion of the structure will be 9 ft below the grade of the northeast corner with the height of the building ranging between 18' at the lowest and 44' at its highest point. The roofline will be its highest at 44' which surpasses the 35' limitation by 9'. See the Architectural Elevations below:



As shown in the above elevations, to achieve a 35' roofline across the development, the design of the building and as a result the function would be restricted. Not only is the topography challenging, but a substantial portion of the site is within the protected Significant Resource Overlay zone. Wilsonville requires all commercial sales and storage of inventory to be in an enclosed structure, including vehicle sales. To accommodate vehicle sales while meeting this standard requires significant floor area. Without the ability to expand horizontally the applicant is achieving the necessary space with vertical development. Allowing a three-story building with a maximum height of 44' enables the applicant to efficiently use the site and reduce the impact of development on the SROZ, with only minor encroachment proposed. Waiving the 35' height standard to account for the challenging topography will result in the best and most efficient use of the site.

## Variance to Landscape Standards

The applicant requests a Variance to the landscaping standards outlined in Section 4.155(.03) B.1. requiring a screening landscape buffer between the parking area and the property to the north. A Variance is appropriate in circumstance where complying with a standard within the Development Code would create unnecessary hard ship due to circumstances unique to the lot and not resulting from owner action. As discussed in the Background section and Discussion Points the unique topographic and natural resources on the site require creative site and building design to allow for a successful development while also maximizing natural resource preservation and minimizing encroachments within the SROZ. To achieve this goal the applicant designed the parking area to be limited in size and located on the northern edge of the site, adjacent to the property line. Pedestrian and access standards require that a sidewalk is provided for safe access from the parking area to the building. The applicant has prioritized the safe access of pedestrians and protection of the SROZ in their designs, limiting the space for the required landscape buffer. The buffer is intended to minimize the visual dominance of parking areas and as such applicant proposes an alternative to minimizing the visual dominance of the parking area.

An existing landscape buffer on the adjacent property to the north will provide physical and visual distancing. A retaining wall along the north property line will also limit the visibility of the proposed parking from the property to the north. Additionally, the offsite trees to the north proposed for removal will be replaced within the existing landscape buffer on the adjacent property providing additional screening from the northern property. Aside from the proposed mitigation measures, the adjacent use to the north is an existing parking area not anticipated to redevelop in the foreseeable future and no negative impacts are expected from granting this Variance.

**Conclusion and Conditions of Approval:**

Staff has reviewed the applicant’s analysis of compliance with the applicable criteria. The Staff Report adopts the applicant’s responses as Findings of Fact except as noted in the Findings. Based on the Findings of Fact and information included in this Staff Report, and information received from a duly advertised public hearing, staff recommends that the Development Review Board approve, with the conditions below, the proposed Stage 1 Preliminary Plan, Stage 2 Final Plan, Site Design Review, Waiver, Class 3 Sign Permit, Type C Tree Removal Plan, Standard SROZ Map Verification, and Standard SRIR Review, and Variance request.

**Planning Division Conditions:**

**Request A: Stage 1 Preliminary Plan (STG124-0002)**

**PDA 1. General:** The approved preliminary final plan shall control the issuance of all building permits and shall restrict the nature, location and design of all uses. Minor revisions may be approved by the Planning Director through administrative review processes in Section 4.030. All other modifications shall be processed in the same manner as the original application and shall be subject to the same procedural requirements. .

**Request B: Stage 2 Final Plan (STG224-0002)**

- PDB 1. General:** The approved final plan shall control the issuance of all building permits and shall restrict the nature, location and design of all uses. Minor revisions may be approved by the Planning Director through administrative review pursuant to Section 4.030. All other modifications shall be processed in the same manner as the original application and shall be subject to the same procedural requirements.
- PDB 2. Prior to Final Occupancy:** All exterior, roof and ground mounted, mechanical and utility equipment shall be screened from ground level off-site view from adjacent streets or properties.
- PDB 3.** The applicant’s plan sheets include four (4) interior bicycle parking spaces **Prior to Building Permit Issuance:** The applicant shall provide anchoring and mounting information for the internal bicycle parking. See Finding B55.
- PDB 4. Prior to Final Occupancy:** All travel lanes shall be constructed to be capable of carrying a twenty-three (23) ton load. See Finding B80.

**Request C: Site Design Review (SDR24-0003)**

- PDC 1. Ongoing:** Construction, site development, and landscaping shall be carried out in substantial accord with the DRB-approved plans, drawings, sketches, and other documents. Minor revisions may be approved by the Planning Director through administrative review pursuant to Section 4.030. See Finding C15.
- PDC 2. Prior to Temporary Occupancy:** All landscaping required and approved by the DRB shall be installed prior to occupancy of the proposed development unless security equal to one hundred and ten percent (110%) of the cost of the landscaping as determined by the Planning Director is filed with the City assuring such

	<p>installation within six (6) 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 DRB, 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 will be returned to the applicant. See Finding C27.</p>
<p><b>PDC 3.</b></p>	<p><b><u>Ongoing:</u></b> The approved landscape plan is binding upon the applicant/owner. 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 DRB, pursuant to the applicable sections of Wilsonville’s Development Code. See Findings B66, C28 and C30.</p>
<p><b>PDC 4.</b></p>	<p><b><u>Prior to Temporary Occupancy:</u></b> The applicant shall submit a landscape plan substituting non-native species proposed to be planted to the south of the retaining wall within the SROZ with native plants. See Findings B66 and C32</p>
<p><b>PDC 5.</b></p>	<p><b><u>Ongoing:</u></b> All landscaping shall be continually maintained, including necessary watering, weeding, pruning, and replacing, in a substantially similar manner as originally approved by the DRB, unless altered as allowed by Wilsonville’s Development Code. See Finding C29.</p>
<p><b>PDC 6.</b></p>	<p><b><u>Prior to Temporary Occupancy:</u></b> All trees shall be balled and burlapped and conform in grade to “American Standards for Nursery Stock” current edition. Tree size shall be a minimum of 2-inch caliper. See Finding C37.</p>
<p><b>PDC 7.</b></p>	<p><b><u>Prior to Temporary Occupancy:</u></b> The following requirements for planting of shrubs and ground cover shall be met:</p> <ul style="list-style-type: none"> <li>• Non-horticultural plastic sheeting or other impermeable surface shall not be placed under landscaping mulch.</li> <li>• Native topsoil shall be preserved and reused to the extent feasible.</li> <li>• Surface mulch or bark dust shall be fully raked into soil of appropriate depth, sufficient to control erosion, and shall be confined to areas around plantings.</li> <li>• 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 10- to 12-inch spread.</li> <li>• Shrubs shall reach their designed size for screening within 3 years of planting.</li> <li>• Ground cover shall be equal to or better than the following depending on the type of plant materials used: gallon containers spaced at 4 feet on center minimum, 4-inch pot spaced 2 feet on center minimum, 2-1/4-inch pots spaced at 18 inches on center minimum.</li> <li>• No bare root planting shall be permitted.</li> <li>• Ground cover shall be sufficient to cover at least 80% of the bare soil in required landscape areas within 3 years of planting.</li> </ul>

	<ul style="list-style-type: none"> <li>• Appropriate plant materials shall be installed beneath the canopies of trees and large shrubs to avoid the appearance of bare ground in those locations.</li> <li>• Compost-amended topsoil shall be integrated in all areas to be landscaped, including lawns. See Finding C42.</li> </ul>
<b>PDC 8.</b>	<b><u>Prior to Temporary Occupancy:</u></b> Plant materials shall be installed and irrigated to current industry standards and be properly staked to ensure survival. Plants that die shall be replaced in kind, within one growing season, unless appropriate substitute species are approved by the City. See Finding C42.
<b>PDC 9.</b>	<b><u>Prior to Building Permit Issuance:</u></b> Final review of the proposed building lighting’s conformance with the Outdoor Lighting Ordinance will be determined at the time of Building Permit issuance. See Findings C45 through C53.
<b>PDC 10.</b>	<b><u>Ongoing:</u></b> Lighting shall be reduced one hour after close, to 50% of the requirements set forth in the Oregon Energy Efficiency Specialty Code. See Finding C52.

Request D: Waivers (WAIV24-0001)

No conditions for this request
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Request E: Class 3 Sign Permit (SIGN24-0008)

<b>PDE 1.</b>	<b><u>Ongoing:</u></b> The approved signs shall be installed in a manner substantially similar to the plans approved by the DRB and stamped approved by the Planning Division.
<b>PDE 2.</b>	<b><u>Prior to Sign Installation/Ongoing:</u></b> The applicant/owner of the property shall obtain all necessary building and electrical permits for the approved signs, prior to their installation, and shall ensure that the signs are maintained in a commonly-accepted, professional manner.
<b>PDE 3.</b>	<b><u>Prior to Sign Installation/Ongoing:</u></b> The applicant/owner of the property shall apply for a Class 1 Sign Permit to determine compliance with the final placement, allowed monument sign area outside of the Public Utility Easement and Site Design Review standards. The monument sign shall not exceed 64 square feet in size. See Findings E11 and E17.
<b>PDE 4.</b>	<b><u>Prior to Sign Installation/Ongoing:</u></b> The applicant/owner of the property shall apply for Class 1 Sign Permit to determine compliance with the allowed building sign area and Site Design Review standards. See Finding E19.

Request F: Type C Tree Removal Plan (TPLN24-0003)

<b>PDF 1.</b>	<b><u>General:</u></b> This approval for removal applies only to the 27 on-site trees and 2 offsite trees identified in the applicant’s submitted materials. All other trees on the property shall be maintained unless removal is approved through separate application.
<b>PDF 2.</b>	<b><u>Prior to Grading Permit Issuance:</u></b> The applicant shall submit an application for a Type ‘C’ Tree Removal Permit, together with the applicable fee. In addition to the application form and fee, the applicant shall provide the City’s Planning Division an accounting of trees to be removed within the project site, corresponding to the approval of the DRB. The applicant shall not remove any trees from the project site

	until the tree removal permit, including the final tree removal plan, have been approved by Planning Division staff.
<b>PDF 3.</b>	<b><u>Prior to Temporary Occupancy/Ongoing:</u></b> The permit grantee or the grantee’s successors-in-interest shall cause the replacement trees to be staked, fertilized and mulched, and shall guarantee the trees for two (2) years after the planting date. A “guaranteed” tree that dies or becomes diseased during the two (2) years after planting shall be replaced. See Findings F9 through F13.
<b>PDF 4.</b>	<b><u>Prior to Commencing Site Grading:</u></b> Prior to site grading or other site work that could damage trees, the applicant/owner shall install 6-foot-tall chain-link fencing around the drip line of preserved trees. Removal of the fencing around the identified trees shall only occur if it is determined the trees are not feasible to retain. The fencing shall comply with Wilsonville Public Works Standards Detail Drawing RD-1230. Fencing shall remain until authorized in writing to be removed by the Planning Division. See Finding F13.
<b>PDF 5.</b>	<b><u>Ongoing:</u></b> The project arborist shall monitor tree protection fencing and the condition of all preserved and protected trees during construction and shall submit quarterly monitoring reports to the City. Any adjustments to tree protection fencing, work within the tree protection fencing within the root protection zone of protected on- and off-site trees, or pruning of the roots or overstory (canopy and branches) of protected trees shall be supervised by the project arborist. See Finding F14.

**Request G: Standard SROZ Map Verification (SROZ24-0002)**

No conditions for this request.

**Request H: Standard SRIR Review (SRIR24-0002)**

No conditions for this request.

*The following Conditions of Approval are provided by the Engineering, Natural Resources, or Building Divisions of the City’s Community Development Department or Tualatin Valley Fire and Rescue, all of which have authority over development approval. A number of these Conditions of Approval are not related to land use regulations under the authority of the Development Review Board or Planning Director. Only those Conditions of Approval related to criteria in Chapter 4 of Wilsonville Code and the Comprehensive Plan, including but not limited to those related to traffic level of service, site vision clearance, recording of plats, performance standards, and concurrency, are subject to the Land Use review and appeal process defined in Wilsonville Code and Oregon Revised Statutes and Administrative Rules. Other Conditions of Approval are based on City Code chapters other than Chapter 4, state law, federal law, or other agency rules and regulations. Questions or requests about the applicability, appeal, exemption or non-compliance related to these other Conditions of Approval should be directed to the City Department, Division, or non-City agency with authority over the relevant portion of the development approval.*

**Engineering Division Conditions:**

Request: DB24-0006 Preliminary Development Plan

PFA 1.	Public Works Plans and Public Improvements shall conform to the “Public Works Plan Submittal Requirements and Other Engineering Requirements” in Exhibit C1.
PFA 2.	The Traffic Impact Study for the project (DKS, February 2024), found that all intersections impacted with the proposed development would operate above the City’s acceptable level of service (LOS) D.
PFA 3.	<b><u>Prior to Issuance of the Public Works Permit:</u></b> Submit site plans to Engineering showing street improvements along the development’s frontage on SW Parkway Avenue, including 1 driveway approach, utility connections, and water main extension for public fire. All necessary water meters and vaults shall be located adjacent to the SW Parkway Avenue right-of-way. Additionally, the plans shall show all stormwater facilities, including planting plans. Any damaged sidewalk panels shall be replaced in whole. Any unused utility stubs, including sanitary sewer and storm water laterals shall be located and properly abandoned. Improvements shall be constructed in accordance with the Public Works Standards.
PFA 4.	<b><u>Prior to Issuance of Final Permit Approvals:</u></b> The applicant shall provide a site distance certification by an Oregon Registered Professional Engineer for all driveway accesses per the Traffic Impact Study.
PFA 5.	<b><u>Prior to the Issuance of the Public Works Permit:</u></b> Applicant shall apply for City of Wilsonville 1200CN Erosion Control permit. The erosion control permit shall be issued and erosion control measures shall be installed, inspected and approved prior to any onsite work occurring.
PFA 6.	<b><u>Prior to the Issuance of Public Works Permit:</u></b> A final stormwater report shall be submitted for review and approval. The stormwater report shall include information and calculations to demonstrate how the proposed development meets the treatment and flow control requirements. A copy of all necessary ODOT approvals for connection to ODOT drainage facilities shall be submitted with the Public Works Permit application. <b><u>Prior to Issuance of Certificate of Occupancy:</u></b> Storm facilities shall be constructed, inspected and approved by the City. The applicant shall record a Stormwater Access Easement for the storm facility.
PFA 7.	<b><u>With the Building permit application:</u></b> The applicant shall submit an industrial user wastewater survey that identifies all non-domestic sewer discharges. <b><u>Prior to the issuance of the Building permit:</u></b> The applicant shall submit plans showing any applicable pretreatment devices necessary to treat non-domestic wastes including oil/water separators, grease traps and/or sampling manholes. <b><u>Prior to issuance of Certificate of Occupancy:</u></b> The applicant shall submit for review and approval any required Best Management Practice plans.
PFA 8.	<b><u>Prior to Any Paving:</u></b> Onsite stormwater facilities must be constructed and vegetated facilities planted. <b><u>Prior Issuance of Final Permit Approvals:</u></b> The applicant must execute and record with Washington County Stormwater Maintenance and Access Easement Agreements with the City.
PFA 9.	<b><u>Prior to Issuance of Certificate of Occupancy:</u></b> The applicant shall record a 6-foot public utility easement along the SW Parkway Avenue right-of-way.

**PFA 10. Prior to Issuance of Certificate of Occupancy:** The applicant shall record a 15-foot water line easement for the new fire water main.

**PFA 11. Prior to Issuance of Certificate of Occupancy:** A waiver of remonstrance against formation of a local improvement district (LID) shall be recorded in the County Recorder’s Office as wells as the City’s Lien Docket in accordance with Wilsonville Code 4.177(.02)C.2.

**Natural Resources Division Conditions:**

All Requests

**NR 1.** Natural Resource Division Requirements and Advisories listed in Exhibit C2 apply to the proposed development.



## Master Exhibit List:

Entry of the following exhibits into the public record by the DRB confirms its consideration of the application as submitted. The exhibit list below includes exhibits for Planning Case File DB24-0006 and reflects the electronic record posted on the City's website and retained as part of the City's permanent electronic record. Any inconsistencies between printed or other electronic versions of the same Exhibits are inadvertent and the version on the City's website and retained as part of the City's permanent electronic record shall be controlling for all purposes.

### Planning Staff Materials

- A1. Staff report and findings (this document)
- A2. Staff's Presentation Slides for Public Hearing (to be presented at Public Hearing)

### Materials from Applicant

- B1. Development Permit Application Form, Proof of Ownership, and Service Provider Letters
- B2. Project Narrative
- B3. Civil and Landscape Plans
- B4. Architectural Drawings, Retaining Wall Rendering and Materials Board
- B5. Arborist Report, Adjacent Property Owner Tree Removal Approval
- B6. Lighting Plan and Photometrics
- B7. Preliminary Stormwater Report
- B8. SRIR Report
- B9. Geotechnical Report
- B10. Traffic Impact Analysis

### Development Review Team Correspondence

- C1. Public Works Plan Submittal and Other Engineering Requirements
- C2. Natural Resource Findings and Requirements
- C3. Oregon Department of Transportation Comment RE: Traffic Impact Analysis

## Procedural Statements and Background Information:

1. The statutory 120-day time limit applies to this application. The application was received on May 8, 2024. Staff conducted a completeness review within the statutorily allowed 30-day review period and found the application to be incomplete on June 6, 2024. The applicant submitted additional materials on July 10, 2024. Staff conducted a second completeness review within the statutorily allowed 30-day review period and deemed the application complete on July 10, 2024. The City must render a final decision for the request, including any appeals, by November 7, 2024.
2. Surrounding land uses are as follows:

<b>Compass Direction</b>	<b>Zone:</b>	<b>Existing Use:</b>
North:	PDC	Office
East:	PDC	Office
South:	PDC	Service Commercial
West:	N/A	I-5 Freeway

- 76RZ03 – Zone Change and Partition for Stafford Park
3. The applicant has complied with Sections 4.008 through 4.011, 4.013-4.031, 4.034 and 4.035 of the Wilsonville Code, said sections pertaining to review procedures and submittal requirements. The required public notices have been sent and all proper notification procedures have been satisfied.

## Findings of Fact:

NOTE: Pursuant to Section 4.014 the burden of proving that the necessary findings of fact can be made for approval of any land use or development application rests with the applicant in the case.

### General Information

#### Application Procedures-In General Section 4.008

The application is being processed in accordance with the applicable general procedures of this Section.

#### Initiating Application Section 4.009

The application has been submitted and signed by the property owner, Bradley Tonkin, Casa Tonchinni LLC.

#### Pre-Application Conference Subsection 4.010 (.02)

A pre-application conference was held on May 25, 2023 (PRE23-0008) in accordance with this subsection.

#### Lien Payment before Approval Subsection 4.011 (.02) B.

No applicable liens exist for the subject property. The application can thus move forward.

#### General Submission Requirements Subsection 4.035 (.04) A.

The applicant has provided all of the applicable general submission requirements contained in this subsection.

#### Zoning-Generally Section 4.110

This proposed development is in conformity with the applicable zoning district and City review uses the general development regulations listed in Sections 4.150 through 4.199.

## Request A: Stage 1 Preliminary Plan (STG124-0002)

As described in the Findings below, the request meets the applicable criteria or will by conditions of approval.

### Planned Development Regulations

Planned Development Purpose & Lot Qualifications  
Subsections 4.140 (.01) and (.02)

- A1.** The property is of sufficient size to be developed in a manner consistent the purposes and objectives of Section 4.140. The subject property is greater than 2 acres, is zoned Planned Development Commercial and is designated for commercial development in the Comprehensive Plan. The property will be developed as a planned development in accordance with this subsection.

Ownership Requirements  
Subsection 4.140 (.03)

- A2.** All the land subject to change under the proposal is under a single ownership.

Professional Design Team  
Subsection 4.140 (.04)

- A3.** As can be found in the applicant's submitted materials, appropriate professionals have been involved in the planning and permitting process. Brad Kilby, AICP, with Harper Houf Peterson Righellis, Inc is the applicant's representative.

Planned Development Permit Process  
Subsection 4.140 (.05)

- A4.** The subject property is greater than 2 acres, is designated for commercial development in the Comprehensive Plan, and is zoned Planned Development Commercial. The property will be developed as a planned development in accordance with this subsection.

Comprehensive Plan Consistency  
Subsection 4.140 (.06)

- A5.** The proposed project, as found elsewhere in this report, complies with the Planned Development Commercial zoning designation, which implements the Comprehensive Plan designation of Commercial for this property.

## Application Requirements

### Subsection 4.140 (.07)

- A6.** Review of the proposed Stage 1 Preliminary Plan has been scheduled for a public hearing before the Development Review Board, in accordance with this subsection, and the applicant has met all the applicable submission requirements as follows:
- The property affected by the Stage 1 Preliminary Plan is under the sole ownership Bradley Tonkin, Casa Tonchinni LLC and has signed the submitted application.
  - The application for a Stage 1 Preliminary Plan has been submitted on a form prescribed by the City.
  - The professional design team and coordinator have been identified. See Findings A3 and B3.
  - The applicant has stated the various uses involved in the Preliminary Plan and their locations.
  - The boundary affected by the Stage 1 Preliminary Plan has been clearly identified and legally described.
  - Sufficient topographic information has been submitted.
  - Information on the land area to be devoted to various uses has been provided.
  - Any necessary performance bonds will be required.
  - Waiver information has been submitted.

## Planned Development Commercial (PDC) Zone

### Uses Typically Permitted in the PDC Zone

#### Subsection 4.131 (.01)A.9

- A7.** The use of a car dealership and associated improvements as proposed in the Stage 1 Preliminary Plan, with the vehicles to be stored and operations to enclosed within the building, is an allowed use in the PDC Zone.

### Prohibited Uses

Subsection 4.131 (.02) and 4.135(.05)

- A8.** The proposed development is a use typically permitted in the PDC zone and no information has been submitted indicting performance standards as outlined in Section 4.135(.05) will be violated therefore the proposed development is not a prohibited use

### Block and Access Standards

Subsections 4.135.5 (.05) and 4.131 (.03)

- A9.** The proposed development is consistent with the Transportation System Plan and meets all block and access standards.

## Standards Applying to Commercial Development in any Zone

### Commercial Development Operational Standards Subsections 4.116 (.05)

**A10.** The proposed operations for the dealership will occur entirely within the proposed building meeting the requirement that all businesses, service and processing is conducted within a completely enclosed building. The submitted plans show the interior storage area for the vehicles and inventory, two interior loading zones, as well as office space and showroom. No exterior sales are proposed.

### Commercial Development Performance Subsections 4.116 (.07) and 4.135(.05)

**A11.** Commercial operations are required to meet the performance standards outlined in subsection 4.135.(05) of the Planned Industrial Development (PDI) Zone. All performance standards will be met with operations occurring within and enclosed building, no outdoor storage, and no indication that the development will produce emissions, vibrations, heat and glare, noise, or discharge in violation of the standards. Landscaping is proposed consistent with Section 4.176.

## Request B: Stage 2 Final Plan (STG224-0002)

As described in the Findings below, the request meets the applicable criteria or will by conditions of approval.

## Planned Development Regulations-Generally

### Planned Development Purpose and Lot Qualifications Subsections 4.140 (.01) and (.02)

**B1.** The proposed Stage 2 Final Plan is consistent with the Planned Development Regulations and is of sufficient size to be developed in a manner consistent with the purposes and objectives of Section 4.140. The subject property is greater than two (2) acres and is designated for commercial development in the Comprehensive Plan, and zoned Planned Development Commercial (PDC). The property will be developed as a planned development in accordance with this subsection.

### Ownership Requirements Subsection 4.140 (.03)

**B2.** The land included in the proposed Stage 2 Final Plan is under the single ownership and the application has been submitted and signed by the property owner, Bradley Tonkin, Casa Tonchinni LLC.

Professional Design Team  
Subsection 4.140 (.04)

- B3.** As can be found in the applicant's submitted materials, appropriate professionals have been involved in the planning and permitting process. Brad Kilby, AICP, with Harper Houf Peterson Righellis, Inc is the applicant's representative.

Planned Development Permit Process  
Subsection 4.140 (.05)

- B4.** The subject property is greater than 2 acres, is designated for commercial development in the Comprehensive Plan, and is zoned Planned Development Commercial (PDC). The property will be developed as a planned development in accordance with this subsection.

## Stage 2 Final Plan Submission Requirements and Process

Timing of Submission  
Subsection 4.140 (.09) A.

- B5.** The applicant is requesting both Stage 1 and Stage 2 approval, together with Site Design Review, as part of this application. The final plan provides sufficient information regarding conformance with both the preliminary development plan and Site Design Review.

Development Review Board Role  
Subsection 4.140 (.09) B.

- B6.** The Development Review Board (DRB) is considering all applicable permit criteria set forth in the Planning and Land Development Code and staff is recommending the DRB approve the application with conditions of approval.

Stage 1 Conformance, Submission Requirements  
Subsection 4.140 (.09) C.

- B7.** The Stage 2 Final Plan substantially conforms to the proposed Stage 1 Preliminary Plan, which has been submitted concurrently. The applicant has provided the required drawings and other documents showing all the additional information required by this subsection.

Stage 2 Final Plan Detail  
Subsection 4.140 (.09) D.

- B8.** The applicant has provided sufficiently detailed information to indicate fully the ultimate operation and appearance of the development, including a detailed site plan, landscape plans, and elevation drawings.

Submission of Legal Documents  
Subsection 4.140 (.09) E.

- B9.** No additional legal documentation is required for dedication or reservation of public facilities.

### Expiration of Approval

Subsection 4.140 (.09) I. and Section 4.023

- B10.** The Stage 2 Final Plan approval, along with other associated applications, will expire two (2) years after approval, unless an extension is approved in accordance with these subsections. The applicant intends to construct the proposed building in one implementation phase promptly after land use approval, and well within the allotted time period.

### Consistency with Plans

Subsection 4.140 (.09) J. 1.

- B11.** As documented in the applicant's materials, the proposed development for the Lamborghini Dealership is consistent with the planned economic uses and activities and the form of development the City's planning work has been designed to foster and support. The property is zoned Planned Development Commercial, consistent with the Commercial designation in the Comprehensive Plan. The proposed commercial use of a Lamborghini Dealership is consistent with other applicable plans, maps, and ordinances, or will be by specific conditions of approval.

### Traffic Concurrency

Subsection 4.140 (.09) J. 2.

- B12.** As shown in Transportation Impact Analysis (February 2024), included in Exhibit B10, the Level of Service (LOS) for all intersections will remain above the minimum LOS D standard with the existing street improvements at the studied intersections with existing, planned, and this proposed development, as follows:
- Signalized:
    - a. I-5 Southbound Ramps/SW Elligsen Road (LOS B)
    - b. I-5 Northbound Ramps/SW Elligsen Road (LOS A)
    - c. SW Parkway Ave/SW Elligsen Road (LOS C)

### Facilities and Services Concurrency

Subsection 4.140 (.09) J. 3.

- B13.** Facilities and services, including utilities in SW Parkway Avenue, are available and sufficient or will be installed with construction of the proposed development in accordance to Condition of Approval PFA 3. Utilities proposed to be installed during construction include a sanitary sewer later, water lines and stormwater facilities with associated pipelines.

The new development has frontage along SW Parkway Avenue which has previously been improved to urban levels. Required improvements include one driveway approach, utility connection, water main extension for public fire, and repair of any existing improvements impacted during construction. Any sidewalk panels damaged during construction are required to be replaced in whole. See Condition of Approval PFA 3.



Adherence to Approved Plans  
Subsection 4.140 (.10) A.

- B14.** A condition of approval ensures adherence to approved plans except for minor revisions by the Planning Director.

**Standards Applying in All Planned Development Zones**

Underground Utilities  
Subsection 4.118 (.02)

- B15.** All utilities on the property are required to be underground.

Waivers  
Subsection 4.118 (.03)

- B16.** The applicant is requesting one (1) waiver (see Request D).

Other Requirements or Restrictions  
Subsection 4.118 (.03) E.

- B17.** No additional requirements or restrictions are recommended pursuant to this subsection. Performance standards and requirements of the PDC Zone address potential impacts from noise, odor, glare, etc.

Impact on Development Cost  
Subsection 4.118 (.04)

- B18.** In staff's professional opinion, the determination of compliance or attached conditions do not unnecessarily increase the cost of development, and no evidence has been submitted to the contrary.

Requiring Tract Dedications  
Subsection 4.118 (.05)

- B19.** No additional tracts are required for recreational facilities or open space area. A 6-foot-wide public utility easement is required along the site's frontage on SW Parkway Avenue. The applicant also is required to dedicate a 15-foot waterline easement for the new fire water main. See Conditions of Approval PFA 9. And PFA 10.

Habitat Friendly Development Practices  
Subsection 4.118 (.09)

- B20.** The applicant's development plans are designed to limit grading to the extent possible with limited grading on the northwest, and north access of the site. The building is designed to work with the topography of the site with minimal grading to preserve the SROZ and natural features of the site as best as possible. Tree removal is limited to what is necessary for construction, with nearly all trees inventoried in the SROZ planned for preservation. A mitigation plan will address impacts from the development within the SROZ. No significant native vegetation would be retained by an alternative site design, the City's

stormwater standards will be met limiting adverse hydrological impacts on water resources, and no impacts on significant wildlife corridors or fish passages have been identified.

## Planned Development Commercial (PDC) Zone

### Uses Typically Permitted in the PDC Zone

Subsection 4.131 (.01)A.9

**B21.** The use of a car dealership and associated improvements as proposed in the Stage 1 Preliminary Plan, with the vehicles to be stored and operations to be enclosed within the building, is an allowed use in the PDC Zone.

### Prohibited Uses

Subsection 4.131 (.02) and 4.135(.05)

**B22.** The applicant is not requesting approval for any prohibited use.

### Block and Access Standards

Subsections 4.135.5 (.05) and 4.131 (.03)

**B25.** All block and access standards are met or will be met with conditions of approval.

### Industrial Performance Standards

Subsections 4.135 (.06) A. through N.

**B26.** The proposed project meets the performance standards of this subsection as follows:

- **Pursuant to Standard A** (enclosure of uses and activities), all non-parking activities and uses are completely enclosed within the proposed building including vehicle storage and loading zones.
- **Pursuant to Standard B** (vibrations), there is no indication that the proposed development will produce vibrations detectable off site without instruments.
- **Pursuant to Standard C** (emissions), there is no indication that odorous gas or other odorous matter will be produced by the proposed use.
- **Pursuant to Standard D** (open storage) No open storage is proposed.
- **Pursuant to Standard E** (operations and residential areas), no residential districts exist within 100 feet of building openings and proposed loading zones.
- **Pursuant to Standard F** (heat and glare, exterior lighting), no exterior operations are proposed creating heat and glare, and exterior lighting will be equipped with directional throw and/or cutoffs so as not to produce light on adjacent properties.
- **Pursuant to Standard G** (dangerous substances), there are no prohibited dangerous substances expected on the development site.
- **Pursuant to Standard H** (liquid and solid wastes), there is no evidence that the standards for liquid and solid waste will be violated.
- **Pursuant to Standard I** (noise), there is no evidence that noise generated from the proposed operations will violate the City's Noise Ordinance. Noises produced in

violation of the Noise Ordinance would be subject to the enforcement procedures established in Wilsonville Code (WC) 6.204 for such violations.

- **Pursuant to Standard J** (electrical disturbances), no functions or construction methods are proposed that would interfere with electrical systems, and any construction activity that may require temporary electrical disruption for safety or connection reasons will be limited to the project site and coordinated with appropriate utilities.
- **Pursuant to Standard K** (discharge of air pollutants), there is no evidence that any prohibited discharge will be produced by the proposed project.
- **Pursuant to Standard L** (open burning), no open burning is proposed on the development site.
- **Pursuant to Standard M** (outdoor storage), No outdoor storage is proposed. All vehicles will be stored within the building.
- **Pursuant to Standard N** (unused area landscaping), the subject property outside the SROZ and its buffer and Impact Area, will be completely developed with buildings, circulation areas, and landscaping.

## On-site Pedestrian Access and Circulation

### Conformance with Standards

Section 4.154 (.01) B. 1.

- B27.** All of the on-site pedestrian access and circulation standards are being applied to the proposed development.

### Continuous Pathway System

Section 4.154 (.01) B. 1.

- B28.** A continuous pathway system will connect from the existing public sidewalk on SW Parkway Avenue to the main building entrance near the northeast building corner, closest to the parking area. The proposed pathway provides direct access to the building entrance from the street and parking area, while safely directing pedestrians away from the entrance to loading spaces within the building. The parking area is less than three (3) acres in size and, therefore, an internal bicycle and pedestrian pathway is not required.

### Safe, Direct, and Convenient

Section 4.154 (.01) B. 2.

- B29.** The plans show one (1) pathway from SW Parkway Ave to the northeast corner of the building. The pathway is direct and convenient from both the public sidewalk and the parking area. Lighting is shown within the parking area and mounted on the building itself, lighting pedestrian pathways to ensure safety for all users; demonstrating compliance with this standard.

### Free from Hazards/Smooth Surface

Section 4.154 (.01) B. 2. a.

**B30.** The proposed pathway is planned to be free from hazards and will be a smooth hard surface.

### Reasonably Direct

Section 4.154 (.01) B. 2. b.

**B31.** The plans show that a direct pedestrian connection is provided from the public sidewalk in SW Parkway Avenue to the primary entrance at of the dealership.

### Building Entrance Connectivity/Meets ADA

Section 4.154 (.01) B. 2. c.

**B32.** As described above, the closest parking is ADA-accessible and a direct pathway is provided to the main building entrance.

### Vehicle/Pathway Separation

Section 4.154 (.01) B. 3.

**B33.** All pedestrian facilities, are raised to provide vertical separation or horizontally separated by curb stops in the parking area.

### Crosswalks

Section 4.154 (.01) B. 4.

**B34.** No crosswalks are proposed within this development.

### Pathway Width and Surface

Section 4.154 (.01) B. 5.

**B35.** All internal proposed pathways are constructed of concrete and have a minimum width of five (5) feet, and pedestrian access from SW Parkway Avenue to the internal walkway in front of the building meeting this standard.

### Pathway Signs

Section 4.154 (.01) B. 6.

**B36.** No pathways needing directional signage are proposed.

## Parking Area Design Standards

### Minimum and Maximum Parking

Subsection 4.155 (.03) G.

**B37.** Pursuant to Oregon Administrative Rules (OAR) 660-012-0440 parking mandates, or the minimum vehicle parking requirements in Table 5, are not applicable due to the site being within 1/2 mile of SMART Routes 2X and 4, the City's most frequent transit routes, as well as within 1/4 mile to the Wilsonville WES Station. With no minimum or maximum vehicle parking requirements, the number of total vehicle parking spaces is at the complete

discretion of the applicant, so long as the total number of spaces does not exceed the maximum and other non-parking requirements are still met. In addition, for any vehicle parking spaces provided, the applicable design standards as well percentage and similar requirements for certain types of spaces still apply.

**Other Parking Area Design Standards**  
Subsections 4.155 (.02) and (.03)

**B38.** The applicable standards are met as follows:

Standard	Met	Explanation
<b>Subsection 4.155 (.02) General Standards</b>		
B. All spaces accessible and usable for parking	<input checked="" type="checkbox"/>	Standard parking lot design
I. Parking lot screen of at least 6 feet adjacent to residential district.	<input checked="" type="checkbox"/>	The parking is not adjacent to a residential district.
J. Sturdy bumper guards or curbs of at least 6 inches to prevent parked vehicles crossing property line or interfering with screening or sidewalks.	<input checked="" type="checkbox"/>	The parking lot has curb stops at all parking spaces.
K. Surfaced with asphalt, concrete or other approved material.	<input checked="" type="checkbox"/>	Surfaced with asphalt
Drainage meeting City standards	<input checked="" type="checkbox"/>	Drainage is professionally designed and being reviewed to meet City standards
L. Lighting will not shine into adjoining structures or into the eyes of passers-by.	<input checked="" type="checkbox"/>	Lighting is proposed to be appropriately shielded and subject to the City's Outdoor Lighting Ordinance.
N. No more than 40% of parking compact spaces.	<input checked="" type="checkbox"/>	None of the proposed parking spaces are compact spaces
O. Where vehicles overhand curb, planting areas at least 7 feet in depth.	<input checked="" type="checkbox"/>	All parking area planting areas are at least 7 feet in depth.
<b>Subsection 4.155 (.03) General Standards</b>		
A. Access and maneuvering areas adequate.	<input checked="" type="checkbox"/>	Access to the area is available to residents and customers. Maneuvering area is plentiful.
A.1. Loading and delivery areas and circulation separate from customer/employee parking and pedestrian areas.	<input checked="" type="checkbox"/>	No loading areas are located within the proposed development
Circulation patterns clearly marked.	<input checked="" type="checkbox"/>	No markings needed to clarify circulation.
A.2. To the greatest extent possible, vehicle and pedestrian traffic separated.	<input checked="" type="checkbox"/>	Vehicle and pedestrian traffic are clearly delineated and separated

C. Safe and Convenient Access, meet ADA and ODOT Standards.	<input checked="" type="checkbox"/>	The proposed parking and access allow ADA and ODOT standards to be met.
For parking areas with more than 10 spaces, 1 ADA space for every 50 spaces.	<input checked="" type="checkbox"/>	The applicant proposes 1 ADA parking space and 23 standard spaces
D. Where possible, parking areas connect to adjacent sites.	<input checked="" type="checkbox"/>	The new parking area is part of a single development.
Efficient on-site parking and circulation	<input checked="" type="checkbox"/>	The proximity to the destination and pedestrian connections, and adequate maneuvering area make the circulation efficient.

**Other Parking Standards and Policies and Procedures**

Parking Variances and Waivers  
 Subsection 4.155 (.02) A. 1.-2.

**B39.** The applicant request a variance to parking landscape requirements included in Section 4.155 (.03) B1. See Request I.

Non-Parking Use of Parking Areas  
 Subsection 4.155 (.02) H.

**B40.** All parking areas are expected to be maintained and kept clear for parking. Inventory vehicles will be stored within the proposed dealership.

Electrical Vehicle Charging Stations  
 Subsection 4.155 (.03) H.

**B41.** Accommodations for electric vehicle charging stations will be provided with the project in compliance with the CFEC ruling with four (4) electric vehicle charging stations provided onsite.

**Parking Area Landscaping**

Minimizing Visual Dominance of Parking  
 Subsection 4.155 (.03) B.

**B42.** As described by the applicant and illustrated on the plan sets, design of the development intends to minimize the visual dominance of parking to the extent feasible with the site constraints. The parking area is setback from the frontage of the property and obscured from the public’s view. Landscaping is provided throughout the parking area, breaking up the parking. A retaining wall to the north of the property helps to screen the parking area from the adjacent property.

### 10% Parking Area Landscape Requirement

Subsection 4.155 (.03) B. 1.

**B43.** Parking area landscaping is 1,248 square feet, which is 10% of the 12,484 square feet of site area devoted to parking, which meets the minimum 10% requirement. Parking landscape areas have been counted as contributing to overall site landscaping, consistent with the provisions of this standard.

### Landscape Screening of Parking

Subsection 4.155 (.03) B. 1.

**B44.** While landscaping equivalent to 10% of the parking area is provided and the parking area is not visible from the Right-of-Way, the applicant requests a Variance to the landscape buffer requirement for the property to the north due to site constraints. While much of the parking will be screened from the adjacent property to the north by the proposed retaining wall, a portion of the parking area is not screened from the property to the north. A landscape strip to the north, where the applicant proposes replanting the two (2) offsite trees required for removal, will provide some screening between the properties. The use directly adjacent to the proposed parking area is also a parking lot and as such the impact from the limited screening is not anticipated to be negative. See Request I.

### Tree Planting Area Dimensions

Subsection 4.155 (.03) B. 2.

**B45.** All tree planting areas meet or exceed the 8-foot minimum width and length.

### Parking Area Tree Requirement

Subsection 4.155 (.03) B. 2. and 2. a.

**B46.** For a parking lot with a total of 24 parking spaces, one (1) tree per eight (8) parking spaces is required for a total of rounded to 3 total trees. Three (3) trees are shown within the landscaped islands within the parking area and access meeting this requirement.

### Parking Area Tree Clearance

Subsection 4.155 (.03) B. 2. b.

**B47.** All trees planted in the parking areas are varieties that could typically be maintained to provide a 7-foot clearance.

## Bicycle Parking-General Provisions

### Determining Minimum Bicycle Parking

Subsection 4.155 (.04) A. 1.

**B48.** Table 5 indicates that retail stores selling automobiles uses require one (1) bicycle space per 8,000 square feet with a minimum of two (2) spaces. Based on the proposed building size of 37,508 square feet and the proposed use, eight (8) bicycle parking spaces are required.

The applicant proposes four (4) bicycle parking spaces interior to the and four (4) bicycle parking spaces outside the building.

#### Bicycle Parking for Multiple Uses

Subsection 4.155 (.04) A. 3.

**B49.** The applicant proposes a single commercial use for the development.

#### Bicycle Parking Waivers

Subsection 4.155 (.04) A. 4.

**B50.** The applicant proposes no waivers to bicycle parking.

### Bicycle Parking Standards

#### Bicycle Parking Space Dimensions

Subsection 4.155 (.04) B. 1.

**B51.** Four (4) of the provided bicycle parking spaces are long-term, wall mounted and located within the building. The four (4) outdoor bicycle parking spaces are mounted in-ground, a detail drawing of the proposed rack is provided on page A-104 included in Exhibit B4. The site plan shows the internal and external bicycle parking spaces with adequate space for maneuvering.

#### Access to Bicycle Parking Spaces

Subsection 4.155 (.04) B. 1.

**B52.** The proposed bicycle parking spaces provide adequate accessible space.

#### Bicycle Maneuvering Area

Subsection 4.155 (.04) B. 2.

**B53.** Bicycle parking spaces are located on the north wall of the warehouse area, south of the office endcap, and therefore, provide adequate space for maneuvering.

#### Spacing of Bicycle Racks

Subsection 4.155 (.04) B. 3.

**B54.** A detail is provided for the bicycle parking racks indicating adequate spacing dimensions.

#### Bicycle Racks and Lockers Anchoring

Subsection 4.155 (.04) B. 4.

**B55.** A Condition of Approval requires anchoring and mounting information to be submitted for the internal bicycle parking.



### Bicycle Parking Location

Subsection 4.155 (.04) B. 5.

**B56.** As shown on the applicant's plans, bicycle parking is provided inside the building in a location that is easily accessible for bicyclists.

### Long-term Bicycle Parking

#### Required Long-term Bicycle Parking

Subsection 4.155 (.04) C. 2.

**B57.** No long-term bicycle parking is required; however, four (4) of the eight (8) bicycle parking spaces are located within the building in an accessible and secure location.

### Minimum Off-Street Loading Requirements

#### Determining Required Loading Berths

Subsection 4.155 (.05) A. 1.-2.

**B58.** The proposed building has 37,508 square feet of floor area, therefore, a minimum of two (2) loading berths is required. The applicant proposes 2 loading berths located within the building.

#### Loading Berth Dimensions

Subsection 4.155 (.05) A. 3.

**B59.** As shown in the applicant's plan set, one loading berth is provided on the lower level of the building located on the south side and one loading berth is provided on the main level of the building located on the east side. The loading areas meet the required dimensions at 12 ft wide, 35 ft deep and 14 ft vertical clearance. Pedestrian and vehicle traffic is reasonably separated from the loading areas.

#### Existing Loading Berths

Subsection 4.155 (.05) A. 4.

**B60.** There are no existing uses or loading berths on the subject property.

#### Use of Off-Street Parking Areas for Loading

Subsection 4.155 (.05) A. 5.

**B61.** Off-street parking areas are not proposed to be used for loading and unloading operations.

#### Exception for On-Street Loading

Subsection 4.155 (.05) B.

**B62.** No loading area adjacent to or within a street right-of-way is proposed.

## Access, Ingress, and Egress

### Access at Defined Points

Subsection 4.167 (.01)

**B63.** As illustrated on the applicant's site plan, one (1) access point is located on SW Parkway Avenue for trucks, passenger vehicles, and emergency vehicles.

### Health, Safety, and Welfare

Subsection 4.167 (.01)

**B64.** By virtue of meeting applicable standards of Chapter 4, as well as being required to meet Public Works Standards, the access points will be consistent with the public's health, safety and general welfare.

### Approval of Access Points

Subsection 4.167 (.01)

**B65.** The Engineering Division is reviewing and approving all proposed points of access to public streets.

## Other Development Standards

### Natural Features and Other Resources

Section 4.171

**B66.** A significant portion of the south and southwest area of the development site is located within the SROZ which protects the existing wetland. The impact on natural resources is carefully considered in the site design and the importance of the wetland area is acknowledged by the applicant. To mitigate any impacts on the natural resources and SROZ the applicant has worked with the City's Natural Resources team to develop a mitigation planting of a variety of native species. The planting includes a diverse mix of native trees, shrubs, and ground cover for a complete and complex restoration area shown in the mitigation table below from the applicants' materials:

### MITIGATION PLANTING TABLE

BOTANICAL NAME	COMMON NAME	WETLAND INDICATOR STATUS	Minimum Rooting Size	UPLAND PLANTING AREA	WETLAND PLANTING AREA
<b>TREES</b>					
Acer macrophyllum	Bigleaf Maple	FACU	2 Gallon	5	
Quercus garryana	Oregon White Oak	UPL	2 Gallon	10	
Populus balsamifera	Balsam Poplar	FAC	2 Gallon		5
Pinus ponderosa var. willamettensis	Willamette Valley Ponderosa Pine	FACU	2 Gallon	5	
Fraxinus latifolia	Oregon Ash	FACW	2 Gallon		15
			<b>Total trees</b>	<b>20</b>	<b>20</b>
<b>SHRUBS</b>					
Amelanchier alnifolia	Western Serviceberry	FACU	1 Gallon	5	
Symphoricarpos alba	Snowberry	FACU	1 Gallon	5	
Mahonia aquifolium	Tall Oregon Grape	UPL	1 Gallon	10	
Polystichum munitum	Pacific Sword Fern	FACU	1 Gallon		
Cornus sericea ssp. sericea	Red-osier Dogwood	FACW	1 Gallon		5
Salix hookeriana	Hooker's Willow	FACW	1 Gallon		10
Spiraea douglasii	Douglas spirea	FACW	1 Gallon		5
			<b>Total shrubs</b>	<b>20</b>	<b>20</b>
<b>GRASSES AND FORBS*</b>					
Elymus glaucus	Blue Wild-rye	FACW	5 lbs		X
Festuca idahoensis	Idaho Fescue	FACU	5 lbs	X	
*Grass seed to be applied in all temporary disturbed areas following construction at 7-10 PLS / Acre					

The native plantings are to be installed to the south of the parking and access area, along the street frontage and will buffer the development to the north from the wetland to the south. The applicant proposes the planting of several non-native species to the south of the retaining wall within the SROZ. Condition of Approval PDC 4 requires the applicant substitute the proposed plantings to the south of the retaining wall with native plants achieving the same design and landscaping goals.

The building, parking lot, and other proposed site improvements are located as far north as possible to not impact the SROZ or buffer. The applicant's design is sensitive to minimizing impacts to the site while balancing the competing interest of developing a functional and well-designed commercial development as the site is intended for in the comprehensive plan. The site development plan will achieve a balance between the purposes of the site's Commercial Comprehensive Plan designation – notably a specialized commercial use requiring storage of vehicles internally– and the site's natural topography and resource constraints. The applicant's proposed development plans include a Grading

Plan, see Sheet C-001 of Exhibit B2) that provides on-site grading and slope conditions that comply with these requirements to the extent feasible.

Areas not to be developed on site will either remain in their natural state after the removal of non-native and invasive plants or professionally landscaped in accordance to the mitigation planting plan above. The varying topography of the site includes areas with slopes greater than 25 percent, where development is not proposed, along the property's edge or within the SROZ, wetland and upland area.

To the maximum extent possible, existing trees on the project site are being retained and protected through construction. However, twenty-nine (29) trees are proposed for removal to accommodate the development. The removed trees will be mitigated at a rate greater than the required 1:1 mitigation.

In summary, development plan prioritizes limiting impacts on the identified significant resource within the SROZ by concentrating development in the areas outside of it to the maximum extent feasible, consistent with full utilization of the portions of the property that do not contain significant resource areas. Following land use approval, as the project proceeds to development permitting, the applicant will be required to submit a detailed Erosion and Sediment Control (ESC) Plan with construction management practices to satisfy the requirements of subparagraphs B and C.1, -2 and -3. This standard can be met by imposition if a condition of approval requiring submittal of an Erosion and Sediment Control (ESC) Plan prior to issuance of a building construction permit. As described above, the applicant will follow development practices that align with the protection of natural features.

#### Grading Limited to Protect Natural Features

Section 4.171 (.02)C

**B67.** The grading of the site seeks to minimize soil disturbance and areas of cut and fill as much as possible, while accommodating the new building and associated development throughout the site. Public Safety and Crime Prevention

#### Design for Public Safety

Subsection 4.175 (.01)

**B68.** As described in the applicant's response narrative and shown on the proposed site plan the proposed development is designed to provide visibility of active use parts of the site and building from the SW Parkway Avenue public right-of-way. This facilitates surveillance by law enforcement, and also enables citizens passing by on the public street to observe activity within the site. Site lighting, including in parking/circulation areas and along the pedestrian path to the building, will contribute to safety during hours of darkness.

## Addressing and Directional Signing

Subsection 4.175 (.02)

- B69.** Addressing will be as required by Tualatin Valley Fire and Rescue. The address of the development shall be required on the proposed monument sign and reviewed during the building permit process

## Surveillance and Access

Subsection 4.175 (.03)

- B70.** The proposed parking area has been designed to be located at the front of the building and is provided with adequate lighting to allow for surveillance by customers and employees. The loading spaces are proposed to be located inside the building, will be well lit, and secured when the dealership is closed. The vehicle parking lot and access aisles have been designed to allow for emergency vehicles and police cars to access the site.

## Lighting to Discourage Crime

Subsection 4.175 (.04)

- B71.** Lighting has been designed in accordance with the City's outdoor lighting standards, which will provide sufficient illumination to discourage crime.

## Landscaping Standards

### Landscaping Standards Purpose

Subsection 4.176 (.01)

- B72.** In complying with the various landscape standards in Section 4.176, the applicant has demonstrated the Stage 2 Final Plan is in compliance with the landscape purpose statement.

### Landscape Code Compliance

Subsection 4.176 (.02) B.

- B73.** A variance to the landscape standards included in Section 4.155.03(B)(.01) for the parking area buffer to the north is been requested. See Request I for more information. All other landscaping and screening must comply with standards of this section.

### Intent and Required Materials

Subsections 4.176 (.02) C. through I.

- B74.** As shown on the applicant's landscape plans and described in their response narrative, the applicant has used the General Landscape standard for the much of the site while SROZ mitigation standards guide the plantings within the SROZ providing a diverse planting plan with appropriately placed landscaping and selected species. The west property line of the site is landscaped to the low screen standard. Screening beyond the proposed mitigation planting is not required along the south property line as the development will be adequately screened.

### Landscape Area and Locations

Subsection 4.176 (.03)

**B75.** Landscaping is proposed in more than three (3) distinct areas, the parking area, surrounding the building, along the street frontage and within the SROZ. The site plan includes 61,813 sq ft of landscape area which is 61.6% of the net development area. Parking area landscaping is 1,617 sq ft, which is 13% of the 12,484 sq ft of site area devoted to parking.

#### Buffering and Screening

Subsection 4.176 (.04)

**B76.** The subject property's location in the Planned Development Commercial (PDC), with commercially zoned neighboring properties, does not require buffering and screening to protect adjacent sensitive uses other than the buffering requirement for parking areas included in Section 4.155(B.)(.01). The proposed retaining wall to the north of the parking area will provide some screening and buffering between the proposed parking area and the property to the north. A gap in the retaining wall will be softened by the two (2) trees to be planted on the north property. The applicant proposes screening of the parking area to the extent possible with site constraints. No negative impacts to the property to the north are anticipated as the immediate adjacent use is also a parking area.

The building's parapet-roof design provides screening of rooftop mechanical equipment from view from adjacent streets or properties; a condition of approval ensures screening is provided as required by the standards.

#### Landscape Plans

Subsection 4.176 (.09)

**B77.** Sufficient information has been provided regarding landscaping and a condition of approval ensures final construction landscape plans meet the City's objective landscape standards and all plantings within the SROZ are native.

#### Mixed Solid Waste and Recyclables Storage

##### DRB Review of Adequate Storage Area, Minimum Storage Area

Subsections 4.179 (.01)

**B78.** The proposed development will be a car dealership; therefore, the building requires provision of 10 square feet plus ten (10) square feet per 1,000 square feet of floor area of mixed solid waste and recycling storage. At 37,508 square feet, the building requires 10 plus 375 square feet, or 385 square feet of storage. The applicant proposes an enclosure of 385 square feet meeting this standard.

#### Review by Franchise Garbage Hauler

Subsection 4.179 (.07)

**B79.** The applicant's Exhibit B1 includes a letter from Republic Services indicating coordination with the franchised hauler, and that the proposed storage area and site plan meets Republic Services requirements.

## Other Development Standards

### Access Drives and Travel Lanes Subsection 4.177 (.01) E.

**B80.** These criteria are satisfied or will be satisfied by conditions of approval. The proposed access drive is are designed to provide a clear travel lane, free from obstructions at 26 ft wide. All travel lanes will be asphalt. A condition of approval will ensure they are capable of carrying a 23-ton load. The proposed Emergency access lane and turnaround are improved to a minimum of 12 feet and the development has been reviewed and approved by the Tualatin Valley Fire and Rescue.

### Outdoor Lighting Sections 4.199.20 through 4.199.60

**B81.** The proposal is required to meet the Outdoor Lighting Standards. See Findings C44-C52.

### Underground Installation Sections 4.300-4.320

**B82.** Utilities will be installed underground.

## Request C: Site Design Review (SDR24-0003)

As described in the Findings below, the request meets the applicable criteria or will by conditions of approval.

### Site Design Review

#### Excessive Uniformity, Inappropriateness Design Subsection 4.400 (.01) and Subsection 4.421 (.03)

**C1.** Staff summarizes the compliance with this subsection as follows:

**Excessive Uniformity:** The proposed development is unique to the particular development context and does not create excessive uniformity.

**Inappropriate or Poor Design of the Exterior Appearance of Structures:** The proposed building was designed by a licensed architect and attention was paid to creating an aesthetically pleasing building that functions efficiently as a dealership. The proposed building has a limited color pallet of white, grey, and black, but displays unique architectural expression in the buildings structure and articulation with a varied roofline, substantial glazing, and a second floor patio. The combination of the varied roof line, glazing, and patio has the impact of reducing the massing of the building while reflecting the slope of the natural areas on site creating a sense of place in harmony with the surrounding area. A large retaining wall is required for the successful development of the site. The design of the retaining wall includes a cast-in-place concrete and a vehicle barrier cable system in black with stainless steel cables. The design does not draw focused to the



wall. Climbing plants, thoughtfully planted along the wall minimize the presence of the wall as the landscaping matures.

**Inappropriate or Poor Design of Signs:** The proposed wall and free-standing signs display Lamborghini branding and are designed to be aesthetically pleasing and fit with the look of the overall development.

**Lack of Proper Attention to Site Development:** The applicant employed the skills of the appropriate professional services to design the site, demonstrating appropriate attention to site development. The development team – which includes civil engineers, architects, landscape architects, and planners – proposes an original design for the site that prioritizes functionality of the car dealership for employees and customers, while ensuring a visually pleasing building and protection of natural resources, including the SROZ and wetlands. The proposed building will be in the northwest corner of the site, avoiding all but minor encroachments within the SROZ demonstrating creative and responsible design for natural resource preservation. The site has been thoughtfully designed to support public safety and easy surveillance of the site. This includes pedestrian walkways connecting the building to the public right-of-way, building entrances facing the right-of-way, and lighting within the parking lot and around the site.

**Lack of Proper Attention to Landscaping:** The applicant proposes landscaping meeting the area requirements professionally designed by a landscape architect, incorporating a variety of plant materials, both native and non-native. To the maximum extent possible, the existing landscaping is proposed to be preserved on the project site, and mitigation planting will be provided where required. In addition to the required landscaping, the applicant proposes to retain twenty-seven (27) in the SROZ and plant an additional forty (40) trees in the upland and wetland area to support the natural landscape. Climbing plants, thoughtfully planted along the retaining wall minimize the presence of the wall as the landscaping matures.

## Objectives and Standards of Site Design Review

### Proper Functioning of the Site

Subsection 4.400 (.02) A. and Subsection 4.421 (.03)

- C2.** The professionally designed site demonstrates significant thought to make the site functional and safe. A two-way drive aisle, standard size parking stalls, a complete pathway network, and access meeting City standards are among the site design features contributing to functionality and safety.

### High Quality Visual Environment

Subsection 4.400 (.02) A. and Subsection 4.421 (.03)

- C3.** The project includes professionally designed building, landscaping and a professional, site specific, layout supports a quality visual environment. Careful attention has been made to provide a direct pedestrian path from Parkway Avenue, along the north property line, connecting to the parking area and the main entrance of the building. Landscaping is thoughtfully planted with an abundant natural resource mitigation planting in the SROZ

providing great aesthetic value and enhancing the function of the site with plantings throughout the parking area, adjacent to the building, within stormwater facilities and throughout the open space.

#### Encourage Originality, Flexibility, and Innovation

Subsection 4.400 (.02) B. and Subsection 4.421 (.03)

- C4. The applicant proposes buildings, landscaping, and other site elements professionally designed specifically for the site. The development's design is innovative, with keen attention paid to balancing natural resource preservation and development which is achieved through both the architectural design of the building and efficient use of developable land by reducing parking and locating the building on the northwest corner, the area furthest from the SROZ. Sufficient flexibility exists to fit the planned development within the site.

#### Discourage Inharmonious Development

Subsection 4.400 (.02) C. and Subsection 4.421 (.03)

- C5. As indicated in Findings C1, C3, and C8 the architectural design of the proposed project offers a unique and exciting visual character, which draws inspiration from modern design without detracting from the surrounding natural features, thus preventing monotonous, drab, unsightly, dreary development. The proposed building has a limited color palette of white, grey, and black, but displays unique architectural expression in the buildings structure and articulation with a varied roofline, substantial glazing, and a second floor patio.

#### Proper Relationships with Site and Surroundings

Subsection 4.400 (.02) D. and Subsection 4.421 (.03)

- C6. The applicant prepared a professional site-specific design that carefully considers the relationship of the building, landscaping, and other improvements with other improvements on and adjacent to the site, existing and planned. The surrounding developments are a mix of modern and more traditional design with the older buildings using brick and natural materials with the more modern developments using similar materials and colors as the proposed Lamborghini Dealership. The new development will seamlessly integrate within this commercial area and its mix of traditional and modern design.

#### Regard to Natural Aesthetics

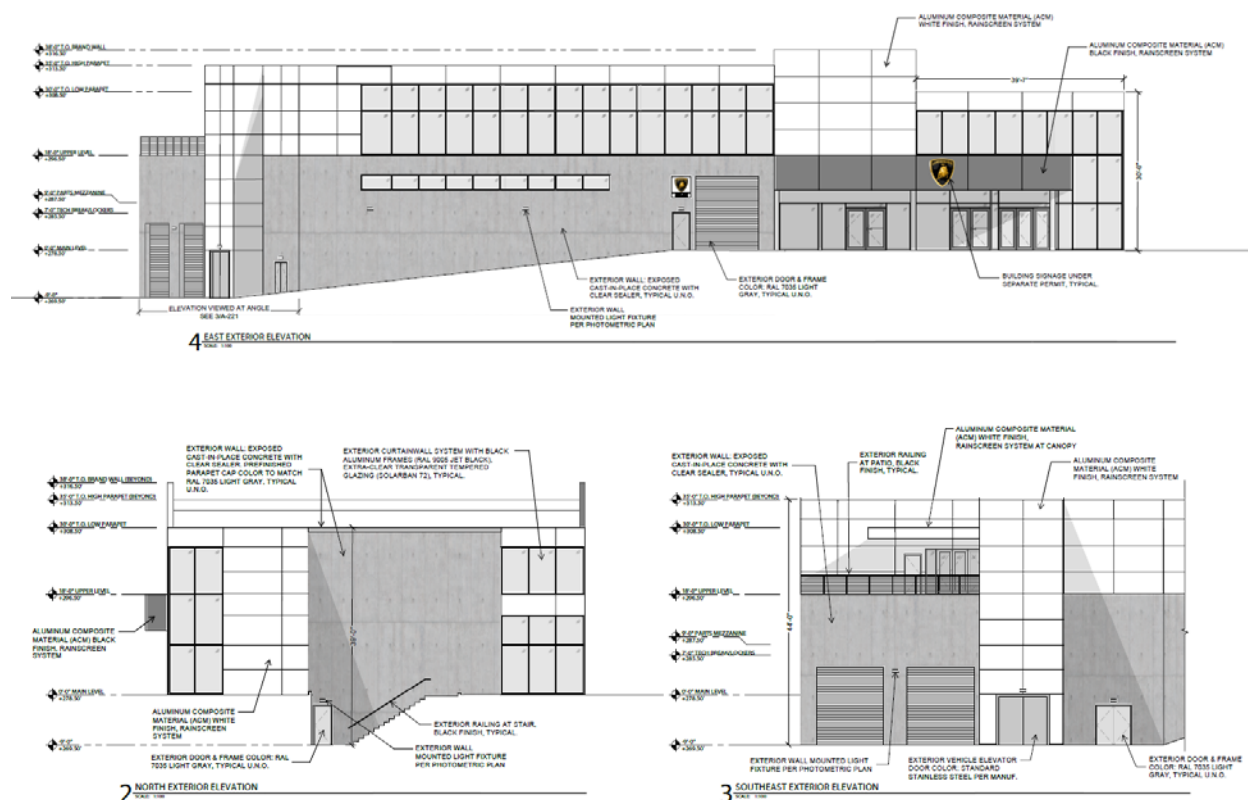
Subsection 4.400 (.02) D. and Subsection 4.421 (.03)

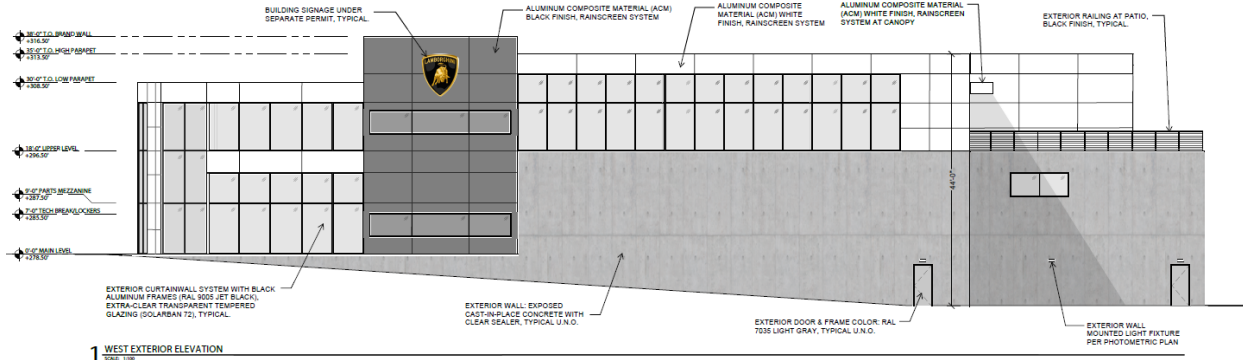
- C7. The applicant has designed the development to be in harmony with the existing natural area and SROZ by orienting the development in such a manner that only two minor encroachments within the SROZ occur and designing a robust mitigation planting. In addition to the mitigation planting that will enhance both the upland and wetland habitat, the applicant proposes the preservation of twenty-seven (27) trees onsite.

Attention to Exterior Appearances  
Subsection 4.400 (.02) D. and Subsection 4.421 (.03)

C8. The applicant used appropriate professional services to design the exterior of the building. The modern building uses a limited pallet of white, grey and black, utilizing contrast in material and articulation to break up the massing of the building and add visual interest. Glazing on the east, north, and west facades creates unique focal points throughout the structure contrasting with the industrial materials. Use of long lasting materials as well as landscaping will make the site more harmonious with adjacent and nearby development. The design of the retaining wall includes a cast-in-place concrete and a vehicle barrier cable system in black with stainless steel cables. The design does not draw focused to the wall. Climbing plants, thoughtfully planted along the wall minimize the presence of the wall as the landscaping matures.

Architectural Elevations:





### Development Renderings :



Parking Area Perspective



Perspective from the west looking east



Perspective from northeast looking southwest



Perspective from east looking west



Perspective from south looking north



Perspective from the north looking south

**Retaining Wall Renderings:**





Protect and Enhance City's Appeal  
Subsection 4.400 (.02) E. and Subsection 4.421 (.03)

C9. The development will be visible from the I-5 freeway drawing attention not only to the new dealership but commercial businesses in the area and Wilsonville generally. The dealership will add to Wilsonville's already robust car sales sector.



### Stabilize Property Values/Prevent Blight

Subsection 4.400 (.02) F. and Subsection 4.421 (.03)

- C10.** The site of the proposed development is one of the few remaining undeveloped lots zoned PDC in Wilsonville, likely due to the unique challenges presented by the natural features of the site. The successful development of the site will prevent blight by improving the existing natural features, activating the area through customer and employee presence as well as regular maintenance. The development of the lot will improve property values and, thus, increase tax revenues while promoting future development and preventing blight.

### Adequate Public Facilities

Subsection 4.400 (.02) G. and Subsection 4.421 (.03)

- C11.** As found in the Stage 2 Final Plan review, see Request B, adequate public facilities serve the site or will with conditions of approval.

### Pleasing Environments and Behavior

Subsection 4.400 (.02) H. and Subsection 4.421 (.03)

- C12.** 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, building entrances facing the right-of-way, and lighting within the parking lot and around the site.

### Civic Pride and Community Spirit

Subsection 4.400 (.02) I. and Subsection 4.421 (.03)

- C13.** The project site is currently an undeveloped property within the City limits and the urban growth boundary that is zoned for commercial development. The proposed car dealership will improve the use of the site and provide growth in the community.

### Favorable Environment for Residents

Subsection 4.400 (.02) J. and Subsection 4.421 (.03)

- C14.** The proposed development will serve both residents and those visiting Wilsonville for the retail and commercial opportunities. A new dealership development with a quality design will create jobs, improve the surrounding area, and provide a favorable environment to residents and potential employees.

## Jurisdiction and Power of the DRB for Site Design Review

### Development Must Follow DRB Approved Plans Section 4.420

- C15.** A condition of approval ensures construction, site development, and landscaping are carried out in substantial accord with the Development Review Board approved plans, drawings, sketches, and other documents.

## Design Standards

### Harmony of Proposed Buildings to Environment Subsection 4.421 (.01) B.

- C16.** The proposed site design preserves and protects the SROZ and upland area on the southeast part of the site including twenty-seven (27) existing trees. The site design integrates a large retaining wall with the natural landscape through careful placement and thoughtful use of finishing materials. Landscaping throughout the site help to blend the proposed development with the surrounding natural environment. The building itself is designed in harmony with the existing slope to the extent practicable.

### Advertising Features Do Not Detract Subsection 4.421 (.01) F.

- C17.** All advertising features are sized and located appropriately to not detract from the design of the proposed structure and existing development on surrounding properties. See also Request E.

### Design Standards Apply to All Buildings, Structures, Signs, and Features Subsection 4.421 (.02)

- C18.** The project does not include any accessory structures on site.

### Conditions of Approval to Ensure Proper and Efficient Function Subsection 4.421 (.05)

- C19.** Staff does not recommend any additional conditions of approval to ensure the proper and efficient functioning of the development.

### Color or Materials Requirements Subsection 4.421 (.06)

- C20.** The applicant is proposing a variety of materials reflecting a modern design approach including cast-in-place concrete with clear sealer in grey, aluminum composite material in white, aluminum composite material in black, and glazing bound with black aluminum frames (see Materials Board in Exhibit B4) The colors and materials chosen are appropriate for the development. Staff does not recommend any additional requirements or conditions related to colors and materials.

## Standards for Mixed Solid Waste and Recycling Areas

### Mixed Solid Waste and Recycling Areas Colocation Subsection 4.430 (.02) A.

- C21.** The proposal provides an exterior storage area for solid waste and recyclables located south of the proposed building along the west boundary of the project site with direct access from the building to the enclosure.

### Exterior vs Interior Storage, Fire Code, Number of Locations Subsections 4.430 (.02) C.-F.

- C22.** The applicant proposes a single, visible, exterior location south of the building. The enclosure is appropriately screened. Review of the Building Permit will ensure that the building and fire code standards are met.

### Collection Vehicle Access, Not Obstruct Traffic or Pedestrians Subsections 4.430 (.02) G.

- C23.** The letter from Republic Services, included in the applicant's materials in Exhibit B1, indicates the location and arrangement is accessible to collection vehicles. The location of the storage area does not impede sidewalks, parking area aisles, or public street right-of-way.

### Dimensions Adequate to Accommodate Planned Containers Subsections 4.430 (.03) A.

- C24.** Pursuant to the letter from Republic Services, the dimensions are adequate to accommodate the planned containers.

### 6-Foot Screen, 10-Foot Wide Gate Subsections 4.430 (.03) C.

- C25.** The solid waste and recyclables storage area is enclosed by a 18.75' by 23.5' metal enclosure with walls over 6' with a covering allowing adequate access and meeting the minimum standards.

## Site Design Review Submission Requirements

### Submission Requirements Section 4.440

- C26.** The applicant submitted a site plan drawn to scale and digital materials board illustrating proposed finishes and paint colors.

## Time Limit on Site Design Review Approvals

Void after 2 Years  
Section 4.442

**C27.** The applicant plans to develop the proposed project within two (2) years and understands that the approval will expire after two (2) years unless the City grants an extension.

## Installation of Landscaping

Landscape Installation or Bonding  
Subsection 4.450 (.01)

**C28.** A condition of approval will assure installation or that appropriate security equal to one hundred and ten percent (110%) of the cost of the landscaping as determined by the Planning Director is filed with the City assuring such installation within six (6) months of occupancy.

Approved Landscape Plan  
Subsection 4.450 (.02)

**C29.** A condition of approval will ensure that substitution of plant materials, irrigation systems, or other aspects of an approved landscape plan will not be made without official action of the Planning Director or DRB and provide ongoing assurance the criterion is met.

Landscape Maintenance and Watering  
Subsection 4.450 (.03)

**C30.** A condition of approval will ensure landscaping is continually maintained in accordance with this subsection.

Modifications of Landscaping  
Subsection 4.450 (.04)

**C31.** A condition of approval will provide ongoing assurance that this criterion is met by preventing modification or removal of landscaping without appropriate City review.

## Natural Features and Other Resources

Protection  
Section 4.171

**C32.** The proposed design of the site provides for protection of natural features and other resources, specifically the SROZ and upland areas on the southwest part of the site, including the preservation of twenty-seven (27) trees, consistent with the proposed Stage 2 Final Plan for the site and the purpose and objectives of Site Design Review. To mitigate any impacts on the natural resources and SROZ the applicant has worked with the City's Natural Resources team to develop a mitigation planting of a variety of native species. The native plantings are to be installed to the south of the parking area and will buffer the

development from the wetland on the southern portion of the property. The planting includes a diverse mix of native trees, shrubs, and ground cover for a complete and complex restoration area. The applicant proposes the planting of several non-native species to the south of the retaining wall within the SROZ. Condition of Approval PDC 4 requires the applicant substitute the proposed plantings to the south of the retaining wall with native plants achieving the same design and landscaping goals. (See Exhibit B3)

## Landscaping

### Landscape Standards Code Compliance

Subsection 4.176 (.02) B.

**C33.** The applicant requests a variance to parking landscaping standards outlined in Section 4.155(.03)B.1. requiring a screening landscape buffer between the parking area and the property to the north. The buffer is intended to minimize the visual dominance of parking areas. See Request I. All other landscaping and screening must comply with the standards of this section.

### Intent and Required Materials

Subsections 4.176 (.02) C. through I.

**C34.** The minimum or higher standard has been applied throughout different landscape areas of the site and landscape materials are proposed to meet each standard in the different areas. Site Design Review is being reviewed concurrently with the Stage 2 Final Plan, which includes a thorough analysis of the functional application of the landscaping standards.

### Landscape Area and Locations

Subsection 4.176 (.03)

**C35.** As indicated in the applicant's narrative and plan set the site contains 62% landscaped area exceeding the 15% requirement. Additionally, the parking lot area has landscaping equivalent to 13% of the parking area, exceeding the 10% requirement.

### Buffering and Screening

Subsection 4.176 (.04)

**C36.** Consistent with the proposed Stage 2 Final Plan, adequate screening is proposed.

### Shrubs and Groundcover Materials

Subsection 4.176 (.06) A.

**C37.** All of the proposed shrubs in the applicant's landscape plans (Exhibit B3) meet the required 2-gallon minimum. A condition of approval will require that the detailed requirements of this subsection are met.

Plant Materials-Trees  
Subsection 4.176 (.06) B.

**C38.** As stated on the applicant's landscape plans, the plant material requirements for landscape trees will be met as follows:

- Trees are B&B (Balled and Burlapped)
- Tree are 2" caliper.

A mix of trees to be planted throughout the site in appropriate locations, and the two offsite replacement trees, includes Freeman maple, Victoria magnolia, and Oregon white oak.

Types of Plant Species  
Subsection 4.176 (.06) E.

**C39.** The applicant has provided sufficient information in their plans showing the proposed landscape design meets the standards of this subsection.

Exceeding Plant Standards  
Subsection 4.176 (.06) G.

**C40.** The selected landscape materials do not violate any height or vision clearance requirements.

Landscape Installation and Maintenance  
Subsection 4.176 (.07)

**C41.** Conditions of approval ensure that installation and maintenance standards are or will be met including that plant materials be installed to current industry standards and properly staked to ensure survival, and that plants that die are required to be replaced in kind, within one growing season, unless appropriate substitute species are approved by the City. The applicant's plan set includes a note indicating plans for an irrigation system.

Landscape Plans  
Subsection 4.176 (.09)

**C42.** The applicant's landscape plan shows all existing and proposed landscape areas. The to-scale plans show the type, installation size, number and placement of materials. Plans include a plant material list. Plants identification is by both their scientific and common names.

Completion of Landscaping  
Subsection 4.176 (.10)

**C43.** The applicant has not requested to defer installation of plant materials.

**Outdoor Lighting**

**Applicability**

Sections 4.199.20 and 4.199.60

**C44.** An exterior lighting system is being installed for the proposed new development. The Outdoor Lighting standards thus apply.

**Outdoor Lighting Zones**

Section 4.199.30

**C45.** The project site is within LZ 2 and the proposed outdoor lighting systems will be reviewed under the standards of this lighting zone.

**Optional Lighting Compliance Methods**

Subsection 4.199.40 (.01) A.

**C46.** The applicant has elected to comply with the prescriptive option.

**Wattage and Shielding**

Subsection 4.199.40 (.01) B. 1.

**C47.** Based on the applicant’s submitted materials, all proposed lighting will be shielded and is below the maximum wattage. A condition of approval will ensure that the requirements of the Outdoor Lighting Ordinance are met at the time of building permit issuance.

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

**Compliance with Oregon Energy Efficiency Specialty Code**

Subsection 4.199.40 (.01) B. 2.

**C48.** The applicant is complying with the Oregon Energy Efficiency Specialty Code.

**Mounting Height**

Subsection 4.199.40 (.01) B. 3.

**C49.** All exterior mounted lighting on the building and pole-mounted lighting is less than 40 feet high, and thus complies with Table 8. A condition of approval will ensure the requirements of the Outdoor Lighting Ordinance are met at the time of building permit issuance.

Table 8: Maximum Lighting Mounting Height In Feet			
Lighting Zone	Lighting for private drives, driveways, parking, bus stops and other transit facilities	Lighting for walkways, bikeways, plazas and other pedestrian areas	All other lighting
LZ 2	40	18	8

**Luminaire Setback**  
 Subsection 4.199.40 (.01) B. 4.

**C50.** The subject property is bordered by the same base zoning and the same lighting zone on all sides. Staff understands the three times mounting height setback to only apply where the property abuts a lower lighting district. A condition of approval will ensure the requirements of the Outdoor Lighting Ordinance are met at the time of building permit issuance.

**Lighting Curfew**  
 Subsection 4.199.40 (.02) D.

**C51.** As stated by the applicant, it is feasible to install an automatic device or system meeting the lighting curfew requirements. Compliance is assured through an appropriate condition of approval.

**Standards and Submittal Requirements**  
 Sections 4.199.40 and 4.199.50

**C52.** All required materials have been submitted.

**Request D: Waivers (WAIV24-0001)**

**Waiver to 35' Maximum Height Limitation**

**Waiver of Typical Development Standards**  
 Subsections 4.116(.10)E. and 4.118 (.03) A.

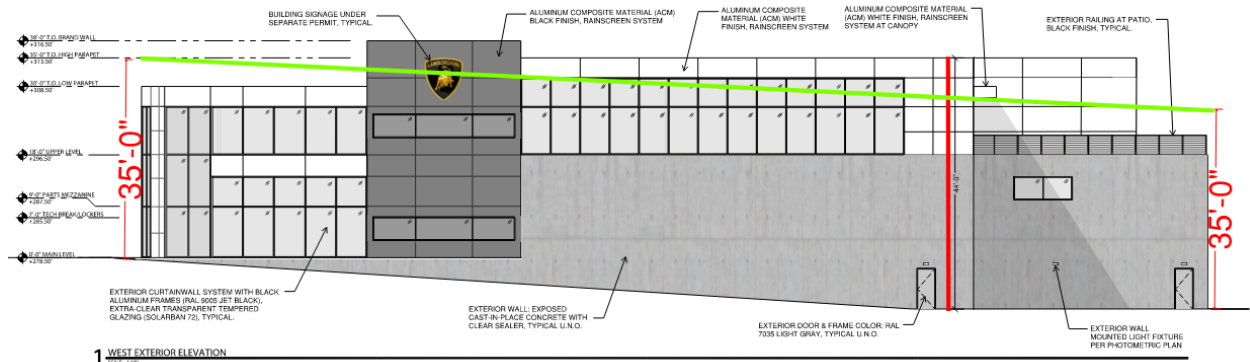
**D1.** The applicant requests one waiver to the 35' maximum height allowance for commercial development included in Section 4.116(.10)E, Standards Applying to Commercial Developments in any Zone. The requested waiver addresses the highest point of the roofline which surpasses the 35' limitation by 9' at 44'.

The applicant proposes a 37,508 SF Lamborghini Dealership with height varying from 30' at the lowest to 44' at the highest. While the 44' roofline measures at the tallest height, this roofline visually appears lower than other shorter segments of the building. This is due to the significant variations in grade on the property. In addition to the variation in elevation the requirement that all commercial operations and sales must occur within an enclosed structure requires vertical development for functional operations, as the alternative to



achieve the necessary space would be a larger footprint which is not feasible given site constraints.

See the west elevation below with the highest point of the building indicated in red and green demonstrating the 35' height limitation:



As is demonstrated in the above elevation, a roofline meeting the 35' foot height standard would limit the functional space as well as the design of the building.

The applicant states the rationale for requesting this waiver as summarized below:

The site is located within the Planned Development Commercial (PDC) zoning designation and is greater than 2 acres in size. The proposed building is three stories, but the actual height varies based on the topography and the desire to manage all activities inside the building. The City of Wilsonville does not allow outdoor storage of vehicles and due to the size of the significant natural resource located on the site, it is not feasible to increase the footprint of the building horizontally to increase building area. From a functionality standpoint, the lower level of the building is at the minimum head clearance allowed by the building code. The main level provides the minimum head clearance needed to operate vehicle lifts and the upper level provides the minimum head clearance needed to operate vehicle stacking equipment in order to allow for 2 vehicles to be stacked.

By allowing the building height to be increased, the dealership maintains the ability to store required vehicle inventory and provide all vehicle sales and services inside the building. Even with the (2) vehicle stacking system located on the upper level, the building has the ability to store only 34 inventory vehicles, which is far less than other automotive dealerships in the area.

Finally, there is 10 feet of fall between the north property line and the south end of the building. In order to minimize grading on this particular site, the building has been designed to balance the needs of the owner and the interests of the community. The average grade around the building is 273.3 feet. The proposed height of the building on the north

side of the building is exactly 35 feet from finished grade to the top of the high parapet. On the lower side of the site, the height is 44 feet from finished grade to the top of the high parapet. The overall average height of the building is approximately 40.2 feet in height. Please see the attached building elevations in Exhibit B4 (Sheet A-221) for details related to building height along the building

#### Purpose and Objectives of Planned Development Regulations Subsection 4.140 (.01) B.

- D2.** Pursuant to Subsection 4.118 (.03) A., waivers must implement or better implement the purpose and objectives listed in this subsection. Subsection 4.116(.10)E. requires substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways. As explained by the applicant in the narrative code response, the proposed building and site design ensures that the intent of the standard is satisfied, while creating the space necessary for the operations required within the Lamborghini Dealership meeting the requirement to conduct all operations in an enclosed structure.

### **Request E: Class 3 Sign Permit (SIGN24-0008)**

As described in the Findings below, the request meets the applicable criteria or will by conditions of approval.

#### **Sign Review and Submission**

Class 3 Sign Permits Reviewed by DRB  
Subsection 4.031 (.01) M. and Subsection 4.156.02 (.03)

- E1.** The application qualifies as a Class 3 Sign Permit subject to Development Review Board review.

What Requires Class 3 Sign Permit Review  
Subsection 4.156.02 (.06)

- E2.** The request involves a single tenant in a development subject to Site Design Review by the Development Review Board, thus a Class 3 Sign Permit is required.

Class 3 Sign Permit Submission Requirements  
Subsection 4.156.02 (.06) A.

- E3.** As indicated in the table below the applicant has satisfied the submission for Class 3 sign permits, which includes the submission requirements for Class 2 sign permits:

Requirement	Submitted	Waiver Granted		Condition of Approval	Not Applicable	Additional Findings/Notes
		Info Already Available to City	Info Not Necessary for Review			
<b>Completed Application Form</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Sign Drawings or Descriptions</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Documentation of Tenant Spaces Used in Calculating Max. Sign Area</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Drawings of Sign Placement</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Project Narrative</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Information on Any Requested Waivers or Variances</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Class 3 Sign Permit Criteria**

Class 2 Sign Permit Review Criteria: Generally and Site Design Review  
 Subsection 4.156.02 (.05) F.

**E4.** As indicated in Findings below, the proposed signs will satisfy the sign regulations for the applicable zoning district and the relevant Site Design Review criteria.

Class 2 Sign Permit Review Criteria: Compatibility with Zone  
 Subsection 4.156.02 (.05) F. 1.

**E5.** The applicant is proposing three (3) signs visible from offsite: one (1) ground-mounted monument sign located along SW Parkway Ave to the north of the entry driveway and two (2) building signs, one (1) on the east elevation above the main entry and one (1) on the west elevation, visible to I-5. The proposed signs are generally typical of, proportional to, and compatible with development in the PDC zone, with a design representing Lamborghini’s branding, as is typical for commercial developments. No evidence has been presented, nor testimony received, demonstrating the subject signs would detract from the visual appearance of the surrounding development.

Class 2 Sign Permit Review Criteria: Nuisance and Impact on Surrounding Properties  
Subsection 4.156.02 (.05) F. 2.

- E6. There is no evidence, and no testimony has been received, suggesting proposed signs would create a nuisance or negatively impact the value of surrounding properties.

Class 2 Sign Permit Review Criteria: Items for Special Attention  
Subsection 4.156.02 (.05) F. 3.

- E7. The signs do not conflict with the design or placement of other site elements, landscaping, or building architecture reviewed as part of this application.

## Sign Measurement

Measurement of Cabinet Signs  
Subsection 4.156.03 (.01) A.

- E8. The sign measurements use rectangles, as allowed.

## Freestanding and Ground Mounted Signs in the PDC, TC, PDI, and PF Zones

General Allowance  
Subsection 4.156.08 (.01) A.

- E9. The subject site has frontage on SW Parkway Ave of sufficient length to be sign eligible. A single freestanding sign is proposed along SW Parkway Ave north of the entry driveway in a code-compliant location.

Allowed Height  
Subsection 4.156.08 (.01) B.

- E10. The allowed height for the sign is twenty (20) feet as it is located within the PDC zone. The ten-foot and ten-inch-tall freestanding sign (10.83'), as shown in the plan detail on Exhibit B4 thus meets the requirements of this subsection.

Allowed Area  
Subsection 4.156.08 (.01) C.

- E11. The proposed freestanding sign pertains to a single tenant, Lamborghini, within a 37,508-square-foot building fronting SW Parkway Ave. As a result, the maximum allowed sign area is 64 square feet. The proposed sign is just under 64 square feet in size meeting this standard.

Pole or Sign Support Placement Vertical  
Subsection 4.156.08 (.01) D.

- E12. The applicant proposes constructing the freestanding sign and its foundation in a full vertical position.

Extending Over Right-of-Way, Parking, and Maneuvering Areas  
Subsection 4.156.08 (.01) E.

E13. As shown on the applicant’s plans, the subject freestanding sign will not extend into or above right-of-way, parking, and maneuvering areas. Condition of Approval PDE 3 will ensure the sign is placed outside of the Public Utility Easement .

Design of Freestanding Signs to Match or Complement Design of Buildings  
Subsection 4.156.08 (.01) G.

E14. The proposed sign is coordinated with the building design.

Width Not Greater Than Height for Signs Over 8 Feet  
Subsection 4.156.08 (.01) H.

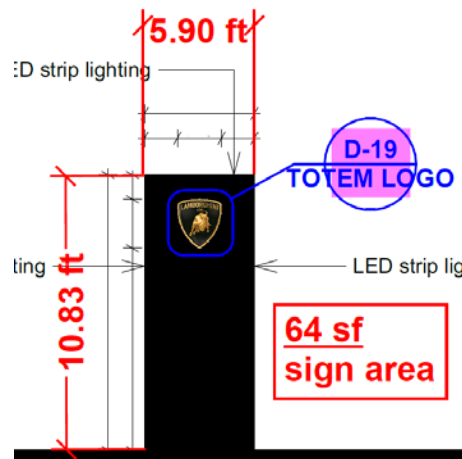
E15. The proposed freestanding sign’s width is 5.9’ which is less than the sign’s height which is 10.38’.

Sign Setback  
Subsection 4.156.08 (.01) J.

E16. The setback requirements intend for freestanding signs to be located no further than 15 feet from the property line and no closer than two (2) feet from a sidewalk or other hard surface in the public right-of-way. The freestanding sign location as shown on the applicant’s plans is roughly one (1) foot from the east property line and five and half (5.5) feet from the public sidewalk along SW Parkway Ave, which meets the requirement.

Address Required to be on Sign  
Subsection 4.156.08 (.01) K.

E17. The submitted plans do not show addressing on the monument sign. Condition of Approval PDE 3 will ensure the address of the development is shown on the sign at the time of Building Plan review.



**Building Signs in the PDC, PDI, and PF Zones**

Establishing whether Building Facades are Eligible for Signs  
Subsection 4.156.08 (.02) A. and 4.156.08(.02) B.5.a

E18. Two (2) facades of the proposed building are sign eligible as follows:

Façade	Sign Eligible	Criteria making sign eligible
North	No	
East	Yes	Public entrance and Parkway Ave frontage
South	No	
West	Yes	I-5 frontage

The proposed building will be occupied by one (1) tenant, Lamborghini, the building fronts SW Parkway Avenue on the east and the I-5 Freeway on the west. The applicant will transfer the allowed freestanding sign area along I-5 for the wall sign proposed on the west façade. The applicant proposes one (1) twenty-five (25) sf wall sign on the west façade and one (1) twenty-five (25) sf wall sign on the east faced which are both sign eligible.

Building Sign Area Allowed  
Subsection 4.156.08 (.02) B. 1.

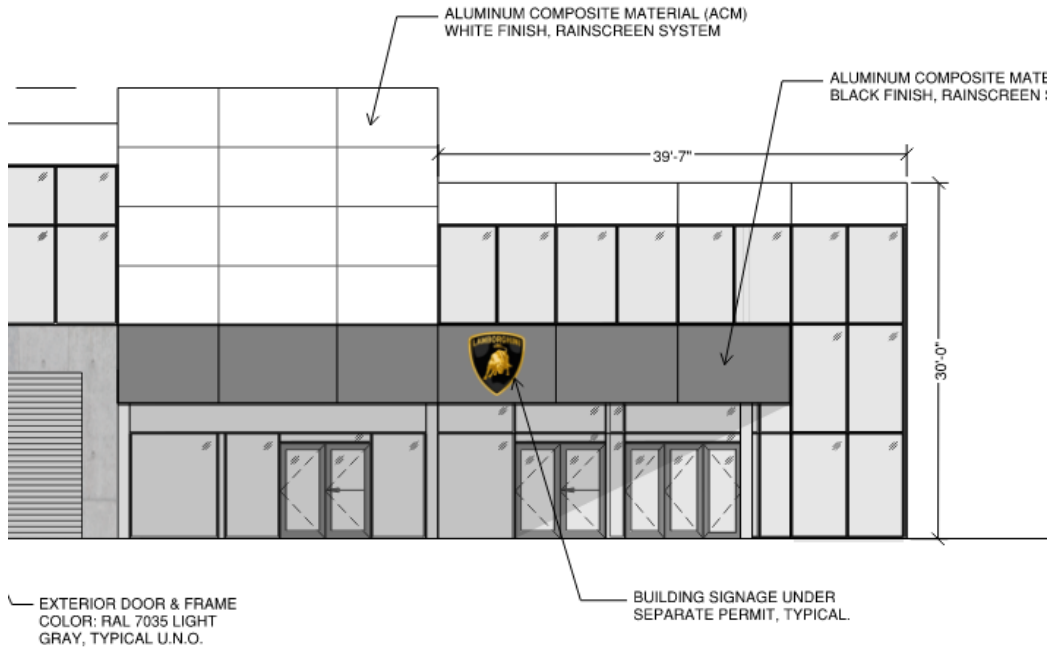
E19. Building signs are proposed on the west and north facades of the building. Both façades of the proposed building exceed 1000 feet in length. For facades greater than 72 linear ft, the allowed sign area is 36 square feet (sf) plus 12 sf for each 24 linear feet or portion thereof greater than 72 ft up to a maximum of 200 sf. The applicant proposes two (2) wall signs, each approximately 25 sf which is less than the allowance therefore this stand is met.

Building Sign Length Not to Exceed 75 Percent of Façade Length  
Subsection 4.156.08 (.02) C.

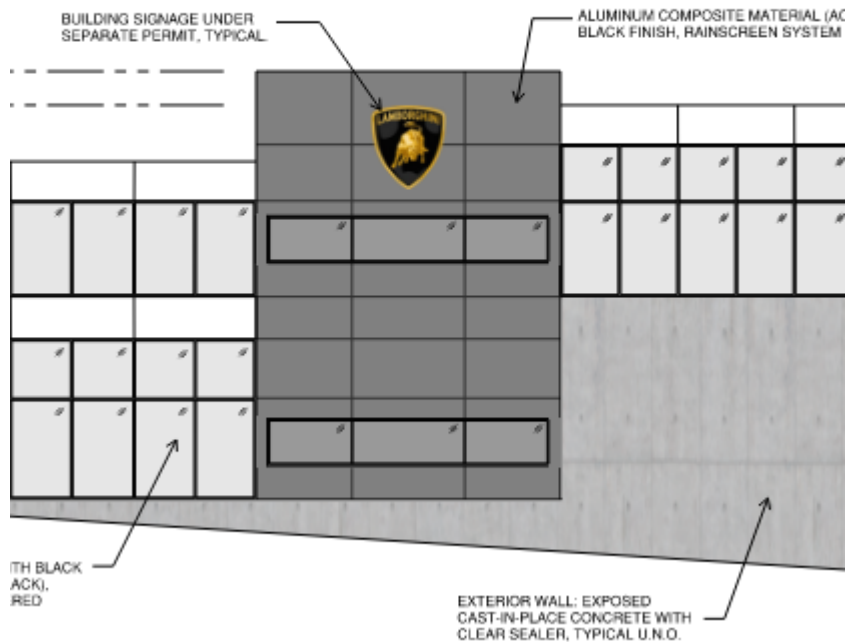
E20. The proposed building signs do not exceed 75% of the length of the north façade.

Building Sign Height Allowed  
Subsection 4.156.08 (.02) D.

E21. The proposed building signs are within a definable architectural feature and has a definable space between the sign and the top and bottom of the architectural feature as shown in the illustrations below.



### East Wall Sign



### West wall sign

## Site Design Review

### Excessive Uniformity, Inappropriate Design Subsection 4.400 (.01)

**E22.** With quality materials and design, the proposed signs will not result in excessive uniformity, inappropriateness or poor design, and the proper attention has been paid to site development.

### Purpose and Objectives Subsection 4.400 (.02) and Subsection 4.421 (.03)

**E23.** The sign allowances are scaled and designed appropriately related to the subject site and the appropriate amount of attention has been given to visual appearance. The signs include the building address and business logo providing local emergency responders and other individual's reference for the location of this development.

### Design Standards Subsection 4.421 (.01)

**E24.** The proposed location, design, materials, and size of the two proposed signs are provided in the applicant's materials and will not detract from the design of the surrounding properties. The signs are a clean design reflecting Lamborghini's logo. The size of the signs are proportional to the building and will represent the business without detracting from the surrounding area.

### Design Standards and Signs Subsection 4.421 (.02)

**E25.** Design standards have been applied to the proposed signs, as applicable, see Findings E16-E18 above.

### Color or Materials Requirements Subsection 4.421 (.06)

**E26.** Similar to the design of the building the signs use a limited color pallet. The proposed signs are black and gold which is appropriate for the proposed development and does not detract from the surrounding area.

### Site Design Review-Procedures and Submittal Requirements Section 4.440

**E27.** The applicant has submitted a sign plan as required by this section.

## **Request F: Type C Tree Removal Plan (TPLN24-0003)**

As described in the Findings below, the request meets the applicable criteria or will by conditions of approval.

### Review Authority



Subsection 4.610.00 (.03) B.

- F1.** The requested removal is connected to Site Design Review by the Development Review Board for new development. The tree removal is thus being reviewed by the DRB.

#### Conditions of Approval

Subsection 4.610.00 (.06) A.

- F2.** No additional conditions are recommended pursuant to this subsection.

#### Completion of Operation

Subsection 4.610.00 (.06) B.

- F3.** It is understood the tree removal will be completed by the time development of the proposed facility is completed, which is a reasonable time frame for tree removal.

#### Security for Permit Compliance

Subsection 4.610.00 (.06) C.

- F4.** No bond is anticipated to be required to ensure compliance with the tree removal plan as a bond is required for overall landscaping.

#### Tree Removal Standards

Subsection 4.610.10 (.01)

- F5.** The standards of this subsection are met as follows:
- Standard for the Significant Resource Overlay Zone: Four (4) of the twenty-nine (29) trees proposed for removal area within the Significant Resource Overlay Zone (SROZ). Although four (4) trees are proposed for removal, twenty-seven(27) trees within the SROZ are proposed for preservation. As shown on the applicant's Tree Removal Plan (Sheet C-100 in Exhibit B3) twenty-seven (27) existing trees in the SROZ are being retained and protected and mitigation includes planting of more than 40 native trees in the upland and wetland habit of the SROZ.
  - Preservation and Conservation: The applicant has taken tree preservation into consideration, and has limited tree removal to trees that are necessary to remove for development. Twenty-seven (27) trees within the SROZ within the SROZ property boundaries will be preserved.
  - Development Alternatives: The applicant has exhausted all efforts to retain trees and natural resources onsite.
  - Land Clearing: Land clearing is not proposed, and will not be a result of this development application.
  - Residential Development: The proposed activity does not involve residential development, therefore this criteria does not apply.
  - Compliance with Statutes and Ordinances: The necessary tree replacement and protection is planned according to the requirements of the tree preservation and protection ordinance.

- Relocation or Replacement: The applicant proposes to plant forty-four (44) trees onsite and two (2) trees offsite as replacement for the twenty-nine (29) trees proposed for removal, thus exceeding the one (1) to one (1) mitigation requirement.
- Limitation: Tree removal is limited to where it is necessary for construction or to address nuisances or where the health of the trees warrants removal.
- Tree Survey: A tree survey has been provided.

Review Process  
Subsection 4.610.40 (.01)

F6. The proposed Type C Tree Plan is being reviewed concurrently with the Stage 2 Final Plan.

Tree Maintenance and Protection Plan  
Section 4.610.40 (.02)

F7. The applicant has submitted the necessary copies of a Tree Maintenance and Protection Plan. See the applicant’s materials in Exhibit B5 and Sheet C-001 (Exhibit B3).

**Replacement and Mitigation**

Tree Replacement Requirement  
Subsection 4.620.00 (.01)

F8. As shown in the table below, 65 trees were inventoried for the current application, including 54 on site and 11 offsite directly adjacent to the development site. 36 of the 65 trees are proposed for retention, including 27 on site and 9 offsite. 27 onsite trees and 2 offsite trees are proposed for removal. The applicant proposes planting 44 trees onsite and 2 trees offsite to mitigate for the removals, which complies with the mitigation requirement.

Trees	Qty	Retain	Remove	Mitigate
On Site	54	27	27	44
Off Site	11	9	2	2
Total	65	36	29	46
Trees	To be planted			
Landscape	4			
Offsite	2			
SROZ	40			

Basis for Determining Replacement  
Subsection 4.620.00 (.02)

F9. The applicant proposes removing twenty-seven (27) trees and planting forty-six (46) trees. Replacement trees will meet the minimum caliper requirement or will be required to by condition of approval.

Replacement Tree Requirements  
Subsection 4.620.00 (.03)

**F10.** A condition of approval will ensure the relevant requirements of this subsection are met.

Replacement Tree Stock Requirements  
Subsection 4.620.00 (.04)

**F11.** A condition of approval will ensure the relevant requirements of this subsection are met.

Replacement Trees Locations  
Subsection 4.620.00 (.05)

**F12.** The applicant is proposing tree planting throughout the site including along SW Parkway Avenue, in parking areas, the planter strip on the property to the north, and throughout the SROZ.

### Protection of Preserved Trees

Tree Protection During Construction  
Section 4.620.10

**F13.** Tree protection is required. All trees required to be protected must be clearly labeled as such, and suitable barriers as described in Condition of Approval PDF 4. to protect remaining trees must be erected, maintained, and remain in place until the City authorizes their removal or issues a final certificate of occupancy. A condition of approval will ensure the applicable requirements of this section are met.

### Request G: Standard SROZ Map Verification (SROZ24-0002)

As described in the Findings below, the request meets the applicable criteria or will by conditions of approval.

### SROZ Map Verification

Requirements and Process  
Section 4.139.05

**G1.** Consistent with the requirements of this section, a verification of the SROZ boundary is required as the applicant requests a land use decision. The applicant conducted a detailed site analysis consistent with the requirements of this section, which the City's Natural Resources Manager reviewed and approved.

### Request H: Standard SRIR Review (SRIR24-0002)

As described in the Findings below, the request meets the applicable criteria or will by conditions of approval.

### Findings of Fact

1. Pursuant to Section 4.139.05 (Significant Resource Overlay Zone Map Verification), the map verification requirements shall be addressed at the time an applicant requests a land use

decision. The applicant conducted a detailed site analysis consistent with code requirements, which the Natural Resources Manager reviewed and approved.

2. The property (Site ID Number 1.12) is comprised of scattered trees, grass/shrub areas, and three delineated wetlands (i.e., Wetlands A, B and Wetland Ditch 1). The wetlands are associated with a historically altered drainageway that flows to the west under 1-5 as part of the Coffee Lake Creek basin.
3. Vegetation within the site consists of native plant species such as Douglas fir, black cottonwood, red alder, black locust, and soft rush. In addition, there are invasive plant species, such as English hawthorn, sweet cherry, reed canarygrass, Himalayan blackberry, tall fescue, and creeping bentgrass.
4. The Significant Resource Overlay Zone ordinance prescribes regulations for development within the SROZ and its associated 25-foot Impact Area. Setbacks from significant natural resources implement the requirements of Metro Title 3 Water Quality Resource Areas, Metro Title 13 Nature in Neighborhoods, and Statewide Planning Goal 5. All significant natural resources have an Impact Area. Development or other alteration activities may be permitted within the SROZ and its associated Impact Area through the review of a Significant Resource Impact Report (SRIR). The primary purpose of the Impact Area is to ensure that development does not encroach into the SROZ.
5. Pursuant to the city's SROZ ordinance, development is only allowed within the Area of Limited Conflicting Use (ALCU). The ALCU is located between the riparian corridor boundary, riparian impact area or the Metro Title 3 Water Quality Resource Area boundary, whichever is furthest from the wetland or stream, and the outside edge of the SROZ, or an isolated significant wildlife habitat (upland forest) resource site.
6. The applicant's standard Significant Resource Impact Report delineated specific resource boundaries and analyzed the impacts of exempt development within the SROZ. The applicant's SRIR contained the required information, including an analysis and development recommendations for mitigating impacts.

## Background/Discussion

The SRIR assessed three wetlands (Figure 4): Wetland A (larger wetland adjacent to Ditch 1), Wetlands B and Wetland Ditch 1 (small wetland and drainage ditch along the southern boundary of the property). Within the SRIR, a local significance determination was completed by the applicant, based on the approved wetland delineation, and updated Oregon Freshwater Wetland Assessment Methodology (OFWAM).

**Wetland A** (0.64 acres) is located on gently sloping to flat ground that extends across much of the southern half of the site. The hydrology of the wetland is dependent on precipitation. The

dominant vegetation includes black cottonwood, English hawthorn, Himalayan blackberry, soft rush, reed canarygrass, common velvet grass, tall fescue and creeping bentgrass.

**Wetland B and Wetland Ditch 1** (0.06 acre and 0.04 acre) are two segments of the altered drainageway, oriented east to west, and located along the southern boundary of the property. These wetlands receive runoff from upslope areas. Vegetation consists of Douglas fir, red alder, Hooker's willow, Himalayan blackberry, common cattail, reed canarygrass, bittersweet nightshade, tall fescue, creeping bentgrass, and bluegrass.

Regarding the City's Natural Resources Inventory (circa 1992-93), a wetland determination, based on OFWAM, provided preliminary boundaries of wetlands in Wilsonville. The mapped boundaries for the wetland determinations relied on aerial photographs, topographic maps, Clackamas County soil survey, and limited field reconnaissance. In contrast to the wetland determination, the state approved wetland delineation, submitted by the applicant, identifies the precise boundaries, location, and current condition of the wetlands on the property. The wetland delineation incorporated observations of on-site hydrology, soils, and vegetation. In accordance with the Corps of Engineers Wetlands Delineation Manual, Pacific Habitat Services delineated the wetland locations and boundaries.

To qualify as a locally significant wetland (and included in the SROZ), as specified in the City of Wilsonville Natural Resource Inventory, a wetland must satisfy the Oregon Freshwater Wetland Assessment Methodology (OFWAM). As documented in the applicant's report, Wetlands A and B satisfy the OFWAM criteria, but Wetland Ditch 1 does not. Staff concurs with the applicant's wetland delineation and determination of local significance. Pursuant to Section 4.139.09(.01) (D), the applicant has demonstrated compliance with the provisions of the SROZ map refinement process for the wetland area.

### **Description of Request**

The applicant is requesting approval of a standard Significant Resource Impact Report (SRIR) for proposed exempt development that is located within the Significant Resource Overlay Zone and its associated Impact Area.

### **Summary of Issues**

Within the SROZ, the applicant's proposed exempt development includes an access road, Fire District turnaround, retaining wall, and stormwater facilities and outfall. Pursuant to Section 4.139.00 and Section 4.139.06(.03), no development is allowed within the SROZ unless it is located within an ALCU, or qualifies as an exempt use or activity.

Proposed exempt development in the SROZ and its associated Impact Area include the following:

- 1) Access road and Fire District turnaround
- 2) Retaining wall and landscaping

- 3) Two stormwater facilities (i.e., planter)
- 4) Stormwater outfall – installation of pipe and outfall structure

## Exempt Uses in the SROZ

### Use and Activities Exempt from These Regulations

Subsection 4.118 (.03) A. and 4.130.04

**H1.** Proposed exempt development in the SROZ and its associated Impact Area complies with the following exemptions.

#### 1. Access road and Fire District turnaround

**Subsection 4.139.04 (.08) exempts the following use/activity:** “The construction of new roads, pedestrian or bike paths into the SROZ in order to provide access to the sensitive area or across the sensitive area, provided the location of the crossing is consistent with the intent of the Wilsonville Comprehensive Plan. Roads and paths shall be constructed so as to minimize and repair disturbance to existing vegetation and slope stability.”

**Finding:** The drive isle is the only feasible location that provides access to the site. The turnaround is a requirement of the fire district, and the retaining wall is necessary for constructing the drive isle and turnaround.

#### 2. Retaining wall and landscaping

**Subsection 4.139.04 (.13) exempts the following use/activity:** “Enhancement of the riparian corridor or wetlands for water quality or quantity benefits, fish, or wildlife habitat as approved by the City and appropriate regulatory agencies.”

**Finding:** Due to the current condition of the site, the placement and operation of the stormwater facilities will provide water quality and habitat benefit through the planting of stormwater facility vegetation and the installation of soil media.

#### 3. Two stormwater outfall and stormwater outfall - installation of pipe and outfall structure:

**Subsection 4.139.04 (.18) exempts the following use/activity:** “Private or public service connection laterals and service utility extensions.”

**Finding:** The stormwater pipe and outfall is necessary for conveying treated and controlled runoff to the wetlands

## Standard SRIR Requirements

### Site Development Permit Application Requirements

Subsection 4.139.06 (.01) A.

**H2.** The applicant has submitted a land use application in conformance with the Planning and Land Development Ordinance.

#### Outline of Existing Features

Subsection 4.139.06 (.01) B.

**H3.** Preliminary plans have been submitted which include all of the proposed development.

#### Location of Wetlands or Water Bodies

Subsection 4.139.06 (.01) C.

**H4.** The SRIR assessed two wetlands (Figures 6a and 6b): Wetland 1 (west of Tapman Creek), Wetland 2 (east of Tapman Creek). Within the SRIR, a significance determination, based on the approved wetland delineation and updated Oregon Freshwater Wetland Assessment Methodology (OFWAM), was completed for the wetlands.

#### Tree Inventory Requirement

Subsection 4.139.06 (.01) D.

**H5.** The preliminary plans include a tree inventory.

#### Location of SROZ and Impact Area Boundaries

Subsection 4.139.06 (.01) E.

**H6.** The SROZ and Impact Area boundaries have been identified on the preliminary plans.

#### Slope Cross-Section Measurements

Subsection 4.139 (.01) F.

**H7.** A slope analysis was included in the SRIR.

#### Metro Title 3 Boundary Delineation

Subsection 4.139 (.01) G.

**H8.** The SRIR includes a delineation of the Metro Title 3 Water Quality Resource Area boundary.

#### Photos of Site Conditions

Subsection 4.139 (.01) H.

**H9.** The SRIR includes representative site photographs.

#### Narrative Describing Impacts

Subsection 4.139 (.01) I.

**H10.** The proposed development impacts have been documented in the SRIR. In addition, the SRIR includes a mitigation plan, which will be implemented in the southern portion of the site within the SROZ to the south of the retaining wall.

Standard SRIR Review Criteria  
Section 4.139.06 (.03)

**H11.** In addition to the normal Site Development Permit Application requirements as stated in the Planning and Land Development Ordinance, the following standards shall apply to the issuance of permits requiring an SRIR. The SRIR must demonstrate how these standards are met in a manner that meets the purposes of this Section.

- A.** Except as specifically authorized by this code, development shall be permitted only within the Area of Limited Conflicting Use (see definition) found within the SROZ;

**Finding:** The proposed exempt development is located within the SROZ, but not a designated Area of Limited Conflicting Use. Only exempt development is allowed within a wetland vegetated corridor.

- B.** Except as specifically authorized by this code, no development is permitted within Metro's Urban Growth Management Functional Plan Title 3 Water Quality Resource Areas boundary;

**Finding:** The proposed exempt development is allowed within Metro's Title 3 Water Quality Resource Areas boundary.

- C.** No more than five (5) percent of the Area of Limited Conflicting Use (see definition) located on a property may be impacted by a development proposal. On properties that are large enough to include Areas of Limited Conflicting Use on both sides of a waterway, no more than five (5) percent of the Area of Limited Conflicting Use on each side of the riparian corridor may be impacted by a development proposal. This condition is cumulative to any successive development proposals on the subject property such that the total impact on the property shall not exceed five (5) percent;

**Finding:** The proposed SROZ boundary does not include an Area of Limited Conflicting Use.

- D.** Mitigation of the area to be impacted shall be consistent with Section 4.139.06 of this code and shall occur in accordance with the provisions of this Section;

**Finding:** The proposed mitigation is consistent with the Development Code provisions. The mitigation will provide an enhancement to the locally significant wetland through the planting of native trees and shrubs.

- E.** The impact on the Significant Resource is minimized by limiting the degree or magnitude of the action, by using appropriate technology or by taking affirmative steps to avoid, reduce or mitigate impacts;

**Finding:** The impacts to the SROZ are the minimum necessary for addressing Public Works Standards and development code requirements.



- F. The impacts to the Significant Resources will be rectified by restoring, rehabilitating, or creating enhanced resource values within the “replacement area” (see definitions) on the site or, where mitigation is not practical on-site, mitigation may occur in another location approved by the City;

**Finding:** Impacts to the SROZ will be mitigated for on-site.

- G. Non-structural fill used within the SROZ area shall primarily consist of natural materials similar to the soil types found on the site;

**Finding:** Non-structural fill will consist of natural materials similar to the soil types found on the site.

- H. The amount of fill used shall be the minimum required to practically achieve the project purpose;

**Finding:** The amount of fill has been minimized to the extent practicable.

- I. Other than measures taken to minimize turbidity during construction, stream turbidity shall not be significantly increased by any proposed development or alteration of the site;

**Finding:** All proposed grading activities on-site will be managed pursuant to guidelines established and identified in the applicant’s approved erosion control plan and a 1200-CN Erosion Control Permit. Stream turbidity is regulated under the City’s Grading and Erosion Control Permit.

- J. Appropriate federal and state permits shall be obtained prior to the initiation of any activities regulated by the U.S. Army Corps of Engineers and the Oregon Division of State Lands in any jurisdictional wetlands or water of the United States or State of Oregon, respectively.

**Finding:** The applicant has not proposed impacts to Wetlands A, B and Wetland Ditch 1, which are regulated by the Oregon Department of State Lands and the U.S. Army Corps of Engineers.

## Request I: Variance (VAR24-0002)

As described in the Findings below, the request meets the applicable criteria or will by conditions of approval.

### Variance Review Authority

Authority of Development Review Board  
Subsection 4.031 (.01) E.

- I1. As further described in the Findings below, the applicant's site design includes a variance request to parking landscaping standards outlined in Section 4.155(.03)B.1. requiring a screening landscape buffer between the parking area and the property to the north. The Development Review Board has authority to act on variances, as authorized in Section 4.196, other than those that are reviewed and acted upon by the Planning Director through Administrative Review processes.

Variance Standards Applied  
Subsection 4.031 (.01) E.

- I2. As shown by Findings I5 through I11 below, the review applies the variance standards of Section 4.196 of the Code.

### Parking Area Landscaping

Minimizing Visual Dominance of Parking  
Subsection 4.155 (.03) B.

- I3. The applicant requests a variance to the requirement that a landscape buffer equivalent to 10% of the parking area is used to minimize the visual dominance of the parking area and separate the use from adjacent properties and the Right-of-Way.

As described by the applicant and illustrated on the plan sets, design of the development intends to minimize the visual dominance of parking to the extent feasible with the site constraints. The parking area is setback from the frontage of the property and obscured from the public's view. Landscaping is provided throughout the parking area, breaking up the parking. A retaining wall to the north of the property helps to screen the parking area from the adjacent property. See the renderings below:



View from Parkway Ave



Southeast view from the North



Southwest view from the North

## Variance Standards

### Grounds for Granting Variance Request Subsection 4.196 (.01)

- I4. Where difficulties exist rendering compliance with the Code impractical and such compliance would create unnecessary hardship to the owner or user of land or buildings, the Development Review Board may grant a variance from the provisions of the Code. Granting of a variance is allowed after the prescribed public hearing as set forth in Section 4.013 and an investigation, provided all the conditions listed in Subsections 4.196 (.01) A. through G., as discussed in Findings I5 through I0 below, exist related to the subject property.

### Difficulty Applies Regardless of Owner Subsection 4.196 (.01) A.

- I5. The proposed development site is a unique property with nearly 1 acre of the 2.3 acre site located within the Significant Resource Overlay Zone (SROZ). Despite being one of few vacant commercially zoned lots, the lot has remained undeveloped since the 70s, most likely due to the significant challenges posed by natural resource and topography constraints. Regardless of owner, the existence of the protected wetland as well as the sloping grade would create constraints to development requiring creative development solutions both in design and construction.

Variance Not Result of Illegal Act  
Subsection 4.196 (.01) B.

I6. The requested relief is not the result of an illegal act on the part of the applicant or their agent in relation to the variance request. Therefore, this variance condition is met.

Unique Circumstances  
Subsection 4.196 (.01) C.

I7. SROZ is present on properties throughout the City and development of those properties is constrained by the SROZ regulations, which apply to the portion of any lot or development site that is within the SROZ and its associated Impact Area. While the presence of SROZ is not on the lot unique, extent to which the SROZ impacts the site is not typical within Wilsonville’s Planned Development Commercial Zone.



Request Relates to Subject Property  
Subsection 4.196 (.01) D.

I8. The SROZ cover approximately 43% of the site. As show above, the location of the wetlands protected by the SROZ forces development to one limited area of the site in the northeast corner. To minimize impact to the SROZ the applicant has designed the development to be set back as far west and north as possible, only requiring a 89 sq ft encroachment in the SROZ. By prioritizing the protection of the SROZ the applicant’s design opportunities are restricted.

### Allowed Uses in Zone

Subsection 4.196 (.01) E.

- I9. The proposed site of development on SW Parkway Avenue is zoned PDC and the Lamborghini Development as proposed is a commercial use allowed in this zone. The variance code standards do not allow the property to be used for purposes not authorized within the zone. Thus, the proposal satisfies this variance condition.

### Minimum Necessary to Relieve Hardship

Subsection 4.196 (.01) F.

- I10. The applicant's materials demonstrate that the requested variance is the minimum necessary to relieve hardship for development of the site. The applicants team worked closely with City staff to create a functional and attractive development that expertly balances the needs of the applicant and the needs of Wilsonville's natural resources. As such, the development is proposed to be constructed in the northwest corner of the site setback from the Parkway Ave frontage, with a twenty-four (24) space parking area designed to meet customer and employee needs while minimizing grading, and the access located along the north property line avoiding the SROZ to the south to the extent possible. Pedestrian and access standards require that a sidewalk is provided for safe access from the parking area to the building. The applicant has prioritized the safe access of pedestrians and protection of the SROZ in their designs, limiting the space for the required landscape buffer.

The variance request described in the findings above, for the landscape buffer requirement outlined in Section 4.155 (.03) B allows for the applicant to maximize the portions of the development site not located within the SROZ. The landscape buffer would force portions of the parking area to encroach within the SROZ or further limit development potential. Notably, the applicant does not request a variance to any of the standards within the SROZ code. The request for a variance to landscape standards is the most minimal and reasonable request to relieve the hardship encumbering the site.

Exhibit C1  
Public Works Plan Submittal Requirements  
and Other Engineering Requirements

1. All construction or improvements to public works facilities shall be in conformance to the City of Wilsonville Public Works Standards - 2017.
2. Applicant shall submit insurance requirements to the City of Wilsonville in the following amounts:

<b>Coverage</b> ( <i>Aggregate, accept where noted</i> )	<b>Limit</b>
<u>Commercial General Liability:</u>	
▪ General Aggregate (per project)	\$3,000,000
▪ General Aggregate (per occurrence)	\$2,000,000
▪ Fire Damage (any one fire)	\$50,000
▪ Medical Expense (any one person)	\$10,000
<u>Business Automobile Liability Insurance:</u>	
▪ Each Occurrence	\$1,000,000
▪ Aggregate	\$2,000,000
<u>Workers Compensation Insurance</u>	\$500,000

3. No construction of, or connection to, any existing or proposed public utility/improvements will be permitted until all plans are approved by Staff, all fees have been paid, all necessary permits, right-of-way and easements have been obtained and Staff is notified a minimum of 24 hours in advance.
4. All public utility/improvement plans submitted for review shall be based upon a 22" x 34" format and shall be prepared in accordance with the City of Wilsonville Public Work's Standards.
5. Plans submitted for review shall meet the following general criteria:
  - a. Utility improvements that shall be maintained by the public and are not contained within a public right-of-way shall be provided a maintenance access acceptable to the City. The public utility improvements shall be centered in a minimum 15-ft. wide public easement for single utilities and a minimum 20-ft wide public easement for two parallel utilities and shall be conveyed to the City on its dedication forms.
  - b. Design of any public utility improvements shall be approved at the time of the issuance of a Public Works Permit. Private utility improvements are subject to review and approval by the City Building Department.
  - c. In the plan set for the PW Permit, existing utilities and features, and proposed new private utilities shall be shown in a lighter, grey print. Proposed public improvements shall be shown in bolder, black print.

- d. All elevations on design plans and record drawings shall be based on NAVD 88 Datum.
  - e. All proposed on and off-site public/private utility improvements shall comply with the State of Oregon and the City of Wilsonville requirements and any other applicable codes.
  - f. Design plans shall identify locations for street lighting, gas service, power lines, telephone poles, cable television, mailboxes and any other public or private utility within the general construction area.
  - g. As per City of Wilsonville Ordinance No. 615, all new gas, telephone, cable, fiber-optic and electric improvements etc. shall be installed underground. Existing overhead utilities shall be undergrounded wherever reasonably possible.
  - h. Any final site landscaping and signing shall not impede any proposed or existing driveway or interior maneuvering sight distance.
  - i. Erosion Control Plan that conforms to City of Wilsonville City Code Section 8.317.
  - j. Existing/proposed right-of-way, easements and adjacent driveways shall be identified.
  - k. All engineering plans shall be printed to PDF, combined to a single file, stamped and digitally signed by a Professional Engineer registered in the State of Oregon.
  - l. All plans submitted for review shall be in sets of a digitally signed PDF and three printed sets.
6. Submit plans in the following general format and order for all public works construction to be maintained by the City:
- a. Cover sheet
  - b. City of Wilsonville construction note sheet
  - c. Land Use Conditions of Approval sheet
  - d. General construction note sheet
  - e. Existing conditions plan.
  - f. Erosion control and tree protection plan.
  - g. Site plan. Include property line boundaries, water quality pond boundaries, sidewalk improvements, right-of-way (existing/proposed), easements (existing/proposed), and sidewalk and road connections to adjoining properties.
  - h. Grading plan, with 1-foot contours.
  - i. Composite utility plan; identify storm, sanitary, and water lines; identify storm and sanitary manholes.
  - j. Detailed plans; show plan view and either profile view or provide i.e.'s at all utility crossings; include laterals in profile view or provide table with i.e.'s at crossings; vertical scale 1"= 5', horizontal scale 1"= 20' or 1"= 30'.
  - k. Street plans.
  - l. Storm sewer/drainage plans; number all lines, manholes, catch basins, and cleanouts for easier reference.
  - m. Stormwater LID facilities (Low Impact Development): provide plan and profile views of all LID facilities.
  - n. Water and sanitary sewer plans; plan; number all lines, manholes, and cleanouts for easier reference.



- o. Where depth of water mains are designed deeper than the 3-foot minimum (to clear other pipe lines or obstructions), the design engineer shall add the required depth information to the plan sheets.
  - p. Detailed plan for water quality facility (both plan and profile views), including water quality orifice diameter and manhole rim elevations. Provide detail of inlet structure and energy dissipation device. Provide details of drain inlets, structures, and piping for outfall structure. Note that although storm water facilities are typically privately maintained they will be inspected by engineering, and the plans must be part of the Public Works Permit set.
  - q. Composite franchise utility plan.
  - r. City of Wilsonville detail drawings.
  - s. Illumination plan.
  - t. Striping and signage plan.
  - u. Landscape plan.
7. Design engineer shall coordinate with the City in numbering the sanitary and stormwater sewer systems to reflect the City's numbering system. Video testing and sanitary manhole testing will refer to City's numbering system.
  8. The applicant shall install, operate and maintain adequate erosion control measures in conformance with City Code Section 8.317 during the construction of any public/private utility and building improvements until such time as approved permanent vegetative materials have been installed.
  9. Applicant shall work with City Engineering before disturbing any soil on the respective site. If 5 or more acres of the site will be disturbed applicant shall obtain a 1200-C permit from the Oregon Department of Environmental Quality. If 1 to less than 5 acres of the site will be disturbed a 1200-CN permit from the City of Wilsonville is required.
  10. The applicant shall be in conformance with all stormwater and flow control requirements for the proposed development per the Public Works Standards.
  11. A storm water analysis prepared by a Professional Engineer registered in the State of Oregon shall be submitted for review and approval by the City.
  12. The applicant shall be in conformance with all water quality requirements for the proposed development per the Public Works Standards. If a mechanical water quality system is used, prior to City acceptance of the project the applicant shall provide a letter from the system manufacturer stating that the system was installed per specifications and is functioning as designed.
  13. Storm water quality facilities shall have approved landscape planted and approved by the City of Wilsonville prior to paving.

14. The applicant shall contact the Oregon Water Resources Department and inform them of any existing wells located on the subject site. Any existing well shall be limited to irrigation purposes only. Proper separation, in conformance with applicable State standards, shall be maintained between irrigation systems, public water systems, and public sanitary systems. Should the project abandon any existing wells, they shall be properly abandoned in conformance with State standards.
15. All survey monuments on the subject site, or that may be subject to disturbance within the construction area, or the construction of any off-site improvements shall be adequately referenced and protected prior to commencement of any construction activity. If the survey monuments are disturbed, moved, relocated or destroyed as a result of any construction, the project shall, at its cost, retain the services of a registered professional land surveyor in the State of Oregon to restore the monument to its original condition and file the necessary surveys as required by Oregon State law. A copy of any recorded survey shall be submitted to Staff.
16. Streetlights shall be in compliance with City dark sky, LED, and PGE Option C requirements.
17. Sidewalks, crosswalks and pedestrian linkages in the public right-of-way shall be in compliance with the requirements of the U.S. Access Board.
18. No surcharging of sanitary or storm water manholes is allowed.
19. The project shall connect to an existing manhole or install a manhole at each connection point to the public storm system and sanitary sewer system.
20. A City approved energy dissipation device shall be installed at all proposed storm system outfalls. Storm outfall facilities shall be designed and constructed in conformance with the Public Works Standards.
21. The applicant shall provide a 'stamped' engineering plan and supporting information that shows the proposed street light locations meet the appropriate AASHTO lighting standards for all proposed streets and pedestrian alleyways.
22. All required pavement markings, in conformance with the Transportation Systems Plan and the Bike and Pedestrian Master Plan, shall be completed in conjunction with any conditioned street improvements.
23. Street and traffic signs shall have a hi-intensity prismatic finish meeting ASTM 4956 Spec Type 4 standards.
24. The applicant shall provide adequate sight distance at all project driveways by driveway placement or vegetation control. Specific designs to be submitted and approved by the City Engineer. Coordinate and align proposed driveways with driveways on the opposite side of the proposed project site.

25. The applicant shall provide adequate sight distance at all project street intersections, alley intersections and commercial driveways by properly designing intersection alignments, establishing set-backs, driveway placement and/or vegetation control. Coordinate and align proposed streets, alleys and commercial driveways with existing streets, alleys and commercial driveways located on the opposite side of the proposed project site existing roadways. Specific designs shall be approved by a Professional Engineer registered in the State of Oregon. As part of project acceptance by the City the Applicant shall have the sight distance at all project intersections, alley intersections and commercial driveways verified and approved by a Professional Engineer registered in the State of Oregon, with the approval(s) submitted to the City (on City approved forms).
26. Access requirements, including sight distance, shall conform to the City's Transportation Systems Plan (TSP) or as approved by the City Engineer. Landscaping plantings shall be low enough to provide adequate sight distance at all street intersections and alley/street intersections.
27. Applicant shall design interior streets and alleys to meet specifications of Tualatin Valley Fire & Rescue and Allied Waste Management (United Disposal) for access and use of their vehicles.
28. The applicant shall provide the City with a Stormwater Maintenance and Access Easement Agreement (on City approved forms) for City inspection of those portions of the storm system to be privately maintained. Applicant shall provide City with a map exhibit showing the location of all stormwater facilities which will be maintained by the Applicant or designee. Stormwater LID facilities may be located within the public right-of-way upon approval of the City Engineer. Applicant shall maintain all LID storm water components and private conventional storm water facilities; maintenance shall transfer to the respective homeowners association when it is formed.
29. The applicant shall "loop" proposed waterlines by connecting to the existing City waterlines where applicable.
30. Applicant shall provide a minimum 6-foot Public Utility Easement on lot frontages to all public right-of-ways. An 8-foot PUE shall be provided along Collectors. A 10-ft PUE shall be provided along Minor and Major Arterials.
31. For any new public easements created with the project the Applicant shall be required to produce the specific survey exhibits establishing the easement and shall provide the City with the appropriate Easement document (on City approved forms).
32. MRecord Drawings:

At the completion of the installation of any required public improvements, and before a 'punch list' inspection is scheduled, the Engineer shall perform a record survey. Said survey

shall be the basis for the preparation of 'record drawings' which will serve as the physical record of those changes made to the plans and/or specifications, originally approved by Staff, that occurred during construction. Using the record survey as a guide, the appropriate changes will be made to the construction plans and/or specifications and a complete revised 'set' shall be submitted. The 'set' shall consist of drawings in an electronic copy in AutoCAD, current version, and a digitally signed PDF.

Exhibit C2  
Natural Resources Findings & Requirements

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Findings for SRIR22-0001

(if SRIR include related findings here)

Significant Resource Overlay Zone

1. The applicant shall submit the SROZ mapping as ARCGIS shape files or a compatible format.
2. All landscaping, including herbicides used to eradicate invasive plant species and existing vegetation, in the SROZ shall be reviewed and approved by the Natural Resources Manager. Native plants are required for landscaping in the SROZ.
3. Prior to any site grading or ground disturbance, the applicant is required to delineate the boundary of the SROZ. Six-foot (6') tall cyclone fences with metal posts pounded into the ground at 6'-8' centers shall be used to protect the significant natural resource area where development encroaches into the 25-foot Impact Area.
4. The applicant shall minimize the impact of the proposed development in the SROZ (e.g., stormwater outfall, retaining wall).
5. Mitigation actions shall be implemented prior to or at the same time as the impact activity is conducted.
6. The Significant Resource Overlay Zone (SROZ) shall be identified in a conservation easement. The applicant shall record the conservation easement with Clackamas County Clerk's office. The conservation easement shall include language prohibiting any disturbance of native vegetation without first obtaining approval from the Planning Division and the Natural Resources Manager. The conservation easement shall be reviewed by the City Attorney prior to recording.





August 7, 2024

ODOT # 13374

## ODOT Formal Response

<b>Project Name:</b> Lamborghini Dealership	<b>Jurisdiction:</b> City of Wilsonville
<b>Site Address:</b> 25239 SW Parkway Avenue	<b>Jurisdiction Case #:</b> DB24-0006

The site of this proposed land use action is adjacent to the I-5 on ramp and in the vicinity of OR 141. ODOT has permitting authority over these facilities and an interest in ensuring that this proposed land use is compatible with their safe and efficient operation.

These comments, standards, and requirements are current as of the date of this letter. If the project scope and/or timeline is modified, the applicant should contact the ODOT Region 1 Development Review program ([ODOT\\_R1\\_DevRev@odot.oregon.gov](mailto:ODOT_R1_DevRev@odot.oregon.gov)) for an updated letter as updated comments may be necessary.

### LAND USE PROPOSAL

ODOT received notice of a land use application submitted to City of Wilsonville for the proposed development of a three-story, 37,508 square foot, auto dealership and associated site improvements. The project is proposed within tax lot 1000 and will take access off SW Parkway Avenue.

### COMMENTS/FINDINGS

#### Traffic Impacts

As part of the materials provided to ODOT, ODOT received a copy of a Transportation Impact Analysis prepared by DKS Associates, dated February 2024. ODOT has reviewed the analysis, concurs with the findings of the TIA and has determined that no additional State review is required.

### ADVISORY INFORMATION

#### Permits to Work in State Highway Right of Way

- An ODOT Miscellaneous Permit must be obtained for all work in the State highway right of way. If applicable, contact the District Contact indicated below to determine permit requirements and to obtain application information.

**Contact the ODOT Development Review Planner identified below for further coordination or questions regarding ODOT comments and requirements during the land use process.**

Please send a copy of the Notice of Decision/Staff Report with conditions of approval to:

[ODOT\\_R1\\_DevRev@odot.oregon.gov](mailto:ODOT_R1_DevRev@odot.oregon.gov)

Development Review Planner: Melissa Gonzalez	<a href="mailto:Melissa.gonzalez-gabriel2@odot.oregon.gov">Melissa.gonzalez-gabriel2@odot.oregon.gov</a>
District Contact: District 2B	<a href="mailto:d2bup@odot.oregon.gov">d2bup@odot.oregon.gov</a>





29799 SW Town Center Loop E, Wilsonville, OR 97070  
Phone: 503.682.4960 Fax: 503.682.7025  
Web: www.ci.wilsonville.or.us

### Planning Division Development Permit Application

Final action on development application or zone change is required within 120 days in accordance with provisions of ORS 227.175

A pre application conference is normally required prior to submittal of an application. Please visit the City's website for submittal requirements

Pre-Application Meeting Date: \_\_\_\_\_

Incomplete applications will not be scheduled for public hearing until all of the required materials are submitted.

**Applicant:**

Name: Celia Tonkin  
Company: Ron Tonkin Gran Turslmo  
Mailing Address: 25300 SW Parkway Avenue  
City, State, Zip: Wilsonville, OR 97070  
Phone: 503-258-5608 Fax: \_\_\_\_\_  
E-mail: celia.tonkin@rtgt.com


**Authorized Representative:**

Name: Brad Kilby, AICP  
Company: Harper Houf Peterson Righellis, Inc  
Mailing Address: 205 SE Spokane Street, #200  
City, State, Zip: Portland, OR 97202  
Phone: 503-221-1131 Fax: \_\_\_\_\_  
E-mail: Bradk@hhpr.com


**Property Owner:**

Name: Bradley Tonkin  
Company: Casa Tonchini LLC  
Mailing Address: 25300 SW Parkway Ave  
City, State, Zip: Wilsonville, OR 97070  
Phone: 503-255-7560 Fax: \_\_\_\_\_  
E-mail: betonkin@rtgt.com

**Property Owner's Signature:**

  
Printed Name: Bradley Tonkin Date: 4.11.24

**Applicant's Signature: (If different from Property Owner)**

  
Printed Name: Celia Tonkin Date: 4.11.24

**Site Location and Description:**

Project Address if Available: 25239 SW Parkway Avenue Suite/Unit \_\_\_\_\_  
Project Location: SW Parkway Avenue north of SW Elligsen Rd. and east of Interstate 5.  
Tax Map #(s): 3S102DA Tax Lot #(s): 1000 County:  Washington  Clackamas

**Request:**

The owner is requesting approval to construct a new auto dealership on the property. They own three other dealerships within the vicinity of this site.

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

Residential  Commercial  Industrial  Other: \_\_\_\_\_

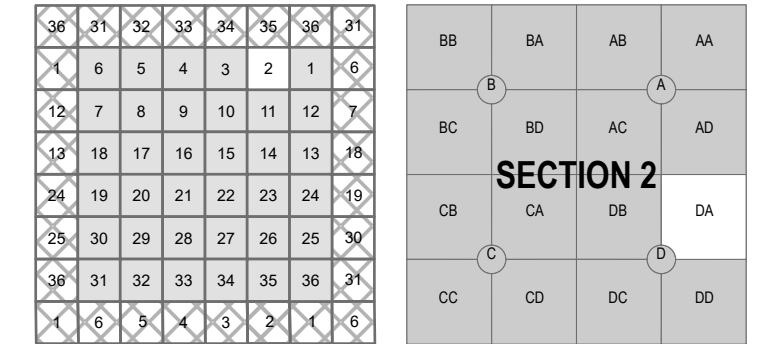
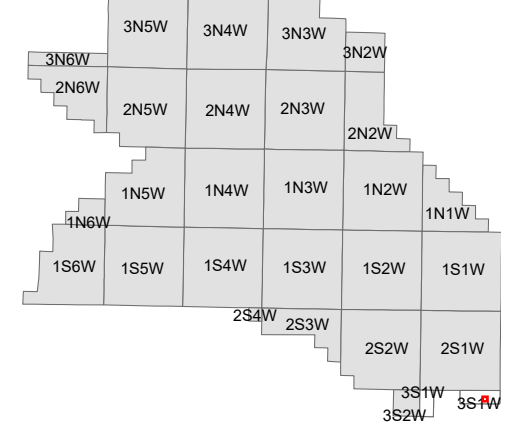
**Application Type(s):**

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



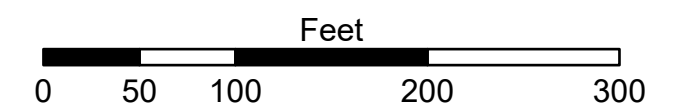
City of Wilsonville  
Exhibit B1 DB24-0006

WASHINGTON COUNTY OREGON  
NE 1/4 SE 1/4 SECTION 2 T3S R1W  
SCALE 1"= 100'



FOR ADDITIONAL MAPS VISIT OUR WEBSITE AT  
[www.co.washington.or.us](http://www.co.washington.or.us)

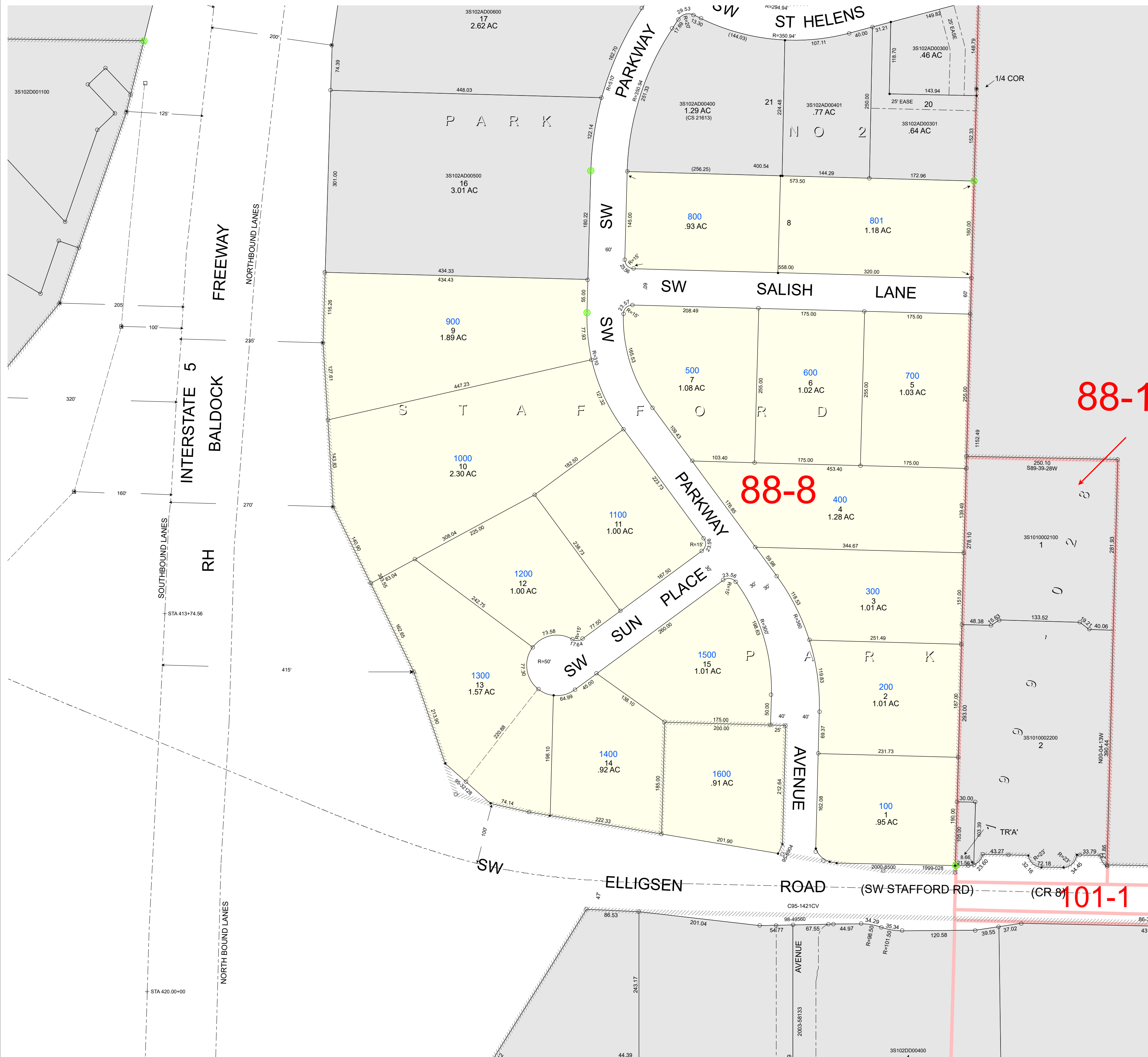
Cancelled Taxlots For: 3S102DA  
None



PLOT DATE: 1/6/2023

FOR ASSESSMENT PURPOSES  
ONLY - DO NOT RELY ON  
FOR OTHER USE

Map areas delineated by either gray shading or a cross-hatched pattern are for reference only and may not indicate the most current property boundaries. Please consult the appropriate map for the most current information.



88-1

88-8

101-1





**SCHEDULE A**

Names and Address of Title Insurance Company: **WFG National Title Insurance Company  
12909 SW 68th Pkwy., Suite 350, Portland, OR 97223**

File No.: **23-165237** Policy No.: **3155441-7201974**

Amount of Insurance: **\$925,000.00** Premium: **\$1,988.00**

Address Reference: **Lot 10 Stafford Park, Wilsonville, OR 97070**

Date of Policy: **September 14, 2023 11:41AM**

1. Name of Insured:  
**Casa Tonchinni LLC, an Oregon limited liability company**
2. The estate or interest in the Land that is insured by this policy is:  
**Fee Simple**
3. Title is vested in:  
**Casa Tonchinni LLC, an Oregon limited liability company**
4. The Land referred to in this policy is described as follows:  
**See Exhibit "A" attached hereto and made a part hereof**

**EXHIBIT "A"**  
**LEGAL DESCRIPTION**

All that certain real property in the County of Washington, State of Oregon, described as follows:

Lot 10, STAFFORD PARK, in the City of Wilsonville, County of Washington and State of Oregon.

**SCHEDULE B**  
**EXCEPTIONS FROM COVERAGE**

File No.: **23-165237**Policy No: **3155441-7201974**

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

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.
3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.
5. Any lien, or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.
6. Access Restrictions, including the terms and provisions thereof in Deed:
 

In favor of	:	the State of Oregon, by and through its State Highway Commission
Recorded	:	April 7, 1952
Recording No.	:	<a href="#">(Book) 331 (page) 171</a>
Also in the following Deeds:		
Recorded	:	April 23, 1962
Recording No.	:	<a href="#">(Book) 461 (page) 367</a>
Recorded	:	February 23, 1966
Recording No.	:	<a href="#">(Book) 589 (page) 142</a>
Recorded	:	May 21, 1969
Recording no.	:	<a href="#">(Book) 744 (page) 151</a>
7. Covenants, Conditions, Restrictions and Easements, including the terms and provisions thereof, but omitting any restrictions based on race, color, religion or national origin appearing of record:
 

Recorded	:	August 18, 1977
Recording No(s)	:	<a href="#">(book) 1192 (page) 414</a>

Said conditions and restrictions disclose a 5 foot easement, running along and interior to the side lines and rear liens of each building site for utilities. Slope control areas affecting Lots 7, 8, 11, 12, 13 and 14 are reserved.

As amended by instrument:  
Recorded : March 12, 1984  
Recording No(s) : [84009286](#)

As amended by instrument:  
Recorded : November 23, 2011  
Recording No(s) : [2011-082918](#)  
Wherein the interior lot line utility easement between Lots 2 and 3 were vacated.

- 8. Easement as shown on the plat of [Stafford Park](#):  
For : Public Utility  
Affects : the Southerly 5 feet of Lot 10
- 9. 2023-2024 taxes, a lien not yet due and payable.

**END OF SCHEDULE B**



**OWNER'S POLICY OF TITLE INSURANCE**  
Issued by  
**WFG NATIONAL TITLE INSURANCE COMPANY**  
**POLICY NUMBER: 3155441-7201974**

**ALTA Owner's Policy (06-17-06)**

**OTIRO No. PO-04**

**Any notice of claim and any other notice or statement in writing required to be given to the Company under this Policy must be given to the Company at the address shown in Section 18 of the Conditions.**


**COVERED RISKS**

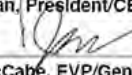
SUBJECT TO THE EXCLUSIONS FROM COVERAGE, THE EXCEPTIONS FROM COVERAGE CONTAINED IN SCHEDULE B, AND THE CONDITIONS, WFG NATIONAL TITLE INSURANCE COMPANY, a South Carolina corporation (the "Company") insures, as of Date of Policy and, to the extent stated in Covered Risks 9 and 10, after Date of Policy, against loss or damage, not exceeding the Amount of Insurance, sustained or incurred by the Insured by reason of:

1. Title being vested other than as stated in Schedule A.
2. Any defect in or lien or encumbrance on the Title. This Covered Risk includes but is not limited to insurance against loss from
  - (a) A defect in the Title caused by
    - (i) forgery, fraud, undue influence, duress, incompetence, incapacity, or impersonation;
    - (ii) failure of any person or Entity to have authorized a transfer or conveyance;
    - (iii) a document affecting Title not properly created, executed, witnessed, sealed, acknowledged, notarized, or delivered;
    - (iv) failure to perform those acts necessary to create a document by electronic means authorized by law;
    - (v) a document executed under a falsified, expired, or otherwise invalid power of attorney;
    - (vi) a document not properly filed, recorded, or indexed in the Public Records including failure to perform those acts by electronic means authorized by law; or
    - (vii) a defective judicial or administrative proceeding.
  - (b) The lien of real estate taxes or assessments imposed on the Title by a governmental authority due or payable, but unpaid.
  - (c) Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.

**In Witness Whereof**, WFG NATIONAL TITLE INSURANCE COMPANY has caused this policy to be signed and sealed by its duly authorized officers as of Date of Policy shown in Schedule A.

**WFG NATIONAL TITLE INSURANCE COMPANY**

By:   
 Steve Ozonian, President/CEO

ATTEST:   
 Joseph V. McCabe, EVP/General Counsel/Secretary



3. Unmarketable Title.
4. No right of access to and from the Land.
5. The violation or enforcement of any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
  - (a) the occupancy, use, or enjoyment of the Land;
  - (b) the character, dimensions, or location of any improvement erected on the Land;
  - (c) the subdivision of land; or
  - (d) environmental protection
 if a notice, describing any part of the Land, is recorded in the Public Records setting forth the violation or intention to enforce, but only to the extent of the violation or enforcement referred to in that notice.
6. An enforcement action based on the exercise of a governmental police power not covered by Covered Risk 5 if a notice of the enforcement action, describing any part of the Land, is recorded in the Public Records, but only to the extent of the enforcement referred to in that notice.
7. The exercise of the rights of eminent domain if a notice of the exercise, describing any part of the Land, is recorded in the Public Records.
8. Any taking by a governmental body that has occurred and is binding on the rights of a purchaser for value without Knowledge.
9. Title being vested other than as stated in Schedule A or being defective
  - (a) as a result of the avoidance in whole or in part, or from a court order providing an alternative remedy, of a transfer of all or any part of the title to or any interest in the Land occurring prior to the transaction vesting Title as shown in Schedule A because that prior transfer constituted a fraudulent or preferential transfer under federal bankruptcy, state insolvency, or similar creditors' rights laws; or
  - (b) because the instrument of transfer vesting Title as shown in Schedule A constitutes a preferential transfer under federal bankruptcy, state insolvency, or similar creditors' rights laws by reason of the failure of its recording in the Public Records
    - (i) to be timely, or
    - (ii) to impart notice of its existence to a purchaser for value or to a judgment or lien creditor.
10. Any defect in or lien or encumbrance on the Title or other matter included in Covered Risks 1 through 9 that has been created or attached or has been filed or recorded in the Public Records subsequent to Date of Policy and prior to the recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The Company will also pay the costs, attorneys' fees, and expenses incurred in defense of any matter insured against by this Policy, but only to the extent provided in the Conditions.

### EXCLUSIONS FROM COVERAGE

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

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
  - (i) the occupancy, use, or enjoyment of the Land;
  - (ii) the character, dimensions, or location of any improvement erected on the Land;
  - (iii) the subdivision of land; or
  - (iv) environmental protection;
 or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
  - (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
  - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
  - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
  - (c) resulting in no loss or damage to the Insured Claimant;
  - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
  - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
  - (a) a fraudulent conveyance or fraudulent transfer; or
  - (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

## CONDITIONS

### 1. DEFINITION OF TERMS

The following terms when used in this policy mean:

- (a) "Amount of Insurance": The amount stated in Schedule A, as may be increased or decreased by endorsement to this policy, increased by Section 8(b), or decreased by Sections 10 and 11 of these Conditions.
- (b) "Date of Policy": The date designated as "Date of Policy" in Schedule A.
- (c) "Entity": A corporation, partnership, trust, limited liability company, or other similar legal entity.
- (d) "Insured": The Insured named in Schedule A.
  - (i) the term "Insured" also includes
    - (A) successors to the Title of the Insured by operation of law as distinguished from purchase, including heirs, devisees, survivors, personal representatives, or next of kin,
    - (B) successors to an Insured by dissolution, merger, consolidation, distribution, or reorganization;
    - (C) successors to an Insured by its conversion to another kind of Entity,
    - (D) a grantee of an Insured under a deed delivered without payment of actual valuable consideration conveying the Title (1) if the stock, shares, memberships, or other equity interests of the grantee are wholly-owned by the named Insured, (2) if the grantee wholly owns the named Insured, (3) if the grantee is wholly-owned by an affiliated Entity of the named Insured, provided the affiliated Entity and the named Insured are both wholly-owned by the same person or Entity, or (4) if the grantee is a trustee or beneficiary of a trust created by a written instrument established by the Insured named in Schedule A for estate planning purposes.
  - (ii) with regard to (A), (B), (C), and (D) reserving, however, all rights and defenses as to any successor that the Company would have had against any predecessor Insured.
- (e) "Insured Claimant": An Insured claiming loss or damage.
- (f) "Knowledge" or "Known": Actual knowledge, not constructive knowledge or notice that may be imputed to an Insured by reason of the Public Records or any other records that impart constructive notice of matters affecting the Title.
- (g) "Land": The land described in Schedule A, and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is insured by this policy.
- (h) "Mortgage": Mortgage, deed of trust, trust deed, or other security instrument, including one evidenced by electronic means authorized by law.
- (i) "Public Records": Records established under state statutes at Date of Policy for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge. With respect to Covered Risk 5(d), "Public Records" shall also include environmental protection liens filed in the records of the clerk of the United States District Court for the district where the Land is located.
- (j) "Title": The estate or interest described in Schedule A.
- (k) "Unmarketable Title": Title affected by an alleged or apparent matter that would permit a prospective purchaser or lessee of the Title or lender on the Title to be released from the obligation to purchase, lease, or lend if there is a contractual condition requiring the delivery of marketable title.

### 2. CONTINUATION OF INSURANCE

The coverage of this policy shall continue in force as of Date of Policy in favor of an Insured, but only so long as the Insured retains an estate or interest in the Land, or holds an obligation secured by a purchase money Mortgage given by a purchaser from the Insured, or only so long as the Insured shall have liability by reason of warranties in any transfer or conveyance of the Title. This policy shall not continue in force in favor of any purchaser from the Insured of either (i) an estate or interest in the Land, or (ii) an obligation secured by a purchase money Mortgage given to the Insured.



### 3. NOTICE OF CLAIM TO BE GIVEN BY INSURED CLAIMANT

The Insured shall notify the Company promptly in writing (i) in case of any litigation as set forth in Section 5(a) of these Conditions, (ii) in case Knowledge shall come to an Insured hereunder of any claim of title or interest that is adverse to the Title, as insured, and that might cause loss or damage for which the Company may be liable by virtue of this policy, or (iii) if the Title, as insured, is rejected as Unmarketable Title. If the Company is prejudiced by the failure of the Insured Claimant to provide prompt notice, the Company's liability to the Insured Claimant under the policy shall be reduced to the extent of the prejudice.

### 4. PROOF OF LOSS

In the event the Company is unable to determine the amount of loss or damage, the Company may, at its option, require as a condition of payment that the Insured Claimant furnish a signed proof of loss. The proof of loss must describe the defect, lien, encumbrance, or other matter insured against by this policy that constitutes the basis of loss or damage and shall state, to the extent possible, the basis of calculating the amount of the loss or damage.

### 5. DEFENSE AND PROSECUTION OF ACTIONS

- (a) Upon written request by the Insured, and subject to the options contained in Section 7 of these Conditions, the Company, at its own cost and without unreasonable delay, shall provide for the defense of an Insured in litigation in which any third party asserts a claim covered by this policy adverse to the Insured. This obligation is limited to only those stated causes of action alleging matters insured against by this policy. The Company shall have the right to select counsel of its choice (subject to the right of the Insured to object for reasonable cause) to represent the Insured as to those stated causes of action. It shall not be liable for and will not pay the fees of any other counsel. The Company will not pay any fees, costs, or expenses incurred by the Insured in the defense of those causes of action that allege matters not insured against by this policy.
- (b) The Company shall have the right, in addition to the options contained in Section 7 of these Conditions, at its own cost, to institute and prosecute any action or proceeding or to do any other act that in its opinion may be necessary or desirable to establish the Title, as insured, or to prevent or reduce loss or damage to the Insured. The Company may take any appropriate action under the terms of this policy, whether or not it shall be liable to the Insured. The exercise of these rights shall not be an admission of liability or waiver of any provision of this policy. If the Company exercises its rights under this subsection, it must do so diligently.
- (c) Whenever the Company brings an action or asserts a defense as required or permitted by this policy, the Company may pursue the litigation to a final determination by a court of competent jurisdiction, and it expressly reserves the right, in its sole discretion, to appeal any adverse judgment or order.

### 6. DUTY OF INSURED CLAIMANT TO COOPERATE

- (a) In all cases where this policy permits or requires the Company to prosecute or provide for the defense of any action or proceeding and any appeals, the Insured shall secure to the Company the right to so prosecute or provide defense in the action or proceeding, including the right to use, at its option, the name of the Insured for this purpose. Whenever requested by the Company, the Insured, at the Company's expense, shall give the Company all reasonable aid (i) in securing evidence, obtaining witnesses, prosecuting or defending the action or proceeding, or effecting settlement, and (ii) in any other lawful act that in the opinion of the Company may be necessary or desirable to establish the Title or any other matter as insured. If the Company is prejudiced by the failure of the Insured to furnish the required cooperation, the Company's obligations to the Insured under the policy shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation, with regard to the matter or matters requiring such cooperation.
- (b) The Company may reasonably require the Insured Claimant to submit to examination under oath by any authorized representative of the Company and to produce for examination, inspection, and copying, at such reasonable times and places as may be designated by the authorized representative of the Company, all records, in whatever medium maintained, including books, ledgers, checks, memoranda, correspondence, reports, e-mails, disks, tapes, and videos whether bearing a date before or after Date of Policy, that reasonably pertain to the loss or damage. Further, if requested by any authorized representative of the Company, the Insured Claimant shall grant its permission, in writing, for any authorized representative of the Company to examine, inspect, and copy all of these records in the custody or control of a third party that reasonably pertain to the loss or damage. All information designated as confidential by the Insured Claimant provided to the Company pursuant to this Section shall not be disclosed to others unless, in the reasonable judgment of the Company, it is necessary in the administration of the claim. Failure of the Insured Claimant to submit for examination under oath, produce any reasonably requested information, or grant permission to secure

reasonably necessary information from third parties as required in this subsection, unless prohibited by law or governmental regulation, shall terminate any liability of the Company under this policy as to that claim.

## **7. OPTIONS TO PAY OR OTHERWISE SETTLE CLAIMS; TERMINATION OF LIABILITY**

In case of a claim under this policy, the Company shall have the following additional options:

- (a) To Pay or Tender Payment of the Amount of Insurance. To pay or tender payment of the Amount of Insurance under this policy together with any costs, attorneys' fees, and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment or tender of payment and that the Company is obligated to pay. Upon the exercise by the Company of this option, all liability and obligations of the Company to the Insured under this policy, other than to make the payment required in this subsection, shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation.
- (b) To Pay or Otherwise Settle With Parties Other Than the Insured or With the Insured Claimant.
  - (i) to pay or otherwise settle with other parties for or in the name of an Insured Claimant any claim insured against under this policy. In addition, the Company will pay any costs, attorneys' fees, and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment and that the Company is obligated to pay; or
  - (ii) to pay or otherwise settle with the Insured Claimant the loss or damage provided for under this policy, together with any costs, attorneys' fees, and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment and that the Company is obligated to pay.

Upon the exercise by the Company of either of the options provided for in subsections (b)(i) or (ii), the Company's obligations to the Insured under this policy for the claimed loss or damage, other than the payments required to be made, shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation.

## **8. DETERMINATION AND EXTENT OF LIABILITY**

This policy is a contract of indemnity against actual monetary loss or damage sustained or incurred by the Insured Claimant who has suffered loss or damage by reason of matters insured against by this policy.

- (a) The extent of liability of the Company for loss or damage under this policy shall not exceed the lesser of
  - (i) the Amount of Insurance; or
  - (ii) the difference between the value of the Title as insured and the value of the Title subject to the risk insured against by this policy.
- (b) If the Company pursues its rights under Section 5 of these Conditions and is unsuccessful in establishing the Title, as insured,
  - (i) the Amount of Insurance shall be increased by 10%, and
  - (ii) the Insured Claimant shall have the right to have the loss or damage determined either as of the date the claim was made by the Insured Claimant or as of the date it is settled and paid.
- (c) In addition to the extent of liability under (a) and (b), the Company will also pay those costs, attorneys' fees, and expenses incurred in accordance with Sections 5 and 7 of these Conditions.

## **9. LIMITATION OF LIABILITY**

- (a) If the Company establishes the Title, or removes the alleged defect, lien, or encumbrance, or cures the lack of a right of access to or from the Land, or cures the claim of Unmarketable Title, all as insured, in a reasonably diligent manner by any method, including litigation and the completion of any appeals, it shall have fully performed its obligations with respect to that matter and shall not be liable for any loss or damage caused to the Insured.
- (b) In the event of any litigation, including litigation by the Company or with the Company's consent, the Company shall have no liability for loss or damage until there has been a final determination by a court of competent jurisdiction, and disposition of all appeals, adverse to the Title, as insured.
- (c) The Company shall not be liable for loss or damage to the Insured for liability voluntarily assumed by the Insured in settling any claim or suit without the prior written consent of the Company.

## **10. REDUCTION OF INSURANCE; REDUCTION OR TERMINATION OF LIABILITY**

All payments under this policy, except payments made for costs, attorneys' fees, and expenses, shall reduce the Amount of Insurance by the amount of the payment.

## 11. LIABILITY NONCUMULATIVE

The Amount of Insurance shall be reduced by any amount the Company pays under any policy insuring a Mortgage to which exception is taken in Schedule B or to which the Insured has agreed, assumed, or taken subject, or which is executed by an Insured after Date of Policy and which is a charge or lien on the Title, and the amount so paid shall be deemed a payment to the Insured under this policy.

## 12. PAYMENT OF LOSS

When liability and the extent of loss or damage have been definitely fixed in accordance with these Conditions, the payment shall be made within 30 days.

## 13. RIGHTS OF RECOVERY UPON PAYMENT OR SETTLEMENT

- (a) Whenever the Company shall have settled and paid a claim under this policy, it shall be subrogated and entitled to the rights of the Insured Claimant in the Title and all other rights and remedies in respect to the claim that the Insured Claimant has against any person or property, to the extent of the amount of any loss, costs, attorneys' fees, and expenses paid by the Company. If requested by the Company, the Insured Claimant shall execute documents to evidence the transfer to the Company of these rights and remedies. The Insured Claimant shall permit the Company to sue, compromise, or settle in the name of the Insured Claimant and to use the name of the Insured Claimant in any transaction or litigation involving these rights and remedies. If a payment on account of a claim does not fully cover the loss of the Insured Claimant, the Company shall defer the exercise of its right to recover until after the Insured Claimant shall have recovered its loss.
- (b) The Company's right of subrogation includes the rights of the Insured to indemnities, guaranties, other policies of insurance, or bonds, notwithstanding any terms or conditions contained in those instruments that address subrogation rights.

## 14. ARBITRATION Intentionally Deleted

## 15. LIABILITY LIMITED TO THIS POLICY; POLICY ENTIRE CONTRACT

- (a) This policy together with all endorsements, if any, attached to it by the Company is the entire policy and contract between the Insured and the Company. In interpreting any provision of this policy, this policy shall be construed as a whole.
- (b) Any claim of loss or damage that arises out of the status of the Title or by any action asserting such claim shall be restricted to this policy.
- (c) Any amendment of or endorsement to this policy must be in writing and authenticated by an authorized person, or expressly incorporated by Schedule A of this policy.
- (d) Each endorsement to this policy issued at any time is made a part of this policy and is subject to all of its terms and provisions. Except as the endorsement expressly states, it does not (i) modify any of the terms and provisions of the policy, (ii) modify any prior endorsement, (iii) extend the Date of Policy, or (iv) increase the Amount of Insurance.

## 16. SEVERABILITY

In the event any provision of this policy, in whole or in part, is held invalid or unenforceable under applicable law, the policy shall be deemed not to include that provision or such part held to be invalid, but all other provisions shall remain in full force and effect.

## 17. CHOICE OF LAW; FORUM

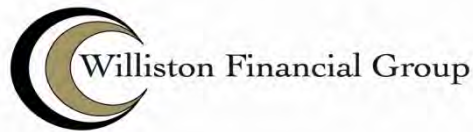
- (a) Choice of Law: The Insured acknowledges the Company has underwritten the risks covered by this policy and determined the premium charged therefor in reliance upon the law affecting interests in real property and applicable to the interpretation, rights, remedies, or enforcement of policies of title insurance of the jurisdiction where the Land is located.

Therefore, the court or an arbitrator shall apply the law of the jurisdiction where the Land is located to determine the validity of claims against the Title that are adverse to the Insured and to interpret and enforce the terms of this policy. In neither case shall the court or arbitrator apply its conflicts of law principles to determine the applicable law.

- (b) Choice of Forum: Any litigation or other proceeding brought by the Insured against the Company must be filed only in a state or federal court within the United States of America or its territories having appropriate jurisdiction.

**18. NOTICES, WHERE SENT**

Any notice of claim and any other notice or statement in writing required to be given to the Company under this policy must be given to the Company at 12909 SW 68th Pkwy., Suite 350, Portland, OR 97223. WFG National Title Insurance Company's telephone number is (800) 334-8885. Email address: [claims@wfgnationaltitle.com](mailto:claims@wfgnationaltitle.com).



## Williston Financial Group Privacy Notice

Williston Financial Group LLC, WFG National Title Insurance Company, and each of the affiliates listed below (collectively “WFG” or the “WFG Family”) believe it is important to protect your privacy and confidences. We recognize and respect the privacy expectations of our customers. We believe that making you aware of how we collect information about you, how we use that information, and with whom we share that information will form the basis for a relationship of trust between us. This Privacy Notice provides that explanation. We reserve the right to change this Privacy Notice from time to time.

WFG’s primary business is providing appraisal, title insurance, and escrow services for the sale or refinance of real property. This can be a complicated process involving multiple parties, many of whom have been selected by our customers, each filling a specialized role. In part, you have hired WFG to coordinate and smooth the passage of the information necessary for an efficient settlement or closing.

In the course of this process, WFG collects a significant amount of personal and identifying information about the parties to a transaction, including sensitive items that include but are not limited to: your contact information, including email addresses, Social Security numbers, driver’s license, and other identification numbers and information; financial, bank and insurance information; information about past and proposed mortgages and loans; information about properties you currently or previously owned; your mortgage application package; and the cookie, IP address, and other information captured automatically by computer systems.

Much of this information is gathered from searches of public land, tax, court and credit records to make certain that any liens, challenges or title defects are addressed properly. Some of the information that is collected is provided by you or the computer systems you use. We also may receive information from real estate brokers and agents, mortgage brokers and lenders, and others working to facilitate your transaction, as well as information from public, private or governmental databases including credit bureaus, ‘no-fly’ lists, and terrorist ‘watch lists’.

### **What Information is Shared?**

**WFG DOES NOT SELL any of your information to non-affiliated companies for marketing or any other purpose.**

However, some of the same information does get shared with persons inside and outside the WFG Family in order to facilitate and complete your transaction.

For example:

However, some of the same information does get shared with persons inside and outside the WFG Family in order to facilitate and complete current and future transactions.

For example:

- Information, draft documents, and closing costs will pass back and forth between WFG and your mortgage broker and lender to facilitate your transaction.
- Information, including purchase agreements and amendments, will pass back and forth between WFG and the real estate agents and brokers, the mortgage brokers and lenders, the lawyers and accountants, and others involved in facilitating the transaction.
- WFG may order property searches and examinations from title searchers, abstractors and title plants.
- WFG may use third parties to obtain tax information, lien information, payoff information, and condominium or homeowners’ association information.
- Third parties may be engaged to prepare documents in connection with your transaction.
- Surveys, appraisals, and inspections may be ordered.
- Within the WFG Family of companies, we may divide up the work to handle each closing in the most efficient manner possible and to meet specific legal and licensing requirements. Certain parts of your closing (for example a search or disbursement) may be handled by another division or company within the WFG Family.

- When it is time for signatures, your complete closing package may be sent to a notary, remote online notary, or notary service company who will arrange to meet with you to sign documents. The notary will, in turn, send signed copies back to us along with copies of your driver's license or other identity documents, usually by mail, UPS, Federal Express or another courier service.
- Your deed, mortgage and other documents required to perfect title will be recorded with the local recorder of deeds.
- In some cases, we use an outside service to coordinate the recording or electronic-recording of those instruments, and they will receive copies of your deeds, mortgages and other recordable documents to process, scan and send on to the recording office.
- Information within your title policy may be shared with WFG National Title Insurance Company title policy issuing agents to facilitate future financial transactions involving your property.
- Various government agencies get involved. The law requires us to provide certain information to the IRS, the U.S. Department of the Treasury, local and state tax authorities, and other regulatory and governmental agencies.
- **WFG title policy issuing agents only:** personal information provided by you may be shared with a third party for the purposes of facilitating training to obtain CE/CLE credits.

You have a choice in the selection of a mortgage broker, lender, real estate broker or agent and others that make up your 'transaction team.' Information flows to and from the members of the transaction team you have selected to facilitate an efficient transaction for you.

When WFG selects and engages a third party provider, we limit the scope of the information shared with that third party to the information reasonably necessary for that service provider to provide the requested services. With most, we have entered into agreements in which they expressly commit to maintain a WFG customer's information in strict confidence and use the information only for purposes of providing the requested services, clearing title, preventing fraud and addressing claims under our title insurance policies.

### **How does WFG use your Information?**

We may use your personal information in a variety of ways, including but not limited to:

- Provide the products, services and title insurance you have requested, and to close and facilitate your transaction.
- Provide and use historic transaction information to facilitate future financial transactions.
- Coordinate and manage the appraisal process.
- Handle a claim or provide other services relating to your title insurance policies.
- Create, manage, and maintain your account.
- Operate and improve WFG's applications and websites, including WFG MyHome®, WFG's secure communication and transaction portal. Your information is used for access management, payment processing, site administration, internal operations, troubleshooting, data analysis, testing, research, and for statistical purposes.
- Respond to your requests, feedback or inquiries.
- Comply with laws, regulations, and other legal requirements.
- Comply with relevant industry standards and our policies, including managing WFG's risk profile through reinsurance.
- Protect and enforce your rights and the rights of other users against unlawful activity, including identity theft and fraud.
- Protect and enforce our collective rights arising under any agreements entered into between WFG and you or any other third party.
- Protect the integrity and maintain security of our applications, websites, and products.
- Operate, evaluate, and improve our business.
- Provide you with information about products, services, and promotions from WFG or third parties that may interest you.
- **WFG title policy issuing agents only:** Provide you with a training platform to obtain CE/CLE credits

## **How Do We Store and Protect Your Personal Information?**

Although no system can guarantee the complete security of your personal information, we will use our best efforts to maintain commercially reasonable technical, organizational, and physical safeguards, consistent with applicable law, to protect your personal information and our systems and sites from malicious intrusions or hacking.

## **How Long Do We Keep Your Personal Information?**

We keep your personal information for as long as necessary to comply with the purpose for which it was collected, our business needs, and our legal and regulatory obligations. We may store some personal information indefinitely. If we dispose of your personal information, we will do so in a way that is secure and appropriate to the nature of the information subject to disposal.

## **Computer Information**

When you access a WFG website, or communicate with us by e-mail, we may automatically collect and store more information than you are expressly providing when you fill out a survey or send an email. This may include:

- Your IP Address.
- Your email address, your alias and, social media handles.
- The type of browser and operating system you use.
- The time of your visit.
- The pages of our site you visit.
- Cookies.

In order to provide you with customized service, we make use of Web browser cookies. Cookies are files that help us identify your computer and personalize your online experience. You may disable cookies on your computer, but you may not be able to download online documents or access certain websites unless cookies are enabled.

The technical information we collect is used for administrative and technical purposes and to prevent fraud and provide identity verification. For instance, we may use it to count the number of visitors to our website and determine the most popular pages. We may also use it to review types of technology you are using, determine which link brought you to our website, assess how our advertisements on other websites are working, help with maintenance, and improve our customers' experience.

We may compare information gathered on previous visits to verify that we are interacting with the same parties and not a potential imposter.

If we ask you to fill out any forms or surveys, we will use the information we receive only for the specific purposes indicated in those forms or surveys.

The information you and your transaction team send us in emails or attached to an email, or provide through any of our online tools, is used for purposes of providing title, escrow and appraisal management services and used for the purposes described above.

In addition to the above, if you use an eClosing platform to sign your real estate transaction additional information may be collected. This may include:

- Your IP address.
- Your location.
- Your email address and your alias.
- The type of browser and operating system you use.
- The time of your visit.
- Your biometrics.
- Your image.
- Video recording of your transaction signing.
- Transaction metadata.
- Cookies.

## **Links to Third Party Sites**

Our Applications and Websites may contain links to third-party websites and services. Please note that these links are provided for your convenience and information, and the websites and services may operate independently from us and have their own privacy policies or notices, which we strongly suggest you review. This Privacy Notice applies to WFG's applications and websites only.

## **Do Not Track**

Because there is not an industry-standard process or defined criteria to permit a user to opt-out of tracking their online activities (“Do Not Track”), our websites do not currently change the way they operate based upon detection of a Do Not Track or similar signal. Likewise, we cannot assure that third parties are not able to collect information about your online activities on WFG websites or applications.

## **Social Media Integration**

Our applications, websites, and products contain links to and from social media platforms. You may choose to connect to us through a social media platform, such as Facebook, Twitter, Google, etc. When you do, we may collect from the social media platform additional information from or about you, such as your screen names, profile picture, contact information, contact list, and the profile pictures of your contacts. The social media platforms may also collect information from you.

When you click on a social plug-in, such as Facebook’s “Like” button, Twitter’s “tweet” button, or the Google+, that particular social network’s plug-in will be activated and your browser will directly connect to that provider’s servers. Your action in clicking on the social plug-in causes information to be passed to the social media platform.

We do not have control over the collection, use and sharing practices of social media platforms. We therefore encourage you to review their usage and disclosure policies and practices, including their data security practices, before using social media platforms.

## **How Can You “Opt-Out?”**

We do not sell your information; therefore there is no need to opt-out of such reselling. Under various laws, you can opt-out of the sharing of your information for more narrow purposes. For additional detail, consult the Links under the “Legal” Notices attached below.

## **The “Legal” Notices**

To comply with various federal and state laws, we are required to provide more complete legal notices and disclosures – see links below. The state-specific statutes referenced therein may also give residents of those states additional rights and remedies.

**Privacy Notice for California Residents** - <https://national.wfgnationaltitle.com/privacy-notice-california>

**Privacy Notice for Oregon Residents** - <https://national.wfgnationaltitle.com/privacy-notice-oregon>

## **How to Contact Us**

If you have any questions about WFG’s privacy notice or how we protect your information, please contact WFG:

- By email: [Consumerprivacy@willistonfinancial.com](mailto:Consumerprivacy@willistonfinancial.com)
- By telephone: 833-451-5718
- By fax: 503-974-9596
- By mail: 12909 SW 68th Pkwy, Suite 350, Portland, OR 97223

## **WFG FAMILY**

WILLISTON FINANCIAL GROUP LLC  
WFG NATIONAL TITLE INSURANCE COMPANY  
WFG LENDER SERVICES, LLC

WFGLS TITLE AGENCY OF UTAH, LLC  
WFG NATIONAL TITLE COMPANY OF WASHINGTON, LLC  
WFG NATIONAL TITLE COMPANY OF CALIFORNIA

WFG NATIONAL TITLE COMPANY OF TEXAS, LLC D/B/A WFG NATIONAL TITLE COMPANY  
UNIVERSAL TITLE PARTNERS, LLC  
VALUTRUST SOLUTIONS, LLC

MYHOME, A WILLISTON FINANCIAL GROUP COMPANY, LLC (formerly known as WILLISTON ENTERPRISE SOLUTIONS & TECHNOLOGY, LLC)

WFG NATIONAL TITLE COMPANY OF CLARK COUNTY, WA, LLC, D/B/A WFG NATIONAL TITLE

Rev 12.20.2022



<b>FACTS</b>	<b>WHAT DOES WILLISTON FINANCIAL GROUP DO WITH YOUR PERSONAL INFORMATION?</b>
<b>Why?</b>	Financial companies choose how they share your personal information. Federal law gives consumers the right to limit some but not all sharing. Federal law also requires us to tell you how we collect, share, and protect your personal information. Please read this notice carefully to understand what we do.
<b>What?</b>	The types of personal information we collect and share depend on the product or service you have with us. This information can include: <ul style="list-style-type: none"> <li>• Social Security number and other government identification information</li> <li>• Your name, address, phone, and email</li> <li>• Information about the property, any liens and restrictions</li> <li>• Financial Information including credit history and other debt</li> <li>• Financial account information, including wire transfer instructions.</li> </ul>
<b>How?</b>	All financial companies need to share customers' personal information to run their everyday business. In the section below, we list the reasons financial companies can share their customers' personal information; the reasons Williston Financial Group chooses to share; and whether you can limit this sharing.

Reasons we can share your personal information	Does Williston Financial Group share?	Can you limit this sharing?
For our everyday business purposes—such as to process your transactions, maintain your account(s), respond to court orders and legal investigations, or report to credit bureaus	Yes	No
For our marketing purposes—to offer our products and services to you	Yes	No
For joint marketing with other financial companies	No	We don't share
For our affiliates' everyday business purposes—information about your transactions and experiences	Yes	No
For our affiliates' everyday business purposes—information about your creditworthiness	No	We don't share
For our affiliates to market to you	No	We don't share
For nonaffiliates to market to you	No	We don't share

To limit our sharing	<ul style="list-style-type: none"> <li>• Call 833-451-5718—our menu will prompt you through your choice(s)</li> <li>• Visit us online: <a href="http://bit.ly/WFGsConsumerPrivacyInformationRequestPage">http://bit.ly/WFGsConsumerPrivacyInformationRequestPage</a> or e-mailing us at <a href="mailto:consumerprivacy@willistonfinancial.com">consumerprivacy@willistonfinancial.com</a></li> <li>• Mail the form below</li> </ul> <p>Please note:</p> <p>If you are a new customer, we can begin sharing your information from the date we sent this notice. When you are no longer our customer, we continue to share your information as described in this notice. However, you can contact us at any time to limit our sharing.</p>
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Questions? Call 833-451-5718 or Email [consumerprivacy@willistonfinancial.com](mailto:consumerprivacy@willistonfinancial.com)

**Mail-In Form**

If you have a joint policy, your choices will apply to everyone on your account.	Mark any/all you want to limit:	
	<input type="checkbox"/> Do not share information about my creditworthiness with your affiliates for their everyday business purposes.	
	<input type="checkbox"/> Do not allow your affiliates to use my personal information to market to me.	
	<input type="checkbox"/> Do not share my personal information with nonaffiliates to market their products and services to me.	
	<b>Name</b>	
<b>Address</b>		
<b>City, State, Zip</b>		
<b>File Number</b>		

<b>Who we are</b>	
Who is providing this notice	Williston Financial Group, LLC and its affiliates and subsidiaries as listed below:
<b>What we do</b>	
How does Williston Financial Group protect my personal information?	To protect your personal information from unauthorized access and use, we use security measures that comply with federal law. These measures include computer safeguards and secured files and buildings. We limit access to your information to employees that need to use the information to process or protect transaction. We take industry standard (IPSEC) measures to protect against malicious intrusions or hacking
How does Williston Financial Group collect my personal information?	<p>We collect your personal information, for example, when you</p> <ul style="list-style-type: none"> <li>• Apply for insurance</li> <li>• Engage us to provide appraisal, title and escrow services</li> <li>• Give us your contact information</li> <li>• Provide your mortgage information</li> <li>• Show your driver's license</li> </ul> <p>We also collect your personal information from others, such as real estate agents and brokers, mortgage brokers, lenders, credit bureaus, affiliates, and others</p>
Why can't I limit all sharing?	<p>Federal law gives you the right to limit only</p> <ul style="list-style-type: none"> <li>• sharing for affiliates' everyday business purposes—information about your creditworthiness</li> <li>• affiliates from using your information to market to you</li> <li>• sharing for nonaffiliates to market to you</li> </ul> <p>State laws and individual companies may give you additional rights to limit sharing. See below for more on your rights under state law.</p>
What happens when I limit sharing for an account I hold jointly with someone else?	Your choices will apply to everyone on your policy.
<b>Definitions</b>	
Affiliates	<p>Companies related by common ownership or control. They can be financial and nonfinancial companies.</p> <p>Our affiliates include companies with a common corporate identity, including those listed below.</p>
Nonaffiliates	<p>Companies not related by common ownership or control. They can be financial and nonfinancial companies.</p> <p>Nonaffiliates we share with can include real estate agents and brokers, mortgage brokers, lenders, appraisers, abstractors and title searchers and others as appropriate to facilitate your transaction.</p>
Joint marketing	<p>A formal agreement between nonaffiliated financial companies that together market financial products or services to you.</p> <p>Williston Financial Group does not jointly market.</p>
<b>Other important information</b>	
<p>As a resident or citizen of certain states, we may have to provide additional state specific privacy notices and you may have rights other than as set forth above. The links below will provide state specific information:</p> <p><b>Privacy Notice for California Residents</b> - <a href="https://national.wfgnationaltitle.com/privacy-notice-california">https://national.wfgnationaltitle.com/privacy-notice-california</a></p> <p><b>Privacy Notice for Oregon Residents</b> - <a href="https://national.wfgnationaltitle.com/privacy-notice-oregon">https://national.wfgnationaltitle.com/privacy-notice-oregon</a></p>	



May 8, 2024

Kendra Kozak

Re: Tonkin Lamborghini  
25239 SW Parkway Ave.  
Wilsonville, OR 97070

Dear Kendra,

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.

Our team has reviewed your site development plan, and the trash enclosure design plan sent 5/6/2024. We have concluded there is adequate room on property for our collection trucks to safely access, service, and maneuver. The dedicated turn-around space north and east of the enclosure will provide adequate room for our trucks to turn around to exit the site. Republic Services will require unobstructed site access as our service-schedules require, to provide consistent trash and recycle service. The trash enclosure dimensions of 23'-6" x 18'-9" will house two 3-yard trash, two 4-yard commingle-recycle, and four 90-gallon recycle receptacles. The gates design including wind-pins to secure the gates in the open and closed position, and the swing radius is sufficient.

*Service levels are available as follows:*

Trash –	6 days per week
Recycle –	5 days per week
Food Waste –	5 days per week
Glass –	1 day per week

Thanks Kendra, for your help and concerns for our services prior to this project being developed.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kelly Herrod", written over a blue horizontal line.

Kelly Herrod  
Operations Supervisor  
Republic Services Inc.





**DEVELOPMENT CODE SUMMARY:**

**TAX LOT:**  
 35-1-32DA TAX LOT 1000, SW PARKWAY AVE, WILSONVILLE, OR

**JURISDICTION:** CLACKAMAS COUNTY, CITY OF WILSONVILLE DEVELOPMENT CODE

**ZONING:** PLANNED DEVELOPMENT COMMERCIAL (PDC)

**CHAPTER 4 - PLANNING AND LAND DEVELOPMENT**

**SECTION 4.116 STANDARDS APPLYING TO COMMERCIAL DEVELOPMENTS IN ANY ZONE**

01 ALL BUSINESSES, SERVICE OR PROCESSING, SHALL BE CONDUCTED WHOLLY WITHIN A COMPLETELY ENCLOSED BUILDING EXCEPT FOR:

G. EXTERIOR SALES AREAS, COMPLYING WITH THE FOLLOWING:  
 1. THE SALES AREA SHALL BE ACCESSORY TO AND SHALL NOT EXCEED 5% OF THE FLOOR AREA OF THE PRIMARY RETAIL OPERATION.  
 2. THE SALES AREA SHALL BE COMPLETELY COVERED BY A PERMANENT STRUCTURE.  
 3. SETBACKS: NONE REQUIRED, EXCEPT WHERE ABUTTING MORE RESTRICTIVE USE BUILDING HEIGHT: 35' MAXIMUM

**SECTION 4.133 PDC - PLANNED DEVELOPMENT COMMERCIAL ZONE**

01 PERMITTED USES:  
 1. RETAIL BUSINESS, GOODS AND SALES  
 2. ANY USE ALLOWED IN PDI ZONE (SERVICE) - WHEN CONDUCTED ENTIRELY WITHIN ENCLOSED BUILDING.

02 PROHIBITED USES:  
 1. NO USED CAR SALES SHALL BE PERMITTED, EXCEPT IN CONJUNCTION WITH NEW CAR DEALERSHIPS WITHIN ENCLOSED BUILDINGS.

**SECTION 4.139 SIGNIFICANT RESOURCE OVERLAY ZONE (SROZ) ORDINANCE**  
 THE SR IMPACT AREA IS ALWAYS 25 FEET WIDE FROM THE EDGE OF THE SR.

**SECTION 4.139.03 ADMINISTRATION**

02 IMPACT AREA, THE IMPACT AREA IS THE AREA ADJACENT TO THE OUTER BOUNDARY OF A SR WITHIN WHICH DEVELOPMENT OR OTHER ALTERATION ACTIVITIES MAY BE PERMITTED THROUGH THE REVIEW OF AN SRIR (SIGNIFICANT RESOURCE IMPACT REPORT)

04 PROHIBITED ACTIVITIES, NEW STRUCTURES, DEVELOPMENT AND CONSTRUCTION ACTIVITIES SHALL NOT BE PERMITTED WITHIN THE SROZ IF THEY WILL NEGATIVELY IMPACT SIGNIFICANT NATURAL RESOURCES, UNAUTHORIZED LAND CLEARING OR GRADING OF THE SITE TO ALTER SITE CONDITIONS IS NOT ALLOWED.

**SECTION 4.139.05 SIGNIFICANT RESOURCE OVERLAY ZONE MAP VERIFICATION**

01 IN ORDER TO CONFIRM THE LOCATION OF THE SROZ, MAP VERIFICATION SHALL BE REQUIRED OR ALLOWED AS FOLLOWS:  
 A. DEVELOPMENT THAT IS PROPOSED TO BE EITHER IN THE SROZ OR LESS THAN 100 FEET OUTSIDE OF THE BOUNDARY OF THE SROZ, AS SHOWN ON THE SROZ MAP.

**SECTION 4.139.06 SRIR AND REVIEW CRITERIA**  
 AN SRIR IS ONLY REQUIRED FOR NON-EXEMPT DEVELOPMENT THAT IS LOCATED WITHIN THE SROZ AND/OR ITS ASSOCIATED 25 FOOT IMPACT AREA.

**SECTION 4.139.09 ACTIVITIES REQUIRING A CLASS II ADMIN REVIEW PROCESS**

01 THE REVIEW OF ANY ACTION REQUIRING AN SRIR

**SECTION 4.139.11 SPECIAL PROVISIONS**

01 REDUCED FRONT, REAR AND SIDE YARD SETBACK. APPLICATIONS ON PROPERTIES CONTAINING THE SROZ MAY REDUCE THE FRONT, REAR AND SIDE YARD SETBACK FOR DEVELOPMENTS OR ADDITIONS TO PROTECT THE SR, AS APPROVED BY THE DEVELOPMENT BOARD.

**SECTION 4.140 PLANNED DEVELOPMENT REGULATIONS**

05 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 (PRE-APP, STAGE 1, STAGE 2 PROCESSES)  
 3. OBTAIN PLANNING DIRECTOR, DEVELOPMENT REVIEW BOARD, OR, ON APPEAL, CITY COUNCIL APPROVAL

**SECTION 4.154 ON-SITE PEDESTRIAN ACCESS AND CIRCULATION**

01 ON-SITE PEDESTRIAN ACCESS AND CIRCULATION  
 B1. CONTINUOUS PATHWAY SYSTEM, A PED PATHWAY SYSTEM SHALL EXTEND THROUGHOUT THE DEVELOPMENT SITE AND CONNECT TO ADJACENT SIDEWALKS. (REQUEST VARIANCE?)  
 B4. CROSSWALKS WHERE PATHWAY CROSSES A PARKING AREA OR DRIVEWAY, IT SHALL BE CLEARLY MARKED WITH CONTRASTING PAINT OR PAVING MATERIALS.  
 B5. PATHWAY WIDTH AND SURFACE. PRIMARY PATHWAY SHALL BE CONSTRUCTED OF CONCRETE, ASPHALT, BRICK/MASONRY PAVERS, NOT LESS THAN 5' WIDE.  
 B6. CROSSWALKS SHALL BE 5 FEET WIDE.  
 C. MAX ALLOWED SIGN AREA DETERMINED BASED ON GFA.  
 26,000 SF OR MORE: 64 SF MAX SIGN AREA

**SECTION 4.155 GENERAL REGULATIONS - PARKING, LOADING & BICYCLE PARKING**

PARKING SPACE = 9' X 18'  
 COMPACT SPACE = 7' 6" X 15'  
 BIKE SPACE = 2' X 6' WITH 5' AISLE (LOCATE WITHIN 30' BUILDING ENTRANCE)  
 LOADING SPACE = 12' X 35' WITH 14' CLEAR HT

02 GENERAL PROVISIONS  
 N. UP TO 40% OF THE OFF-STREET SPACES MAY BE COMPACT SPACES.  
 O. WHERE OFF-STREET PARKING SPACES OVERHANG BEYOND CURBS, LANDSCAPE AREA SHALL BE INCREASED TO MINIMUM 7'-0" IN DEPTH.

**MINIMUM AND MAXIMUM OFF-STREET PARKING REQUIREMENTS**  
 PARKING AREAS OVER 650 SF: LANDSCAPE REQUIREMENTS:

1. LANDSCAPING OF AT LEAST 10% OF THE PARKING AREA. SHALL BE CONSIDERED TO BE PART OF THE 15% TOTAL LANDSCAPING REQUIRED FOR DEVELOPMENT.  
 LANDSCAPE TREE PLANTING AREAS SHALL BE MINIMUM 8'-0" WIDTH AND LENGTH SPACED EVERY 8 PARKING SPACES.  
 A. TREES SHALL BE PLANTED IN A RATIO OF 1 TREE PER 8 PARKING SPACES.  
 ALL PARKING LOTS VIEWED FROM PUBLIC R.O.W. SHALL HAVE MINIMUM 12'-0" LANDSCAPED BUFFER EXTENDING FROM EDGE OF PROPERTY LINE AT R.O.W. TO EDGE OF THE PARKING AREA. BUFFER LANDSCAPING TO MEET LOW SCREEN STANDARD.  
 C. OFF-STREET PARKING, PROVIDE 1 ADA SPACE FOR EVERY 50 STANDARD SPACES.

**TABLE 5 PARKING STANDARDS**

SERVICE/REPAIR SHOPS	PARKING MIN	PARKING MAX	BIKE PARKING MIN
RETAIL - AUTOMOTIVE	4.1 PER 1,000 SF	6.2 PER 1,000 SF	1 PER 4,000 SF
RETAIL - AUTOMOTIVE	1.67 PER 1,000 SF	6.2 PER 1,000 SF	1 PER 8,000 SF (MIN 2)

05 MINIMUM OFF-STREET LOADING REQUIREMENTS

1. COMMERCIAL, INDUSTRIAL, AND PUBLIC UTILITY USES WHICH HAVE GFA OF 5,000 SF OR MORE SHALL PROVIDE TRUCK LOADING PER FOLLOWING:  
 30,000 -100,000 SF = 2 LOADING SPACES  
 2. MAX ALLOWED SIGN AREA DETERMINED BASED ON GFA.  
 26,000 SF OR MORE: 64 SF MAX SIGN AREA

**SECTION 4.156.08 SIGN REGULATIONS IN PDC, TC, PDI, AND PF ZONES**

01 FREESTANDING AND GROUND MOUNTED SIGNS  
 A. ONE FREESTANDING OR GROUND MOUNTED SIGN IS ALLOWED FOR FIRST 200 FEET OF SITE FRONTAGE.  
 B. ALLOWED HEIGHT ABOVE GROUND OF FREESTANDING OR GROUND MOUNTED SIGN IS 20 FEET.  
 C. MAX ALLOWED SIGN AREA DETERMINED BASED ON GFA.  
 26,000 SF OR MORE: 64 SF MAX SIGN AREA

2. SIGNS ON PROPERTIES OR WITHIN DEVELOPMENTS WITH A SINGLE TENANT OR BUSINESS THE SIGN AREA ALLOWED IS 64 SF.  
 02 SIGNS ON BUILDINGS  
 LINEAR LENGTH OF FACADE: GREATER THAN 72 = 36 SF SIGN AREA ALLOWED PLUS 12 SF FOR EACH 24 LINEAR FEET OR PORTION THEREOF GREATER THAN 72 UP TO A MAXIMUM OF 200 SF.  
 03 ADDITIONAL SIGNS  
 B. PLANNED DEVELOPMENT SIGNS: UP TO 32 SF OF THE ALLOWED SIGN AREA FOR FREESTANDING SIGNS IN A PD MAY BE USED FOR A SEPARATE ON-SITE MONUMENT SIGN OR OFF-SITE MONUMENT SIGN ON AN ADJACENT PARCEL.

**SECTION 4.176 LANDSCAPING, SCREENING AND BUFFERING**

03 LANDSCAPE AREA, NOT LESS THAN 15% OF THE TOTAL LOT AREA, SHALL BE LANDSCAPED. 10% PARKING AREA LANDSCAPING IS INCLUDED. 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.

**SECTION 4.179 MIXED SOLID WASTE AND RECYCLABLES STORAGE**

01 REQUIRED FOR ALL SITE PLANS.  
 06 SPECIFIC REQUIREMENTS  
 B. NON-RESIDENTIAL BUILDINGS SHALL PROVIDE MINIMUM STORAGE AREA OF 10 SF PLUS:  
 2. RETAIL: 10 SF PER 1,000 SF GFA  
 OTHER: 4 SF PER 1,000 SF GFA

**SECTION 503 FIRE PROTECTION WATER SUPPLIES**

**SECTION 503.1 FIRE HYDRANT SYSTEMS - WHERE REQUIRED**  
 WHERE A PORTION OF THE FACILITY OR BUILDING HEREAFTER CONSTRUCTED OR MOVED INTO OR WITHIN THE JURISDICTION IS MORE THAN 400 FEET FROM A HYDRANT ON A FIRE APPARATUS ACCESS ROAD, AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE FACILITY OR BUILDING, ON-SITE FIRE HYDRANTS AND MAINS SHALL BE PROVIDED WHERE REQUIRED BY THE FIRE CODE OFFICIAL.

EXCEPTIONS:  
 1. FOR BUILDINGS EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 THE DISTANCE REQUIREMENT SHALL BE 600 FEET.  
 2. ALL PORTIONS OF THE BUILDING OCCUR WITHIN THE 600-FT MAXIMUM DISTANCE REQUIREMENT, THEREFORE, NO ON-SITE FIRE HYDRANTS ARE REQUIRED.

**SECTION 503.2.1 DIMENSIONS**  
 FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET, EXCLUSIVE OF SHOULDERS, EXCEPT FOR APPROVED SECURITY GATES IN ACCORDANCE WITH SECTION 503.6, AND AN UNOBSTRUCTED VERTICAL CLEARANCE OF NOT LESS THAN 13 FEET 6 INCHES.

**SECTION 503.2.2 AUTHORITY**  
 THE FIRE CODE OFFICIAL SHALL HAVE THE AUTHORITY TO MODIFY THE DIMENSIONS SPECIFIED IN SECTION 503.2.1.

**SECTION 503.2.3 SURFACE**  
 FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND SHALL BE SURFACED SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.

**SECTION 503.2.4 TURNING RADIUS**  
 THE REQUIRED TURNING RADIUS OF A FIRE APPARATUS ACCESS ROAD SHALL BE DETERMINED BY THE FIRE CODE OFFICIAL.

**SECTION 503.2.5 DEAD ENDS**  
 DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH AN APPROVED AREA FIRE APPARATUS.

**SECTION 503.2.7 GRADE**  
 THE GRADE OF THE FIRE APPARATUS ACCESS ROAD SHALL BE WITHIN THE LIMITS ESTABLISHED BY THE FIRE CODE OFFICIAL BASED ON THE FIRE DEPARTMENT'S APPARATUS.

**SECTION 503.2.8 ANGLES OF APPROACH AND DEPARTURE**  
 THE ANGLES OF APPROACH AND DEPARTURE FOR FIRE APPARATUS ACCESS ROADS SHALL BE WITHIN THE LIMITS ESTABLISHED BY THE FIRE CODE OFFICIAL BASED ON THE FIRE DEPARTMENT'S APPARATUS.

**SECTION 503.3 MARKING**  
 WHERE REQUIRED BY THE FIRE CODE OFFICIAL, APPROVED SIGNS OR OTHER APPROVED NOTICES OR MARKINGS THAT INCLUDE THE WORDS "NO PARKING - FIRE LANE" SHALL BE PROVIDED FOR FIRE APPARATUS ACCESS ROADS TO IDENTIFY SUCH ROADS OR PROHIBIT THE OBSTRUCTION THEREOF. THE MEANS BY WHICH FIRE LANES ARE DESIGNATED SHALL BE MAINTAINED IN A CLEAR AND LEGIBLE CONDITION AT ALL TIMES AND BE REPLACED OR REPAIRED WHEN NECESSARY TO PROVIDE ADEQUATE VISIBILITY.

**SECTION 504 ACCESS TO BUILDING OPENINGS AND ROOFS**

**SECTION 504.1 REQUIRED ACCESS**  
 EXTERIOR DOORS AND OPENINGS REQUIRED BY THIS CODE OR THE IBC SHALL BE MAINTAINED READILY ACCESSIBLE FOR EMERGENCY ACCESS BY THE FIRE DEPARTMENT. AN APPROVED ACCESS WALKWAY LEADING FROM FIRE APPARATUS ACCESS ROADS TO EXTERIOR OPENINGS SHALL BE PROVIDED WHERE REQUIRED BY THE FIRE CODE OFFICIAL.

**SECTION 505 PREMISES IDENTIFICATION**

**SECTION 505.1 ADDRESS IDENTIFICATION**  
 NEW AND EXISTING BUILDINGS SHALL BE PROVIDED WITH APPROVED ADDRESS IDENTIFICATION. THE ADDRESS IDENTIFICATION SHALL BE LEGIBLE AND PLACED IN A POSITION THAT IS VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. ADDRESS IDENTIFICATION CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND. ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. NUMBERS SHALL NOT BE SPILLED OUT. EACH CHARACTER SHALL BE NOT LESS THAN 1/2 INCH HIGH WITH A MINIMUM STROKE WIDTH OF 1/2 INCH. WHERE REQUIRED BY THE FIRE CODE OFFICIAL, ADDRESS IDENTIFICATION SHALL BE PROVIDED IN ADDITIONAL APPROVED LOCATIONS TO FACILITATE EMERGENCY RESPONSE, WHERE ACCESS IS BY MEANS OF A PRIVATE ROAD AND THE BUILDING CANNOT BE VIEWED FROM THE PUBLIC WAY, A MONUMENT, POLE OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. ADDRESS IDENTIFICATION SHALL BE MAINTAINED.

**SECTION 506 KEY BOXES**

**SECTION 506.1 WHERE REQUIRED**  
 WHERE ACCESS TO OR WITHIN A STRUCTURE OR AN AREA IS RESTRICTED BECAUSE OF SECURED OPENINGS OR WHERE IMMEDIATE ACCESS IS NECESSARY FOR LIFE-SAVING OR FIRE-FIGHTING PURPOSES, THE FIRE CODE OFFICIAL IS AUTHORIZED TO REQUIRE A KEY BOX TO BE INSTALLED IN AN APPROVED LOCATION. THE KEY BOX SHALL BE OF AN APPROVED TYPE LISTED IN ACCORDANCE WITH UL 1037, AND SHALL CONTAIN MAIN KEYS TO GAIN NECESSARY ACCESS AS REQUIRED BY THE FIRE CODE OFFICIAL.

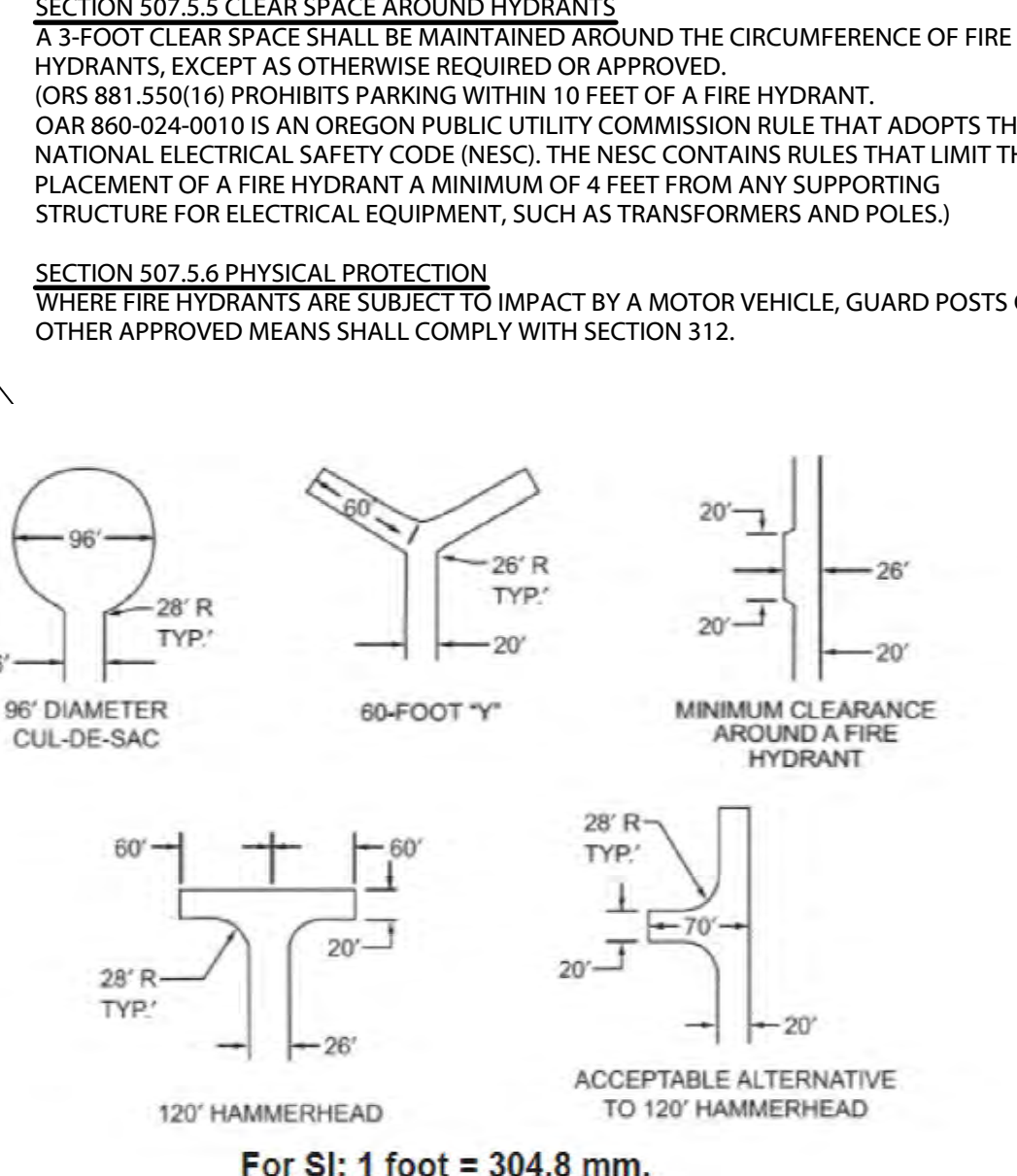
**SHEET NOTES:**  
 1. NO PARKING FIRE LANE MARKING ALONG FULL LENGTH OF THE FIRE LANE REQUIRED PER FIRE MARSHAL  
 2. HYDRANT FLOW TEST DEFERRED UNTIL NEW HYDRANT IS INSTALLED.

**SECTION 507 FIRE PROTECTION WATER SUPPLIES**

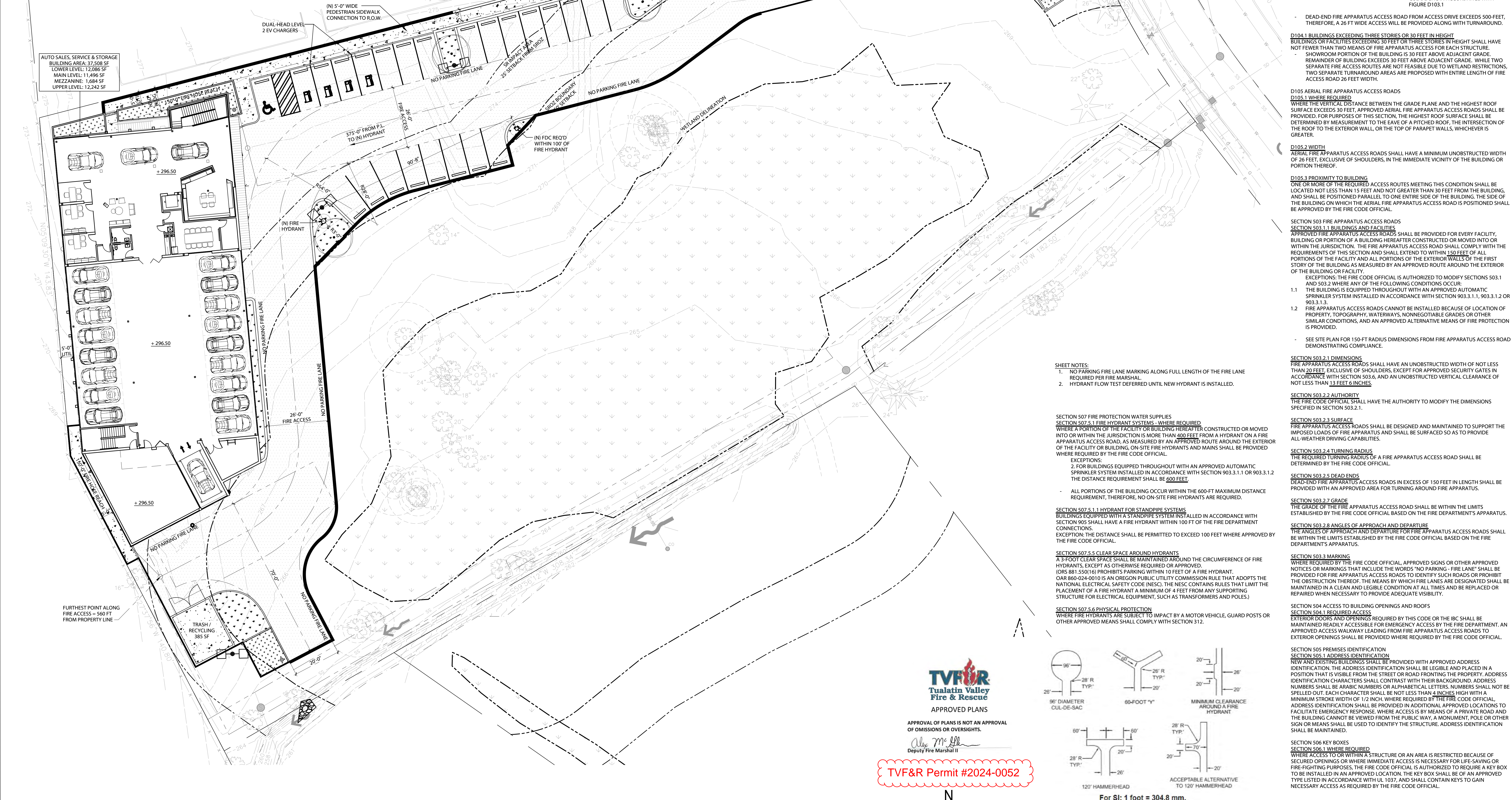
**SECTION 507.5.1 HYDRANT FOR STANDPIPE SYSTEMS**  
 BUILDINGS EQUIPPED WITH A STANDPIPE SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 905 SHALL HAVE A FIRE HYDRANT WITHIN 100 FT OF THE FIRE DEPARTMENT CONNECTIONS.  
 EXCEPTION: THE DISTANCE SHALL BE PERMITTED TO EXCEED 100 FEET WHERE APPROVED BY THE FIRE CODE OFFICIAL.

**SECTION 507.5.5 CLEAR SPACE AROUND HYDRANTS**  
 A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS, EXCEPT AS OTHERWISE REQUIRED OR APPROVED.  
 (ORS 881.550(16) PROHIBITS PARKING WITHIN 10 FEET OF A FIRE HYDRANT.  
 OAR 860-024-0010 IS AN OREGON PUBLIC UTILITY COMMISSION RULE THAT ADOPTS THE NATIONAL ELECTRICAL SAFETY CODE (NESC). THE NESC CONTAINS RULES THAT LIMIT THE PLACEMENT OF A FIRE HYDRANT A MINIMUM OF 4 FEET FROM ANY SUPPORTING STRUCTURE FOR ELECTRICAL EQUIPMENT, SUCH AS TRANSFORMERS AND POLES.)

**SECTION 507.5.6 PHYSICAL PROTECTION**  
 WHERE FIRE HYDRANTS ARE SUBJECT TO IMPACT BY A MOTOR VEHICLE, GUARD POSTS OR OTHER APPROVED MEANS SHALL COMPLY WITH SECTION 312.



**FIGURE D103.1 DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND**



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 Deputy Fire Marshal II

**TVF&R Permit #2024-0052**

PRELIMINARY NOT FOR CONSTRUCTION

AXIS DESIGN GROUP  
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**REVISIONS**

No.	Description	Date

**DRAWN BY:** KJK  
**CHECKED BY:** TRB  
**JOB NO:** 22-033  
**DATE:** 10/04/2023  
**ISSUED FOR:** PRELIMINARY  
**SHEET TITLE:**  
**SITE PLAN @ UPPER LEVEL**

**TONKIN LAMBORGHINI**  
 3S-1-32DA TAX LOT 1000, SW PARKWAY AVE  
 WILSONVILLE, OR 97070

**REVISIONS**

No.	Description	Date

**DRAWN BY:** KJK  
**CHECKED BY:** TRB  
**JOB NO:** 22-033  
**DATE:** 10/04/2023  
**ISSUED FOR:** PRELIMINARY  
**SHEET TITLE:**  
**SITE PLAN @ UPPER LEVEL**

**REVISIONS**

No.	Description	Date

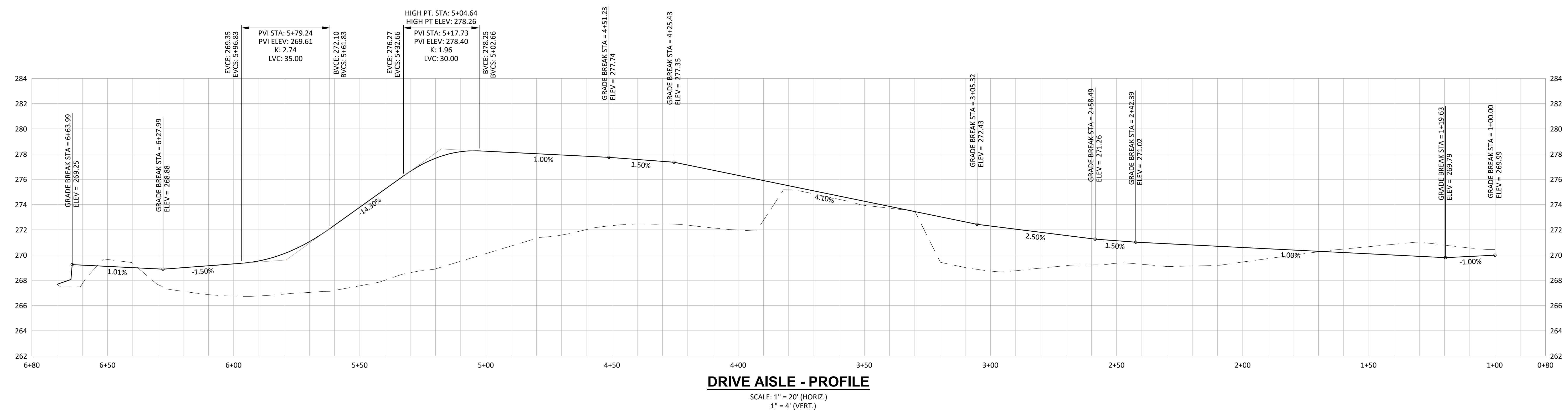
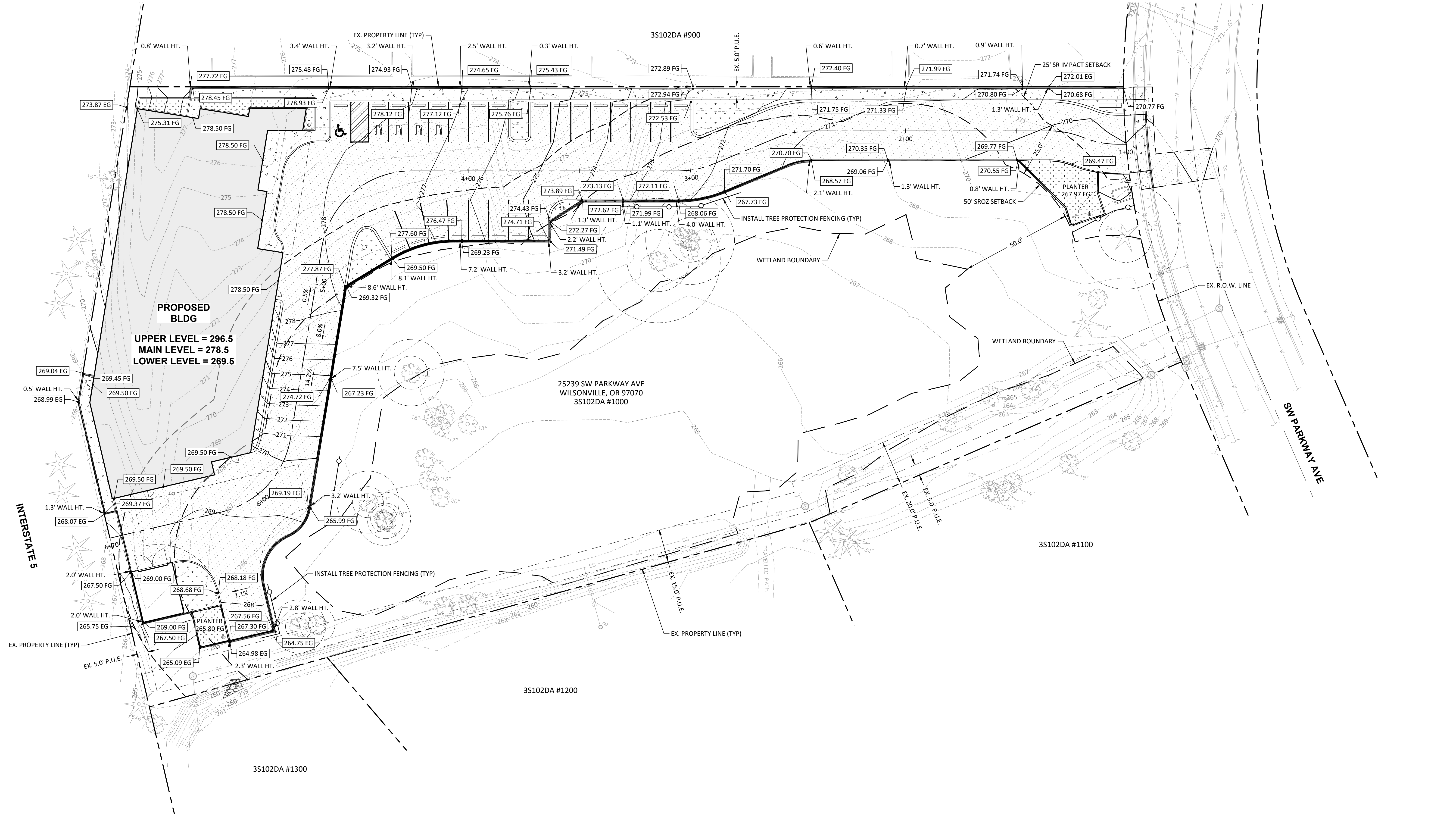
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**CHECKED BY:** TRB  
**JOB NO:** 22-033  
**DATE:** 10/04/2023  
**ISSUED FOR:** PRELIMINARY  
**SHEET TITLE:**  
**SITE PLAN @ UPPER LEVEL**

**FS-3**

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3S-1-32DA TAX LOT 1000, SW PARKWAY AVE  
WILSONVILLE, OR 97070

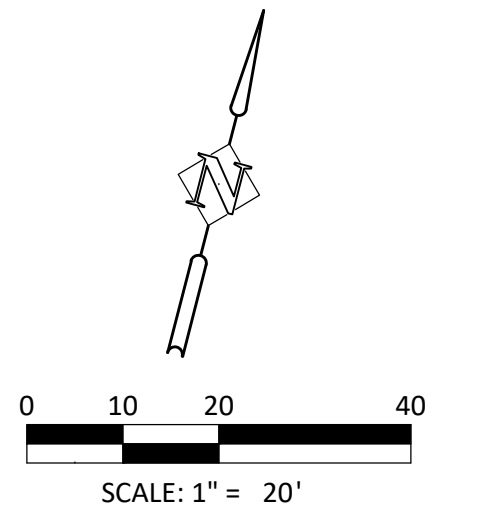


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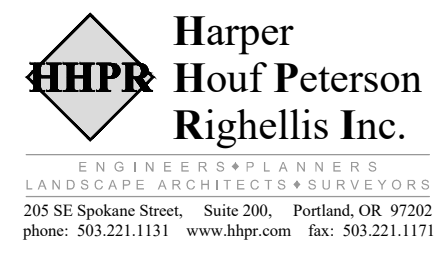
No.	Description	Date

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CHECKED BY: HHPR  
JOB NO: 22-033  
DATE: 10/04/2024  
ISSUED FOR: PRELIMINARY  
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PRELIMINARY GRADING PLAN  
SHEET NO.



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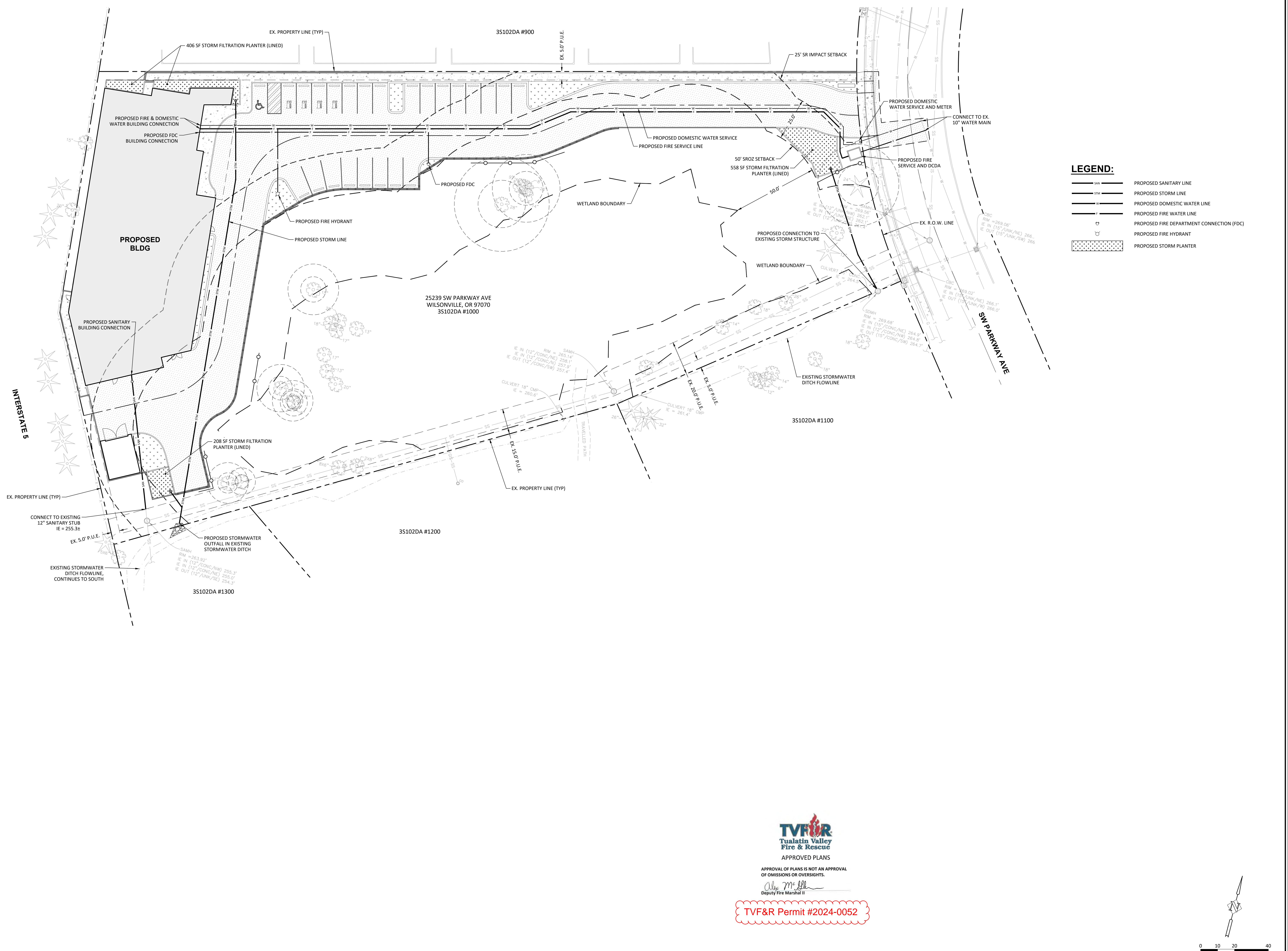
**TONKIN LAMBORGHINI**  
3S-1-32DA TAX LOT 1000, SW PARKWAY AVE  
WILSONVILLE, OR 97070

REVISIONS

No.	Description	Date

DRAWN BY: HHPR  
CHECKED BY: HHPR  
JOB NO: 22-033  
DATE: 10/04/2024  
ISSUED FOR: PRELIMINARY  
SHEET TITLE  
PRELIMINARY UTILITY PLAN  
SHEET NO.

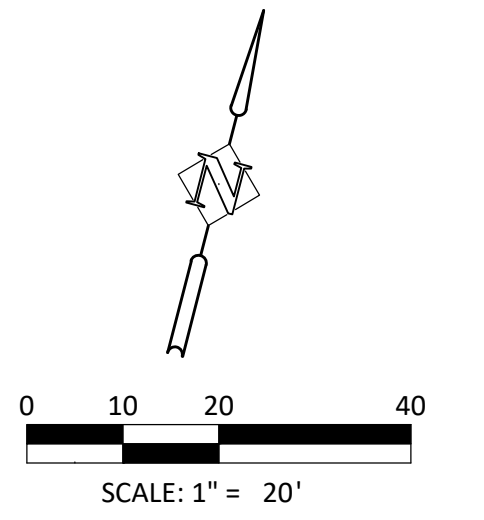
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Deputy Fire Marshal II

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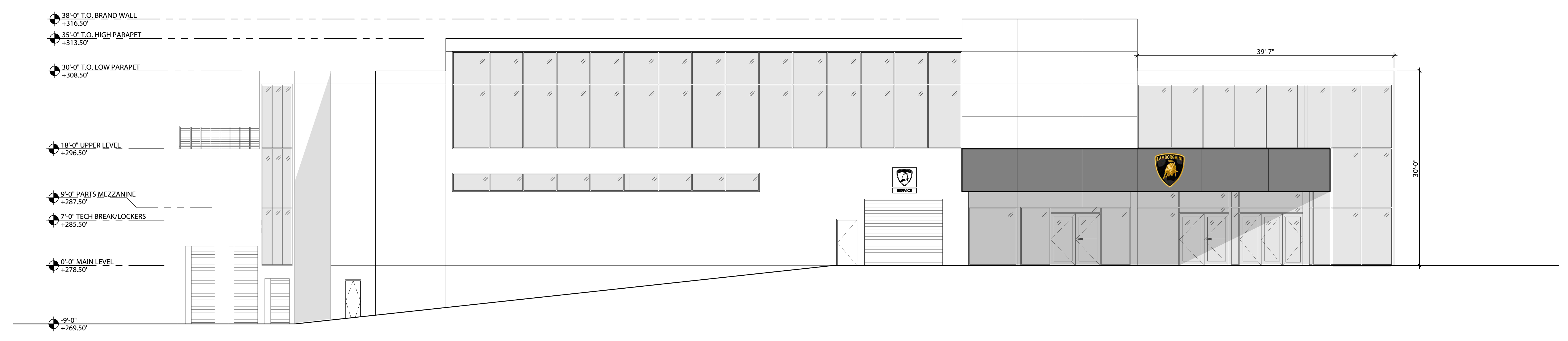
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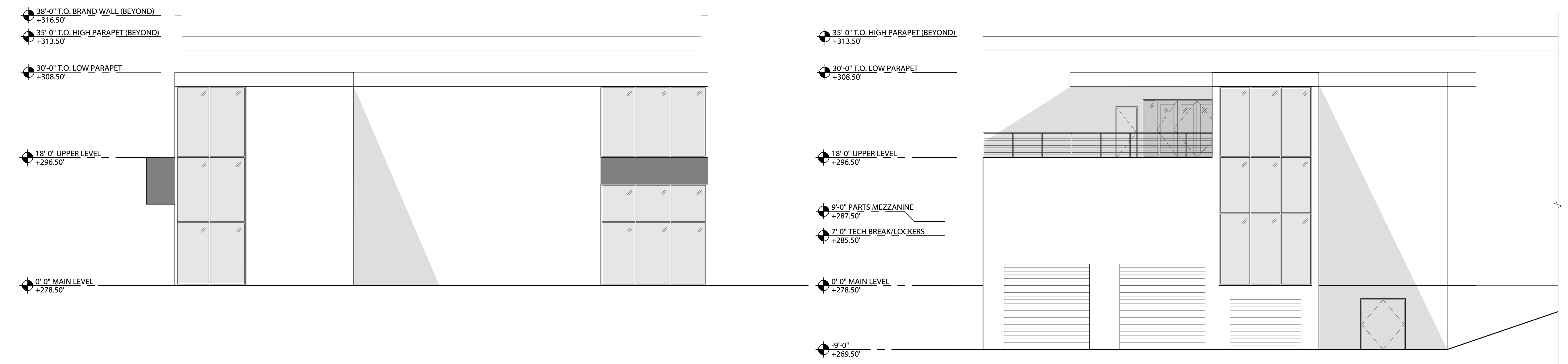
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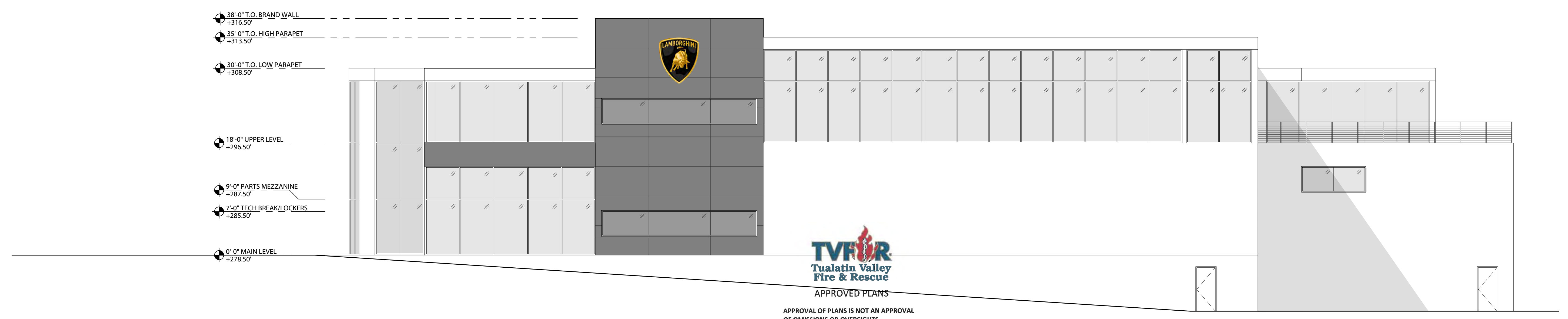


**4 EAST EXTERIOR ELEVATION**  
SCALE: 1/100



**2 NORTH EXTERIOR ELEVATION**  
SCALE: 1/100

**3 SOUTHEAST EXTERIOR ELEVATION**  
SCALE: 1/100



**1 WEST EXTERIOR ELEVATION**  
SCALE: 1/100

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SHEET TITLE  
EXTERIOR ELEVATIONS  
SHEET NO.

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**Ron Tonkin Grand Turismo Lamborghini Dealership  
Land Use Application Narrative & Findings Document**  
Type III Site Design Review, Variance(s), SROZ Map Verification, Significant Resource  
Impact Review

---

**Property Owner:** Casa Tonchinni, LLC  
Bradley Tonkin

**Applicant:** Ron Tonkin Gran Turismo  
Attn: Celia Tonkin  
25300 SW Parkway Avenue  
Wilsonville, OR 97070

**Architect:** Tim Brunner, AIA - Principal  
Axis Design Group  
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**Planner:** Brad Kilby, AICP  
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**Engineer:** Alex Simpson, PE  
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205 SE Spokane Street, Suite 200  
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(503) 211-1131  
alexs@hhpr.com

**Site Address:** 25239 SW Parkway Avenue

**Tax Lot:** 3S102DA01000

**Size:** 2.3 acres

**Zoning Designation:** Planned Development Commercial (PDC)

**Date:** June 17, 2024 (Revised)



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# I. PROJECT OVERVIEW

## EXISTING CONDITIONS + BACKGROUND INFORMATION

The project site is located at 25239 SW Parkway Avenue and includes Tax Lot 3S102DA01000. The site is zoned Planned Development Commercial (PDC) and is currently undeveloped. The property includes a Significant Resource Overlay Zone (SROZ) on site with a mapped wetland located on the central and southern parts of the property. There are several stands of existing trees in the central, eastern, and northern areas of the property. The site is slightly sloped, with elevations dropping from the north side of the property into the wetlands.

### VICINITY MAP



### PROJECT OVERVIEW

The applicant proposes to construct a new auto dealership on the project site. Development is planned to include a new three-level building, vehicle parking and maneuvering area, fire access, utility connections, a trash enclosure and associated landscaping. As the site is severely impacted by the resource lands, the project also includes a request to vary some of the standards expected of typical development on an unconstrained lot.



## SENSITIVE RESOURCES MAP



## REQUESTED REVIEWS

The applicant is requesting the following reviews:

- Stage 1 and 2 Planned Development Permit
  - A waiver of the 35-foot height limit through the Planned Development permit
  - A waiver to the number of wall signs allowed to allow a second wall sign to face I-5
- Type II Site Design Review
- Variances to the minimum parking and loading standards and perimeter landscape buffering between the sidewalk and the north property line.
- SROZ Map Verification
- Significant Resource Impact Review
- Type C Tree Removal Plan
- Class 3 Sign Plan

## II. RESPONSE TO APPLICABLE DEVELOPMENT AND CODE STANDARDS

**Note:** Responses to all applicable development standards are included below. Sections that are not applicable or do not require a response may be omitted from the narrative text.

### ZONING

#### SECTION 4.116: STANDARDS APPLYING TO COMMERCIAL DEVELOPMENTS IN ANY ZONE

*Any commercial use shall be subject to the applicable provisions of this Code and to the following, unless otherwise provided for by a specific zone, overlay zone, or a legislative master plan.*

- 01. Commercial developments shall be planned in the form of centers or complexes as provided in the City's Comprehensive Plan. As noted in the Comprehensive Plan, Wilsonville's focus on centers or complexes is intended to limit strip commercial development.*

**Response:** The project site is currently a vacant property designated commercial in the Wilsonville Comprehensive Plan and surrounded by existing commercial buildings and uses. The applicant is proposing to construct a car dealership that will include sales, service, and storage. Retail business, goods, and sales are a permitted use in the PDC zoning district under Standard 4.131.02.A.1 and is consistent with the Commercial Comprehensive Plan designation.

- 02. Where the land use map of Wilsonville's Comprehensive Plan calls for "Office Commercial" development, not less than 60 percent of the total square footage of the ground floors of buildings within the development shall be in office use. Total floor area dedicated to retail use shall not exceed 30 percent. On-site parking may be limited in order to control traffic generation.*

**Response:** The project site is designated Commercial in the Wilsonville Comprehensive Plan and does not require "Office Commercial" development. Therefore, Standard (02) above does not apply.

- 03. Where the land use map of Wilsonville's Comprehensive Plan calls for "Commercial/Industrial mixed use" development, not more than 50 percent of the total floor area of the development shall consist of retail space.*

**Response:** The project site is designated Commercial in the Wilsonville Comprehensive Plan and does not require "Commercial/Industrial mixed use" development. Therefore, Standard (03) above does not apply.

- 04. Where the land use map of Wilsonville's Comprehensive Plan calls for "Residential/Commercial mixed use" development, not less than 50 percent of the total floor area of the development shall consist of residential units.*

**Response:** The project site is designated Commercial in the Wilsonville Comprehensive Plan and does not require "Residential/Commercial mixed use" development. Therefore, Standard (04) above does not apply.

- 05. All businesses, service or processing, shall be conducted wholly within a completely enclosed building; except for:*
- A. The sale of automotive fuel, lubricants, and fluids at service stations.*
  - B. Car washes and car vacuum bays.*

- C. *Off-street parking for customers and employees and off-street loading.*
- D. *Outdoor seating areas associated with food and drink establishments on private property, or on public easements, provided the area and activities conform to ADA standards and do not interfere with public uses, safety, access or circulation.*
- E. *Temporary staging of inventory, as shall be authorized through a site development permit, complying with the following additional minimum development and performance standards:*
  - 1. *The staging area shall be screened by a fully sight obscuring fence or planting, high wall, high berm or high screen landscape standard as specified in Section 4.176—Landscaping Screening and Buffering;*
  - 2. *All parts of the staged inventory shall be completely concealed on all sides from public view at the right-of-way line; and*
  - 3. *The staged inventory shall be relocated into a completely enclosed structure of the primary retail operation within 48 hours of placement.*
- F. *Exterior sales that are specifically authorized through temporary use permit approval, subject to conditions of approval. Exterior sales that may be permitted are those that are limited in time duration, such as sidewalk sales, grand openings, or farmers' markets.*
- G. *Exterior sales areas, complying with the following minimum development and performance standards:*
  - 1. *The sales area shall be accessory to and shall not exceed five percent of the floor area of the primary retail operation.*
  - 2. *The sales area shall be completely covered by a permanent structure of design, construction and architecture compatible with that of the structure of the primary retail operation.*
  - 3. *All required ADA and pedestrian access ways and circulation aisles shall remain clear at all times.*
  - 4. *For new development, the Development Review Board may grant a waiver to allow exterior sales area of up to ten percent of the floor area of the primary retail operation, provided that findings can be made that:*
    - a. *The expanded covered area has received approval through a Stage II/Site Design Review process.*
    - b. *The expanded area does not detract from the overall character of the development or the surrounding neighborhood.*
    - c. *Partial walls are required for screening large or bulky items.*

**Response:** Sales and Services associated with the auto dealership will be located fully within the proposed building. The proposed outdoor parking on site is provided for customers and employees, not the storage of vehicles for sale; a permitted use under Standard (C) above. Please see the attached site plan (Sheet C-100) for specific details on site layout.

*06. In any Commercial Development directly across the street from any Residential District, the loading facilities shall be at least 20 feet from the street, shall be sited whenever practicable at the rear or side, and if facing a residential area, shall be properly screened. Screening shall be provided in a manner that is compatible with the adjacent residential development in terms of quality of materials and design. Such screening shall effectively minimize light glare and noise levels to those of adjacent residential areas.*

**Response:** The project site is located on SW Parkway Avenue and directly adjacent to the north, south, and east (across Parkway) are all commercial developments. Interstate 5 is located directly to the west. Therefore, Standard (06) does not apply to this project as there are no residential districts located adjacent to the site.

*07. Uses shall be limited to those which will meet the performance standards specified in Section 4.135(.05), with the exception of 4.135(.05)(M.)(3.).*

**Response:** Section 4.135(.05) provides performance standards for uses, including the limitation of vibrations, emissions of gases, heat and glare, dangerous substances, waste, noise, and landscaping. Please see that section of this narrative for details on compliance with all applicable performance standards. As proposed, the development would not cause any of these performance standards to be exceeded.

*08. Corner lots shall conform to the vision clearance standards set forth in Section 4.177.*

**Response:** The project site is not a corner lot and, therefore, Standard (08) does not apply to this application.

*09. Trailer, trailer houses, mobile coaches, or any altered variation thereof shall not be used for the purpose of conducting a trade or calling or for storage of material unless approved for such purpose as a temporary use.*

**Response:** The proposed car dealership will not include trailers, trailer houses, mobile coaches, or other altered variation for the purposes of trade or storage of materials. All activities associated with the dealership are proposed to occur inside the new facility.

*10. Commercial developments generally:*

*A. No structure shall be erected closer than the right-of-way line then existing or the officially planned right-of-way of any public, county, or state road.*

**Response:** The building is located on the western portion of the project site, outside of both the right-of-way lines for SW Parkway Avenue and Interstate 5. Please see the attached Site Plan (Sheet C-100) for details on exact building location and distance to the property lines.

*B. Minimum Front Yard Setback. None required except when front yard abuts a more restrictive district. When the front yard abuts a more restrictive district, setbacks shall be the same as the abutting district.*

**Response:** The building is located on the western portion of the project site, approximately 368 feet from the front property line on SW Parkway Avenue to the closest part of the building. Please see the attached Site Plan (Sheet C-100) for details on exact building location and distance to the property lines.

*C. Minimum Rear Yard Setback. None required except when rear yard abuts a more restrictive district. When the rear yard abuts a more restrictive district, setbacks shall be the same as for the abutting district.*



**Response:** The building is located on the western portion of the project site, approximately 5 feet from the property line closest to I-5. Please see the attached Site Plan (Sheet C-100) for building location and distance to the property lines.

*D. Minimum Side Yard Setback. None required except when side yard abuts a more restrictive district. When a side yard abuts a more restrictive district, setbacks shall be one and one-half times the setback required for the abutting district.*

**Response:** The building is proposed to be located approximately 10 feet from the northern side property line and approximately 94.5 feet from the southern side property line. Please see the attached Site Plan (Sheet C-100) for building location and distance to the property lines.

*E. Maximum Building Height. 35 feet, unless taller buildings are specifically allowed in the zone.*

**Response:** The site is located within the Planned Development Commercial (PDC) zoning designation and is greater than 2 acres in size. The proposed building is three stories, but the actual height varies based on the topography and the desire to manage all activities inside the building. The City of Wilsonville does not allow outdoor storage of vehicles and due to the size of the significant natural resource located on the site, it is not feasible to increase the footprint of the building horizontally to increase building area. From a functionality standpoint, the lower level of the building is at the minimum head clearance allowed by the building code. The main level provides the minimum head clearance needed to operate vehicle lifts and the upper level provides the minimum head clearance needed to operate vehicle stacking equipment in order to allow for 2 vehicles to be stacked.

By allowing the building height to be increased, the dealership maintains the ability to store required vehicle inventory and provide all vehicle sales and services inside the building. Even with the (2) vehicle stacking system located on the upper level, the building has the ability to store only 34 inventory vehicles, which is far less than other automotive dealerships in the area.

Finally, there is 10 feet of fall between the north property line and the south end of the building. In order to minimize grading on this particular site, the building has been designed to balance the needs of the owner and the interests of the community. The average grade around the building is 273.3 feet. The proposed height of the building on the north side of the building is exactly 35 feet from finished grade to the top of the high parapet. On the lower side of the site, the height is 44 feet from finished grade to the top of the high parapet. The overall average height of the building is approximately 40.2 feet in height. Please see the attached building elevations (Sheet A-221) for details related to building height along the building elevations.

*F. Minimum Lot Size. No limitation, save and except as may otherwise be affected by other provisions of this Code.*

**Response:** The subject site is approximately 2.3 acres in size and there are no changes proposed to the lot size with this application.

*G. Maximum Lot Coverage. No limitation, save and except as may otherwise be affected by other provisions of this Code.*

**Response:** There are no maximum lot coverage requirements for commercial developments; however, development of this particular site is severely constrained by the presence of a wetland and its associated buffers within the SROZ. As a result, the proposed development and impervious area is concentrated along the north and west portions of the property preserving the wetlands and associated riparian areas.

*H. Minimum Street Frontage. No limitation, safe and except as may be necessary to provide minimum access requirements.*

**Response:** The project site has approximately 134 feet of street frontage on SW Parkway Avenue and 244 feet of I-5 frontage without direct access. There are no proposed changes to the frontage with this application.

*11. Hotels or Motels: [...]*

**Response:** The applicant is proposing to construct an auto dealership, not a hotel or motel. Therefore, Standard (11) does not apply, and the code language has been removed.

*12. Off-Street Parking is to be as specified in section 4.155.*

**Response:** A proposed variance to parking is being proposed. Please see the attached site plan for details on proposed parking and Section 4.196 of this narrative for details on the requested variance.

*13. Signs are subject to the standards of Section 4.156.01 through 4.156.11.*

**Response:** The applicant and their sign consultant have been provided a copy of the sign regulations that apply to this zoning designation, and there are branding signs illustrated on the building elevations, please see appendix 016. Prior to any sign being constructed on site, all applicable standards will be met, and any necessary permit will be applied for by the property owner or their sign consultant.

*14. Prohibited Uses:*

- A. The use of a trailer, trailer house, or mobile coach as a residence is prohibited except were approved within an RV park or approved as a temporary use during construction.*
- B. Any use that violates the performance standards of Section 4.135(.05), other than 4.135(.05)(M.)(3.) is prohibited within commercial developments.*

**Response:** The applicant is not proposing the use of a trailer, trailer house, or mobile coach as a residence nor any use that violates the performance standards of Section 4.135(.05).

#### **SECTION 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: [...]*

**Response:** The project site is not located in the "S" overlay zone. Therefore, the above standard does not apply to this application and the remaining code language has been omitted from this narrative.

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.*

**Response:** All utilities proposed with the development will be installed and constructed to comply with Sections 4.300 to 4.320 of this code. The site has been designed, including location of utilities, to minimize adverse impacts to the site and neighboring properties. Please see the attached site plan and responses to Sections 4.300 to 4.320 of this narrative for details.

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:*

1. *Minimum lot area;*
2. *Lot width and frontage;*
3. *Height and yard requirements;*
4. *Lot coverage;*
5. *Lot depth;*
6. *Street widths;*
7. *Sidewalk requirements;*
8. *Height of buildings other than signs;*
9. *Parking space configuration and drive aisle design;*
10. *Minimum number of parking or loading spaces;*
11. *Shade tree islands in parking lots, provided that alternative shading is provided;*
12. *Fence height;*
13. *Architectural design standards;*
14. *Transit facilities;*
15. *On-site pedestrian access and circulation standards;*
16. *Solar access standards, as provided in section 4.137;*
17. *Open space in the Residential Neighborhood zone; and*
18. *Lot orientation.*

**Response:** The applicant is requesting that the DRB give consideration to waiving the maximum height of the building, the minimum number of parking spaces, and the minimum number and location of required loading spaces. Each of these issues is discussed throughout the narrative along with the applicant's justifications for the proposed waivers.

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:*

1. *Open space requirements in residential areas, except that the Board may waive or reduce open space requirements in the Residential Neighborhood zone. Waivers in compliance with [Section] 4.127(.08)(B)(2)(d);*
2. *Minimum density standards of residential zones. The required minimum density may be reduced by the Board in the Residential Neighborhood zone in compliance with [Section] 4.127(.06) B; and*
3. *Minimum landscape, buffering, and screening standards.*

**Response:** Although the proposed development is not located within a Residential Neighborhood Zone, it should be noted that the proposal does not request waivers to required open spaces requirements and minimum residential density standards which are not applicable at this site. Reductions to sidewalk separation and landscaping from the northern property and parking standards are being requested through a separate variance process due to the impacts of the SROZ on this site's overall developable area.

- 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:*
1. *Maximum number of parking spaces;*
  2. *Standards for mitigation of trees that are removed;*
  3. *Standards for mitigation of wetlands that are filled or damaged; and*
  4. *Trails or pathways shown in the Parks and Recreation Master Plan.*

**Response:** The applicant is not requesting the Development Review Board to waive any of the above development 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*

**Response:** The proposed building has been located outside of all required setbacks relative to the existing lot lines associated with this site. Please see the attached Site Plan (Sheet C-100) for details.

- 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: [...]*

**Response:** The applicant is not requesting the Development Review Board to waive any development standards related to residential development. This proposal is not a residential development proposal; therefore, this standard is not applicable to this request.

04. *Wetland Mitigation and other mitigation for lost or damaged resources. The Development Review Board may, after considering the testimony of experts in the field, allow for the replacement of resource areas with newly created or enhanced resource areas. The Board may specify the ratio of lost to created and/or enhanced areas after making findings based on information in the record. As much as possible, mitigation areas shall replicate the beneficial values of the lost or damaged resource areas.*

**Response:** There is a wetland on the project site. There are no proposed impacts to the wetland itself, but there are impacts associated with access, fire, access, parking, and other competing interests associated with development to the SROZ. Those impacts and proposed mitigation measures are discussed in the SRIR (Appendix 008) and summarized later in this report.

## SECTION 4.131: PDC – PLANNED DEVELOPMENT COMMERCIAL ZONE

The requirements of a PDC Zone shall be governed by Section 4.140, Planned Development Regulations, and as otherwise set forth in this Code.

01. The following shall apply to any PDC zone:

A. Uses that are typically permitted:

1. Retail business, goods and sales.
2. Wholesale showrooms.
3. Offices and clinics.
4. Service establishments.
5. Any use allowed in a PDR Zone or PDI Zone, provided the majority of the total ground floor area is commercial, or any other commercial uses provided that any such use is compatible with the surrounding uses and is planned and developed in a manner consistent with the purposes and objectives of Section 4.140. However, the uses listed as prohibited below shall not be permitted.
6. Accessory uses, buildings, and structures customarily incidental to any of the aforesaid principal permitted uses.
7. Temporary buildings or structures for uses incidental to construction work, which buildings or structures shall be removed upon completion or abandonment of the construction work.
8. Churches.
9. Those uses that are listed as typically permitted in Section 4.131.05(.03), as well as the following additional uses when conducted entirely within enclosed buildings:
  - a. Automotive machine shops
  - b. Automotive detail shops
  - c. Repair shops for:
    - i. electronics;
    - ii. boats;
    - iii. appliances;
    - iv. light equipment;
    - v. yard equipment;
    - vi. other related types of repair shops.
  - d. Fabrication shops including:
    - i. cabinets;
    - ii. sheet metal;
    - iii. counter tops;
    - iv. closet systems;
    - v. other related types of work.
  - e. Marine equipment—supply and repair

**Response:** The proposed use is an auto dealership, which is considered a retail business, goods and sales. It is a permitted use in the PDC zone under Standard (01)(A) above.

02. Prohibited uses:

- A. No body/fender repair shops shall be permitted unless all operations are conducted entirely within enclosed buildings and meet the performance standards of Section 4.135(.05). The storage and parking of damaged vehicles shall be screened to assure that they are not visible off-site.

- B. *No used car sales shall be permitted, except in conjunction with new car dealerships within enclosed buildings.*
- C. *No wrecking yards shall be permitted.*
- D. *Retail operations south of Boeckman Road and having more than 50,000 square feet of ground floor building area shall only be permitted where it is demonstrated to the satisfaction of the Development Review Board that the following standards will be met. For purposes of these standards, service activities, offices, and other non-retail commercial ventures shall not be considered to be "retail operations."*
  - 1. *That the majority of the customers for the proposed use can reasonably be expected to come from no further than five miles from the proposed development site; and*
  - 2. *That the site design, architecture, landscaping, and pedestrian amenities are compatible with the surrounding neighborhood.*
- E. *Any use that violates the performance standards of Section 4.135(.05), other than 4.135(.05)(M.)(3.).*

**Response:** The proposed use is an auto dealership. It is not a prohibited use listed in Standard (02) above.

**03. Block and access standards:**

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

**Response:** The applicant understands that conditions of approval may be provided by the Development Review Board to ensure adequate connectivity. SW Parkway Avenue is an existing public street, and the applicant is proposing to provide on-site pedestrian and vehicle access to connect with the public right-of-way. Due to the wetlands and associated SROZ buffers on site, there are real limitations to other active transportation connections through the site. Please see the attached site plan (Sheet C-100) for details.

- B. *Where a residential development, or mixed-use development including residential development, is proposed in a PDC zone, the Development Review Board shall assure that adequate connectivity is provided meeting the standards of Metro's Urban Growth Management Functional Plan.*
- C. *Where a residential development, or mixed-use development including residential development, is proposed in a PDC zone, and the application includes a land division, the following standards shall be applied: [...]*

**Response:** There is no residential development proposed on the project site. Therefore, Standards (B) and (C) do not apply to this application.

**SECTION 4.135: PDI – PLANNED DEVELOPMENT INDUSTRIAL ZONE**

**Response:** Although the project site is not located in the PDI zone, Standard 4.116(07) requires that all commercial developments in any zone meet the performance standards of Section 4.135(05). Please see the responses below for compliance on performance standards.

- 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.*

**Response:** The proposed auto dealership and all of the proposed activities including sales, service, storage, and loading are all located completely within the proposed building. The only outdoor activities proposed outside of the building include off-street parking, vehicle and pedestrian access, landscaping, and utilities. Please see the site plan (Sheet C-100) for details on specific site design.

- 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.*

**Response:** There are no expected or anticipated vibrations of the ground due to the proposed use. Auto dealerships do not require any special equipment which would be expected to cause any noticeable ground vibration. There will potentially be vibrations associated with construction of the facility, but those activities are temporary in nature and generally accepted as construction practices associated with development.

- 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.*

**Response:** There are no unexpected odorous gas emissions or matter associated with the proposed auto dealership. 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.

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

**Response:** The applicant is not proposing any open storage associated with the sales and service of vehicles with this application. All proposed storage will be located fully within the building on site. An enclosed trash enclosure is proposed to be located at the southwest corner of the site.

- 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.*

**Response:** The project site is not located within 100 feet of any residential district. The proposed auto dealership is expected to operate during normal business hours as the auto dealerships around it.

- F. *Heat and Glare:*

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

**Response:** The proposed auto dealership is not expected to produce any heat or glare that would not be acceptable within the zone.

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.*

**Response:** As stated previously, there are not adjacent residentially zoned properties adjacent to the site. The surrounding properties are zoned for and developed with other commercial uses. Proposed exterior lighting will be shielded or screened from adjacent properties. Please see the attached exterior lighting cut sheets and site photometrics plan for details on the proposed exterior lighting on the project site.

- 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.*

**Response:** The proposed use does not require or anticipate the presence of any explosives, nuclear waste, or other substance that would be expected to cause a hazard to health or safety. Chemicals and fuel associated with servicing the vehicles will be handled according to safety industry standards. Presumably, those chemicals are subject to handling in accordance with State and Federal rules and will be included in the employee's safety practices.

H. *Liquid and Solid Wastes:*

1. *Any storage of wastes which would attract insects or rodents or otherwise create a health hazard shall be prohibited.*

**Response:** There is no proposed storage of waste or other materials that is expected to attract insects or rodents on site. The proposed dealership is expected to produce typical types of waste that will be stored in an approved, compliant outdoor storage area and disposed of in accordance with local hauler requirements.

2. *Waste products which are stored outside shall be concealed from view from any property line by a sight-obscuring fence or planting as required in Section 4.176.*

**Response:** The proposed waste storage area is located along the western property line, south of the building. This is out of view and screened from the public right-of-way and all adjacent properties. Please see the attached site plan, (Sheet C-100), for details on the location of proposed waste storage facility and (Sheet A-104) for details of the proposed storage facility.

3. *No connection with any public sewer shall be made or maintained in violation of applicable City or State standards.*

**Response:** The only proposed connection to the public sewer has been designed by a licensed, professional engineer to comply with all applicable City and State standards. Please see the attached utility plan (Sheet C-300) for details.

4. *No wastes conveyed shall be allowed to or permitted, caused to enter, or allowed to flow into any public sewer in violation of applicable City or State standards.*



5. *All drainage permitted to discharge into a street gutter, caused to enter or allowed to flow into any pond, lake, stream, or other natural water course shall be limited to surface waters or waters having similar characteristics as determined by the City, County, and State Department of Environmental Quality.*
6. *All operations shall be conducted in conformance with the City's standards and ordinances applying to sanitary and storm sewer discharges.*

**Response:** There is no planned or anticipated conveyance of unauthorized waste to be discharged into a public sewer or stormwater facility. The site has been designed to operate in conformance with all City and State standards and ordinances. Please see the attached utility plan (Sheet C-300) for details.

- 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.*

**Response:** The proposed use of an auto dealership does not generate any noise that would be expected to violate the applicable standards adopted by the State. The noise expected will include normal levels of traffic from customers and visitors. All activities associated with sales and service of the vehicles are proposed to occur within the building.

- 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.*

**Response:** The proposed use of an auto dealership 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.

- 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.*

**Response:** The proposed auto dealership 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 building itself has been designed to be compliant with all of the applicable building and energy codes.

- L. *Open burning is prohibited.*

**Response:** No open burning is proposed to occur on the project site with the proposed use.

*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.*

**Response:** The only proposed outdoor storage on site is the outdoor waste enclosure located in the southwest corner of the development site. The proposed enclosure has been designed to comply with the standards of this code, including being located on a hard surfaced material and screened from public view. Please see the attached site plan (Sheet C-100) for details on the proposed location and Sheet (A-104) for enclosure details.

*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.*
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 soil that is 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.*

**Response:** All portions of the site not proposed for development are either proposed to be landscaped or remain undisturbed. Please see the attached landscape plan (Sheet L-100) for details on proposed and existing landscaping.

#### **SECTION 4.139.02: WHERE THESE REGULATIONS APPLY**

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

*Unless otherwise exempted by these regulations, any development proposed to be located within the Significant Resource Overlay Zone and/or Impact Area must comply with these regulations. Where the provisions of this*

Section conflict with other provisions of the City of Wilsonville Planning and Land Development Ordinance, the more restrictive shall apply.

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

**Response:** A sizable portion of the site is mapped within the Significant Resource Overlay Zone (SROZ). A wetland has been delineated by PHS in the southern middle portion of the site, with a 50-foot SROZ boundary and a 25-foot impact area setback. The applicant understands that all areas of the site within the SROZ and the associated impact area are required to meet the regulations of this section.



**SECTION 4.139.04: USES AND ACTIVITIES EXEMPT FROM THESE REGULATIONS**

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

- 01. Emergency procedures or emergency activities undertaken which are necessary for the protection of public health, safety, and welfare. Measures to remove or abate hazards and nuisances. Areas within the SROZ that are disturbed because of emergency procedures or activities should be repaired and mitigated.
- 02. Maintenance and repair of buildings, structures, yards, gardens or other activities or uses that were in existence prior to the effective date of these regulations.
- 03. Alterations of buildings or accessory structures which do not increase building coverage.
- 04. The following agricultural activities lawfully in existence as of the effective date of this ordinance:



05. *Operation, maintenance, and repair of irrigation and drainage ditches constructed ponds, wastewater facilities, stormwater detention or retention facilities, and water facilities consistent with the Stormwater Master Plan or the Comprehensive Plan.*
06. *Maintenance and repair of streets and utility services within rights-of way, easements, access drives or other previously improved areas.*
07. *Normal and routine maintenance and repair of any public improvement or public recreational area regardless of its location.*
08. *The construction of new roads, pedestrian or bike paths into the SROZ in order to provide access to the sensitive area or across the sensitive area, provided the location of the crossing is consistent with the intent of the Wilsonville Comprehensive Plan. Roads and paths shall be constructed so as to minimize and repair disturbance to existing vegetation and slope stability.*
09. *Maintenance and repair of existing railroad tracks and related improvements.*
10. *The removal of invasive vegetation such as Himalayan Blackberry, English Ivy, Poison Oak, Scots (Scotch) Broom or as defined as invasive in the Metro Native Plant List.*
11. *The planting or propagation of any plant identified as native on the Metro Native Plant List. See Wilsonville Planning Division to obtain a copy of this list.*
12. *Grading for the purpose of enhancing the Significant Resource as approved by the City.*
13. *Enhancement of the riparian corridor or wetlands for water quality or quantity benefits, fish, or wildlife habitat as approved by the City and other appropriate regulatory authorities.*
14. *Flood control activities pursuant to the Stormwater Master Plan, save and except those stormwater facilities subject to Class II Administrative Review, as determined by the Planning Director, to ensure such facilities meet applicable standards under federal, state and local laws, rules and regulations.*
15. *Developments that propose a minor encroachment into the Significant Resource Overlay Zone. The purpose of this adjustment would be to allow for minor encroachments of impervious surfaces such as accessory buildings, eave overhangs, building appurtenances, building access and exiting requirements or other similar feature. The total adjustment shall not exceed 120 square feet in cumulative area.*
16. *The expansion of an existing single-family dwelling or duplex not exceeding 600 square feet in area. The expansion of an existing single-family dwelling or duplex or structures that are accessory to a single-family dwelling or duplex inside the SROZ, provided that the following criteria have been satisfied. An SRIR is not required to evaluate and reach a decision on the issuance of a permit to expand a single-family residence under this paragraph. [...]*
17. *New Single-Family Dwelling or Duplex. The construction of a new single-family dwelling or duplex, including a duplex created through conversion of an existing detached single-family dwelling, is exempt unless the building encroaches into the Impact Area and/or the SROZ. [...]*
18. *Private or public service connection laterals and service utility extensions.*
19. *A Stage II development permit or other development permits issued by the City and approved prior to the effective date of this ordinance.*
20. *The installation of public streets and utilities specifically mapped within a municipal utility master plan, the Transportation Systems Plan or a capital improvement plan.*
21. *Structures which are non-conforming to the standards of this Section may be re-built in the event of damage due to fire or other natural hazard subject to Sections 4.189—4.192 of the Planning and Land Development Ordinance, provided that the structure is placed within the same foundation lines (See Figure NR-6.). An SRIR is not required to evaluate and reach a decision on the issuance of a permit to replace a structure subject to this paragraph.*

22. Any impacts to resource functions from the above excepted activities, such as gravel construction pads, erosion/sediment control materials or damaged vegetation, shall be mitigated using appropriate repair or restoration/enhancement techniques.

**Response:** The applicant is requesting a minor encroachment into the Significant Resource Overlay Zone that will not exceed 120 square feet in cumulative area. This is an allowed exemption under Standard (15) above. A total of 89 square feet of development will be located within the SROZ and include parking lot pavement and small areas of the building. Please see the attached site plan (Sheet C-100) and the attached SRIR for details.

#### SECTION 4.139.05: SIGNIFICANT RESOURCE OVERLAY ZONE MAP VERIFICATION

*The map verification requirements described in this Section shall be met at the time an applicant requests a building permit, grading permit, tree removal permit, land division approval, or other land use decision. Map verification shall not be used to dispute whether the mapped Significant Resource Overlay Zone boundary is a significant natural resource. Map refinements are subject to the requirements of Section 4.139.10(.01)(D).*

01. *In order to confirm the location of the Significant Resource Overlay Zone, map verification shall be required or allowed as follows:*
- A. *Development that is proposed to be either in the Significant Resource Overlay Zone or less than 100 feet outside of the boundary of the Significant Resource Overlay Zone, as shown on the Significant Resource Overlay Zone Map.*
  - B. *A lot or parcel that:*
    1. *Either contains the Significant Resource Overlay Zone, or any part of which is less than 100 feet outside the boundary of the Significant Resource Overlay Zone, as shown on the Significant Resource Overlay Zone Map; and*
    2. *Is the subject of a land use application for a partition, subdivision, or any land use application that the approval of which would authorize new development on the subject lot or parcel.*

**Response:** The project contains a wetland and associated buffers that make up the SROZ boundaries on this particular piece of property. The location of the wetland has been verified by Pacific Habitat Services and a letter of concurrence of their delineation was issued by the Oregon Division of State Lands on June 14, 2019. That letter along with a Significant Resource Impact Report prepared April 30, 2024, by Pacific Habitat Services, Inc. are both included as appendices to this application. (Please see Appendix 008.)

02. *An application for Significant Resource Overlay Zone Map Verification may be submitted even if one is not required pursuant to Section 4.139.05(.01).*
03. *If a lot or parcel or parcel is subject to Section 4.139.05(.01), an application for Significant Resource Overlay Zone Map Verification shall be filed concurrently with the other land use applications referenced in Section 4.139.05(.01)(B)(2) unless a previously approved Significant Resource Overlay Zone Map Verification for the subject property remains valid.*

**Response:** A Significant Resource Overlay Zone Map Verification is required with this application and has been included in the submittal materials.

04. *An applicant for Significant Resource Overlay Zone Map Verification shall use one or more of the following methods to verify the Significant Resource Overlay Zone boundary:*

- A. *The applicant may concur with the accuracy of the Significant Resource Overlay Zone Map of the subject property;*
- B. *The applicant may demonstrate a mapping error was made in the creation of the Significant Resource Overlay Zone Map; and*
- C. *The applicant may demonstrate that the subject property was developed lawfully prior to June 7, 2001.*

**Response:** The applicant agrees with the location of the Significant Resource Overlay Zone on the subject property as illustrated on the site plan and confirmed through the ODSL letter of concurrence and the SRIR prepared by Pacific Habitat Services Inc.

*05. The Planning Director shall determine the location of any Significant Resource Overlay Zone on the subject property by considering information submitted by the applicant, information collected during any site visit that may be made to the subject property, information generated by Significant Resource Overlay Zone Map Verification that has occurred on adjacent properties, and any other relevant information that has been provided.*

**Response:** The location of the wetland has been verified by Pacific Habitat Services and a letter of concurrence of their delineation was issued by the Oregon Division of State Lands on June 14, 2019. That letter is located within Appendix B of the SRIR. (Please see Appendix 008.)

*06. For applications filed pursuant to Section 4.139.05(.04)(A) and (C), a Significant Resource Overlay Zone Map Verification shall be consistent with the submittal requirements listed under Section 4.139.06(.01)(B-H).*

*07. For applications filed pursuant to Section 4.139.05(.04)(B), a Significant Resource Overlay Zone Map Verification shall be consistent with the submittal requirements listed under Section 4.139.06(.02)(D)(1).*

**Response:** The submittal requirements listed under Section 4.139.06(.01)(B-H) have been included in the Significant Resource Impact Report prepared April 30, 2024 by Pacific Habitat Services, Inc. That report is attached as (Appendix 008) to this application.

#### **SECTION 4.139.06. - SIGNIFICANT RESOURCE IMPACT REPORT (SRIR) AND REVIEW CRITERIA.**

**Response:** The applicant is proposing to have this project reviewed as a Standard SRIR. The standards applicable to an abbreviated SRIR are not applicable to this proposal and that language is not included within this narrative.

*02. Application Requirements for a Standard SRIR. The following requirements must be prepared and submitted as part of the SRIR evaluation ...*

**Response:** The analysis and SRIR were prepared by Joe Thompson, PWS and John Van Staveren, SPWS who are both respected and knowledgeable, and qualified professionals with Pacific Habitat Services, Inc. Their report includes the items required in subsection D (1-4) as required. Please refer to their report for specific details on the applicant's responses related to this Section. The report concludes that the proposed project will impact, "97 square feet within the Safe Harbor/SROZ and 7,147 square feet of the SR Impact Area (Area of Limited Conflicting Use)." The report also indicates that 33 trees will need to be removed to accommodate the development. Of these 33 trees, 26 are non-native and do not require mitigation. The remaining 7 trees would

require mitigation. Mitigation plantings are illustrated within the landscape plans associated with the development. Please see the proposed landscape sheets L100 and L101 for details.

*.03 SRIR Review Criteria. In addition to the normal Site Development Permit Application requirements as stated in the Planning and Land Development Ordinance, the following standards shall apply to the issuance of permits requiring an SRIR. The SRIR must demonstrate how these standards are met in a manner that meets the purposes of this Section.*

**Response:** Please see detailed responses provided by Pacific Habitat Services, Inc in their SRIR report on page 16. The report concludes that, “The proposed development includes impact to 7,147 square feet (0.16 acres) of the City of Wilsonville’s SR Impact Area (Area of Limited Conflicting Use) and 97 square feet (0.002 acres) within the Safe Harbor / SROZ). Development within the SROZ includes 97 sf / 0.002 ac of non-exempt encroachment, including a new building and parking area. The remaining encroachments are exempt per Section 4.139.04 of the SROZ ordinance...” The report goes on to say that “...for impacts to 97 sf / 0.002 ac of impacts to the SROZ and the removal of seven native trees, the applicant proposes to restore 2,000 sf / 0.05 ac of degraded upland habitat within the remaining SROZ and 2,000 sf / 0.05 ac of degraded wetland habitat (Figure 6). The applicant will remove invasive and non-native species including Himalayan and cut-leaf blackberry and holly and plant a total of 20 native trees and 39 native shrubs, which per the SROZ ordinance will more than offset the loss of riparian function associated with the proposed impacts to the existing habitat as well as to the wetland.” Figure 6 is located within the SRIR and reflected in the proposed landscape plans included as sheets L100 and L101.

#### **SECTION 4.139.07: MITIGATION STANDARDS**

**Response:** A formal mitigation plan, intended to meet the City’s mitigation requirements has been prepared by Pacific Habitat Services, Inc. to mitigate impacts from development to the SROZ on the proposed project site. The proposed mitigation is discussed within the report and the mitigation plan is provided as Figure 6 within Appendix A of the Significant Resource Impact Report. Required mitigation plantings are also identified within the proposed landscape plans included as sheets L100 and L101. As proposed, the applicant and consultants have demonstrated that the development can feasibly satisfy the requirements of this chapter as illustrated in the accompanying documentation referenced in this narrative and included with these application materials.

#### **SECTION 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.*

**Response:** The proposed property is 2.3 acres in size, located within the Planned Development Industrial zoning classification and typical development of the site is impacted by the presence of valuable natural resources on site. Flexibility in meeting the standards is warranted on a property like this as it balances the development of

the property with an allowed use in the underlying zone with the community desire to preserve natural resource features within the City limits.

*B. It is the further purpose of the following Section:*

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

**Response:** The proposed development is located within the least impacted areas of the subject property and includes modern architectural design that includes stacked storage of the vehicles within the building. All of the on-site stormwater management is proposed to be low impact development techniques that are arguably more sustainable than current mechanical systems and supports the preservation of on-site resources on site.

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;*

**Response:** Consciously, communities make decisions to build up or out. Utilizing planned developments as a tool affords communities with the opportunity to utilize creative approaches to land development within the existing city limits to minimize the costs of expanding public services to a larger footprint while preserving natural features and resources that are unique to individual properties. The proposed development achieves this purpose by providing the landowner with the opportunity to construct an allowed use on the property that traditionally requires a larger footprint utilizing the planned development process.

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

**Response:** The proposed development achieves this purpose by providing for an allowed use in the zone that traditionally requires a larger footprint while still providing on-site amenities needed in support of the development. (i.e. parking, landscaping, circulation, waste disposal, interior vehicle storage, office, service, and sales areas). All of these amenities are provided in a more compact footprint.

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;*

**Response:** The PD process permits the flexibility necessary to achieve development of an allowed use on the site without severely impacting the on-site natural resources and topography. The proposed development has been located in the least impacted areas of the site and utilizes walls to maintain the natural topography and wetlands on the areas of the site that are not proposed to be developed.

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.*



**Response:** This purpose applies to residential development, but it should be noted that the PD allows for the proposed increase in height which allows the development to proceed while still protecting and preserving on-site wetlands and associated riparian areas.

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.*

**Response:** Flexibility in meeting the standards is warranted on a property like this as it balances the development of the property with an allowed use in the underlying zone with the community desire to preserve natural resource features within the City limits. Development is concentrated on the least impacted portions of the property.

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.*

**Response:** Mixed use is not proposed with this development.

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

**Response:** The proposed development is not related to changes in the economic or technological climate.

**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.*

**Response:** The subject property is within a PD zone and over two acres in size. Therefore, it 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 or control or the subject of a joint application by the owners of all the property included. The holder of a written option to purchase, with written authorization by the owner to make applications, shall be deemed the owner of such land for the purposes of Section 4.140.*
- 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. The transferee shall use and maintain each such unit or parcel in strict conformance with the approval permit and development plan.*

**Response:** The property is under the ownership of a single entity. The proposed project does not include a land division.

*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.*

**Response:** The proposed planned development and improvements have been designed by a team of professionals including a licensed architect, civil engineer, certified land use planner, registered landscape architect, a qualified team of wetland scientists, and professional geotechnical engineers.

- 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.*

**Response:** As stated previously, the proposed planned development and improvements have been designed by a team of professionals including a licensed architect, civil engineer, certified land use planner, registered landscape architect, a qualified team of wetland scientists, and professional geotechnical engineers.

- 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.*

**Response:** The certified land use planner is serving as the project liaison between the owner, the project team and City staff. The contacts are listed within the land use application.

- 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.*

**Response:** The land use planner 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.*

**Response:** As noted throughout this document, the property is over two acres in size, zoned for planned development industrial development and seeking approval of the development through the planned development process outlined by the City.

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

**Response:** No zone change or amendment to the zoning map are proposed with this application. The property is already zoned Planned Development Industrial (PDI).

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

**Response:** The owner and design team are aware of this standard and will comply with the applicant's responsibilities in this process.

- 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, City Council approval is required to authorize a Stage I preliminary plan except for properties within the Coffee Creek Industrial Design Overlay District, which may receive separate zone map amendment approvals.*

**Response:** A pre-application conference was conducted with City staff in June of 2023 (PRE23-0008). This application seeks approval of the preliminary and final 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

### SECTION 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.*

**Response:** As part of the site development, the applicant proposes a continuous pedestrian system that connects the sidewalk and right-of-way through the site and to the proposed building. There is only one phase

proposed on the site. Please see the attached site plan (Sheet C-100) for details on the location of the proposed on-site pedestrian circulation.

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.*

**Response:** The proposed pedestrian pathways on the project site have been designed by a licensed and professional engineer to ensure the pathways are designed to be safe and convenient and free from hazards. The pathways are separated from vehicle parking and maneuvering areas by a curb and the pathways will be improved with concrete or a similar material. Please see the attached site plan (Sheet C-100) for details on the proposed on-site pedestrian circulation.

- 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.*

**Response:** The proposed pedestrian pathway has been designed to be a direct route from the Parkway Avenue 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. Please see the attached site plan (Sheet C-100) for details on the proposed on-site pedestrian circulation.

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

**Response:** The proposed pedestrian path connects the public sidewalk to the main building entrance (located at the northeastern corner of the building). The proposed pathway is five feet wide and constructed of a paved material, consistent with all applicable ADA requirements. Please see the attached site plan (Sheet C-100) for details on the proposed on-site pedestrian circulation.

- 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.*

**Response:** The proposed off-street parking lot on the project site is not larger than three acres in size. Therefore, the above standard 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.*

**Response:** The pedestrian pathway proposed on the project site is located adjacent to the vehicle driveway and 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. Please see the attached site plan (Sheet C-100) for details on the proposed on-site pedestrian pathway design.

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).*

**Response:** There are no instances on the project site where the pedestrian pathway crosses a parking area or drive aisle.

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.*

**Response:** The pedestrian pathway is proposed to be five feet in width and paved with concrete, asphalt, or other similar material. Please see the attached site plan (Sheet C-100) for details on the proposed on-site pedestrian design.

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

**Response:** Where necessary or appropriate, all pathways will be clearly marked with appropriate signage.

#### **SECTION 4.155: GENERAL REGULATIONS – PARKING, LOADING, AND BICYCLE PARKING**

##### *02. General Provisions:*

- A. *The provision and maintenance of off-street parking spaces is a continuing obligation of the property owner. The standards set forth herein shall be considered by the Development Review Board as minimum criteria.*
  1. *The Board shall have the authority to grant variances or planned development waivers to these standards in keeping with the purposes and objectives set forth in the Comprehensive Plan and this Code.*
  2. *Waivers to the parking, loading, or bicycle parking standards shall only be issued upon a finding that the resulting development will have no significant adverse impact on the surrounding neighborhood, and the community, and that the development considered as a whole meets the purposes of this section.*

**Response:** The property owner will maintain the proposed off-street parking lot and parking spaces in good condition.

- 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.*

**Response:** All of the proposed off-street parking is accessible and usable for the purpose of parking and maneuvering vehicles. The site has been designed by a professional and licensed engineer to ensure all construction and grading of the parking lot to ensure accessibility for users.

- C. *In cases of enlargement of a building or a change of use from that existing on the effective date of this Code, the number of parking spaces required shall be based on the additional floor area of the enlarged or additional building, or changed use, as set forth in this Section. Current development standards, including parking area landscaping and screening, shall apply only to the additional approved parking area.*

**Response:** The proposed project includes a new use, not the enlargement of a building or a change of use. The required number of parking spaces is based on the proposed use of an auto dealership. A variance has been requested to the minimum number of parking spaces required for the proposed use and is discussed below in section 4.195 of this narrative.

- D. *In the event several uses occupy a single structure or lot, the total requirement for off-street parking shall be the sum of the requirements of the several uses computed separately, except as modified by subsection "E," below. Within the TC Zone, the cumulative number of parking spaces required by this subsection may be reduced by 25 percent.*
- E. *Owners of two or more uses, structures, or lots may utilize jointly the same parking area when the peak hours of operation do not overlap, provided satisfactory legal evidence is presented in the form of deeds, leases, or contracts securing full and permanent access to such parking areas for all the parties jointly using them.*

**Response:** The proposed development includes a single use, and the building and property will only be occupied by the proposed auto dealership. Therefore, the above standards do not apply to this project.

- F. *Off-street parking spaces existing prior to the effective date of this Code may be included in the amount necessary to meet the requirements in case of subsequent enlargement of the building or use to which such spaces are necessary.*

**Response:** There are no off-street parking spaces existing on the project site. Therefore, the above standard does not apply, and all proposed parking will comply with the standards of this Section and code.

- G. *Off-Site Parking. Except for single-family dwellings and middle housing, the vehicle parking spaces required by this Chapter may be located on another lot, provided the lot is within 500 feet of the use it serves and the DRB has approved the off-site parking through the Land Use Review. The distance from the parking area to the use shall be measured from the nearest parking space to the main building entrance, following a sidewalk or other pedestrian route. Within the TC Zone there is no maximum distance to an off-site location provided the off-site parking is located within the TC Zone. The right to use the off-site car park must be evidenced in the form of recorded deeds, easements, leases, or contracts securing full and permanent access to such parking areas for all the parties jointly using them. Within the TC zone, there is no maximum distance to an off-site location provided the off-site parking is located within the TC Zone.*

**Response:** All off-street parking is proposed to be located on the project site, not in an off-site parking area. Please see the site plan for details on the exact parking location.

- H. The conducting of any business activity shall not be permitted on the required parking spaces, unless a temporary use permit is approved pursuant to Section 4.163.*

**Response:** All business activity will take place within the building proposed on site, and all parking spaces will be reserved for customer and employee parking.

- I. 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.*

**Response:** The project site is not within or adjacent to a residential district. Therefore, the above standards do not apply to this application.

- J. 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.*

**Response:** All of the parking spaces in the parking lot include a six-inch curb and wheel stop to ensure no portion of a car extends over the pedestrian circulation areas or property line. This design will prevent any possible obstruction to the pedestrian pathways or landscaped areas on the project site. Please see the attached site plan (Sheet C-100) for details of the proposed parking lot design.

- K. 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.*

**Response:** The entire off-street parking lot and vehicle maneuvering areas, including the drive aisles and fire access, are proposed to be constructed of asphalt concrete. Please see the attached site plan (Sheet C-100) for details on parking lot design.

- L. 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.*

**Response:** All proposed exterior lighting has been designed to be screened and shielded from adjacent properties and the public right-of-way. Please see the attached photometrics plan (Appendix 015) and exterior lighting cut sheets (Appendix 014) for details on lighting levels and proposed fixtures.

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

**Response:** An auto dealership is specifically listed in Table 5 of this code (Standard e.4). Therefore, Standard (M) above does not apply to this application.

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

**Response:** None of the proposed off-street parking spaces are proposed to be compact.

- O. 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.*

**Response:** All of the proposed off-street parking spaces have been designed with wheel stops to prevent any overhang beyond the pedestrian walkway curbs. Please see the attached civil site plan (Sheet C-100) for details.

- P. 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.*

**Response:** There are no parklets proposed with this application.

- Q. Residential garages shall not count towards minimum parking requirements unless all of the following criteria are met: [...]*

**Response:** The proposed project is not residential in nature and does not include any residential garages. Therefore, the above standard does not apply to this application and the remaining code language has been removed from this narrative.

- R. 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.*

**Response:** The only area included in the parking space count is located fully on-site and not in the public right-of-way. Please see the attached site plan (Sheet C-100) for details on parking lot design.

- S. Shared visitor parking in certain residential areas: [...]*

**Response:** The project site is not a residential development and is not located in a residential zoning district or area. Therefore, the above standard does not apply to this project and the remaining code language has been removed from this narrative.

**03. Minimum and Maximum 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.*

**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 to the primary building entrance along the northern property line. This is separated from vehicular circulation areas by a raised curb and wheel stops. Please see the attached site plan (Sheet C-100) for details on parking lot design.

- 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. *Landscaping of at least ten percent of the parking area designed to be screened from view from the public right-of-way and adjacent properties. This landscaping shall be considered to be part of the 15 percent total landscaping required in Section 4.176.03 for the site development.*

**Response:** The proposed off-street parking area is over 650 square feet in size and, therefore, requires at least 10% landscaping and screening from the public right-of-way and adjacent properties. The parking lot is approximately 21,619 square feet in size, requiring a minimum of 2,162 square feet of landscaping to meet the 10% standard. The application proposes a total of 2,172 square feet of landscaping in the parking lot, complying with the above standard. Please see the attached landscape plan, (Sheet L-100) for details.

2. *Landscape tree planting areas shall be a minimum of eight feet in width and length and spaced every eight parking spaces or an equivalent aggregated amount.*
  - a. *Trees shall be planted in a ratio of one tree per eight parking spaces or fraction thereof, except in parking areas of more than 200 spaces where a ratio of one tree per six spaces shall be applied as noted in subsection [4.155](.03)B.3. A landscape design that includes trees planted in areas based on an aggregated number of parking spaces must provide all area calculations.*
  - b. *Except for trees planted for screening, all deciduous interior parking lot trees must be suitably sized, located, and maintained to provide a branching minimum of seven feet clearance at maturity.*

**Response:** Due to the severe limitations on this particular property from the wetlands and SROZ, a variance to the minimum parking requirements has been requested. As proposed, the parking is located along the north side of the property. The applicant is proposing to provide 24 parking spaces, requiring three trees in the parking lot. The landscape architect has proposed to plant two trees within planter islands along the north property line and due to the location of the fire hydrant he has proposed to plant the third tree next to the trash enclosure and turn around for service vehicles. Please see (sheet L100) for details on proposed landscaping tree planting in the parking area and Section 4.196 of this narrative for details on compliance with variance approval criteria.

3. *Due to their large amount of impervious surface, new development with parking areas of more than 200 spaces that are located in any zone, and that may be viewed from the public right-of-way, shall be landscaped to the following additional standards: [...]*

**Response:** The proposed parking lot has 24 stalls. Therefore, the above standard does not apply to this application and the remaining code language has been removed from the narrative.

- 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.*

**Response:** A total of 24 parking spaces are proposed on the project site, requiring one ADA parking space. The applicant is proposing one ADA parking space nearest to the building entrance to ensure safe and convenient access. Please see the attached site plan (Sheet C-100) for details on the exact location of the ADA parking space.

- 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.*

**Response:** There are no logical connections of adjacent parking areas on bordering sites due to public street location, wetlands, and differing site grade between properties. Therefore, no connections are proposed from this lot to any of the adjacent lots.

- E. *In all multi-family dwelling developments, there shall be sufficient areas established to provide for parking and storage of motorcycles, mopeds and bicycles. Such areas shall be clearly defined and reserved for the exclusive use of these vehicles.*

**Response:** The project site does not include multi-family dwellings. Therefore, the above standard does not apply to this development.

- F. *Except for single-family dwelling units and middle housing, on-street parking spaces, directly adjoining the frontage of and on the same side of the street as the subject property, may be counted towards meeting the minimum off-street parking standards.*

**Response:** There are no on-street parking spaces proposed with this application.

- G. *Tables 5 shall be used to determine the minimum and maximum parking standards for various land uses. The minimum number of required parking spaces shown on Tables 5 shall be determined by rounding to the nearest whole parking space. For example, a use containing 500 square feet, in an area where the standard is one space for each 400 square feet of floor area, is required to provide one off-street parking space. If the same use contained more than 600 square feet, a second parking space would be required. Structured parking and on-street parking are exempted from the parking maximums in Table 5.*

<b>TABLE 5: PARKING STANDARDS</b>			
<b>Use</b>	<b>Parking Minimums</b>	<b>Parking Maximums</b>	<b>Bicycle Minimums</b>
<i>Retail stores and outlets selling furniture, automobiles, or other bulky merchandise where the operator can show the bulky merchandise occupies the major areas of the building</i>	<i>1.67 per 1,000 square feet</i>	<i>6.2 per 1,000 square feet</i>	<i>1 per 8,000 square feet (minimum of 2)</i>

**Response:** The total building area for the proposed car dealership is 37,508 square feet. Typically, this development would require a minimum of 63 parking spaces. However, due to the unique circumstances associated with this development site, the applicant is requesting a variance to the minimum parking standards. As stated previously, the applicant is proposing 24 parking spaces on the project site. Due to the restricted developable area on the project site, the variance would allow the site to provide enough parking to serve employees and customers while minimizing impacts to the SROZ. Please see the attached site plan for details on proposed parking and Section 4.196 of this narrative for details on the requested variance.

*H. Electrical Vehicle Charging Stations:*

- 1. Parking spaces designed to accommodate and provide one or more electric vehicle charging stations on site may be counted towards meeting the minimum off-street parking standards.*
- 2. Modification of existing parking spaces to accommodate electric vehicle charging stations on site is allowed outright.*

**Response:** The applicant is proposing four electrical vehicle charging stations that are included in the minimum off-street parking calculation. The location of those spaces is next to the ADA loading space and very convenient to the entrance of the building.

*I. Motorcycle parking:*

- 1. Motorcycle parking may substitute for up to five spaces or five percent of required automobile parking, whichever is less. For every four motorcycle parking spaces provided, the automobile parking requirement is reduced by one space.*
- 2. Each motorcycle space must be at least four feet wide and eight feet deep. Existing parking may be converted to take advantage of this provision.*

**Response:** There is no proposed motorcycle parking on the project site.

**04. Bicycle Parking:**

*J. Required Bicycle Parking—General Provisions:*

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



**Response:** The total building area for the proposed auto dealership is 37,508 square feet, with 25,038 square feet dedicated to service and repair shops and the other 8,672 square feet dedicated to auto sales. This requires eight bicycle parking spaces based on the minimum outlined in Table 5 above. The applicant is proposing to provide eight bicycle parking spaces on the project site, four located outside of the main building entrance (short term parking) and four located inside of the building (long term parking). Please see the attached architectural plan (Sheet A-102) set for details on bicycle parking location.

**K. Standards for Required Bicycle Parking:**

1. *Each space must be at least two feet by six feet in area and be accessible without moving another bicycle.*
2. *An aisle at least five feet wide shall be maintained behind all required bicycle parking to allow room for bicycle maneuvering. Where the bicycle parking is adjacent to a sidewalk, the maneuvering area may extend into the right-of-way.*
3. *When bicycle parking is provided in racks, there must be enough space between the rack and any obstructions to use the space properly.*

**Response:** The proposed bicycle parking spaces are two feet wide and six feet long and all are accessible without moving another bike. There is five-foot-wide clear aisle adjacent to the bike parking to allow for safe and efficient maneuvering. Please see the attached architectural site plan (Sheet A-102) and architectural detail sheet (Sheet A-104) for details on the bicycle parking.

4. *Bicycle lockers or racks, when provided, shall be securely anchored.*

**Response:** The proposed bicycle parking is designed as racks securely anchored to the ground. Bicycles can easily and securely lock these racks. Please see the attached architectural detail sheet (Sheet A-104) for details on bike parking design.

5. *Bicycle parking shall be located within 30 feet of the main entrance to the building or inside a building, in a location that is easily accessible for bicycles. For multi-tenant developments, with multiple business entrances, bicycle parking may be distributed on-site among more than one main entrance.*

**Response:** The proposed bicycle parking is located out front of the building and within 30 feet of the main building entrance. The bike parking is located on concrete that connects with the proposed pedestrian pathway and is easily accessible for bicycles. Please see the attached architectural site plan (Sheet A-102) for details on the exact location of the bicycle parking.

6. *With Planning Director approval, on street vehicle parking can also be used for bicycle parking.*

**Response:** The applicant is not proposing to have on-street vehicle parking used for bicycle parking.

**L. Long-term Bicycle Parking:**

1. *Long-term bicycle parking provides employees, students, residents, commuters, and others who generally stay at a site for several hours a weather-protected place to park bicycles.*

- 2. For a proposed multi-family residential, retail, office, or institutional development, or for a park and ride or transit center, where six or more bicycle parking spaces are required pursuant to Table 5, 50 percent of the bicycle parking shall be developed as long-term, secure spaces. Required long-term bicycle parking shall meet the following standards: [...]

**Response:** The proposed development is required to have a total of eight bicycle parking spaces based on the use and size of the building. Half of the proposed parking (four spaces in total) is proposed to be located inside of the building and used as long-term bike parking. Please see the attached architectural plan (Sheet A-102 and A-104) for details.

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:

- 1. 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
30,000 – 100,000	2

- 2. Restaurants, office buildings, hotels, motels, hospitals and institutions, schools and colleges, public buildings, recreation or entertainment facilities, and any similar use which has a gross floor area of 30,000 square feet or more, shall provide off-street truck loading or unloading berths in accordance with the following table: [...]

**Response:** The proposed auto dealership is a new commercial use that is 37,508 square feet in size, requiring a total of two loading berths. Again, due to the limited space on site and the need to keep the fire lane clear, the applicant has requested a variance to the parking and loading standards only if they were not allowed to be located within the building. The applicant is proposing a two interior loading spaces on the project site, located interior to the building and accessed from the east (main level) and south side (lower level) of the building. Based on the unique brand of automobiles and the dealers experience in other locations. Please see sheets A-101 and A-102 for the location of the proposed loading spaces. See Section 4.196 of this narrative for details on compliance with variance approval criteria for any required variance.

- 3. A loading berth shall contain space 12 feet wide, 35 feet long, and have a height clearance of 14 feet. Where the vehicles generally used for loading and unloading exceed these dimensions, the required length of these berths shall be increased to accommodate the larger vehicles.

**Response:** The proposed loading spaces are 12 feet wide, 35 feet long, and have a height clearance of 14 feet. Please see the attached architectural plan (Sheet A-101, A-102, and A-121) for details on the location and clearance of the proposed loading space.

- 4. If loading space has been provided in connection with an existing use or is added to an existing use, the loading space shall not be eliminated if elimination would result in less space than is required to adequately handle the needs of the particular use.



5. *Off-street parking areas used to fulfill the requirements of this Ordinance shall not be used for loading and unloading operations except during periods of the day when not required to meet parking needs.*

**Response:** The loading spaces are not provided in connection with an existing use, and off-street parking is not being proposed to be used as a loading space.

**06. Carpool and Vanpool Parking Requirements:**

- A. *Carpool and vanpool parking spaces shall be identified for the following uses:*
1. *New commercial and industrial developments with 75 or more parking spaces,*
  2. *New institutional or public assembly uses, and* 3. *Transit park-and-ride facilities with 50 or more parking spaces.*
- B. *Of the total spaces available for employee, student, and commuter parking, at least five percent, but not fewer than two, shall be designated for exclusive carpool and vanpool parking.*
- C. *Carpool and vanpool parking spaces shall be located closer to the main employee, student or commuter entrance than all other parking spaces with the exception of ADA parking spaces.*
- D. *Required carpool/vanpool spaces shall be clearly marked "Reserved - Carpool/Vanpool Only."*

**Response:** The project site is a new commercial development proposing less than 75 parking spaces. Therefore, carpool and vanpool spaces are not required with this application and the property owner is not proposing any on site.

07. *Parking Area Redevelopment. The number of parking spaces may be reduced by up to ten percent of the minimum required parking spaces for that use when a portion of the existing parking area is modified to accommodate or provide transit-related amenities such as transit stops, pull-outs, shelters, and park and ride stations.*

**Response:** The project site is a new development, and there is no proposed redevelopment of the parking area. Therefore, the above standard does not apply to this application.

**SECTION 4.156.08: SIGN REGULATIONS IN THE PDC, TC, PDI, AND PF ZONES**

**01. Freestanding and Ground Mounted Signs:**

- A. *One freestanding or ground mounted sign is allowed for the first 200 linear feet of site frontage. One additional freestanding or ground mounted sign may be added for through and corner lots having at least 200 feet of frontage on one street or right-of-way and 100 feet on the other street or right-of-way.*

**Response:** The applicant is proposing one freestanding totem sign located at the driveway entrance along the site frontage on SW Parkway Avenue. Please see the attached architectural and civil site plan (Sheets C-100 and A-101) for details on the location and setbacks of the freestanding sign location.

- B. *The allowed height above ground of a freestanding or ground mounted sign is 20 feet except as noted in 1-2 below.*
1. *The maximum allowed height above ground for signs along the frontage of Interstate 5, and parallel contiguous portions of streets, as identified in Figure S-4, associated with multiple*

tenants or businesses may be increased by three feet for each tenant space of 10,00 square feet or more of gross floor area up to a maximum of 35 feet.

- 2. The allowed height above ground for signs in the TC Zone, Old Town Overlay Zone, and PDI Zone is eight feet, except those signs along the frontage of Interstate 5 and parallel contiguous portions of streets identified in Figure S-4.

**Response:** The proposed freestanding totem sign is 10 feet 10 inches in height, complying with the maximum 20-foot height limit for freestanding and ground mounted signs. Please see the attached Sign Elevation sheet (Attachment 016) for details on sign dimensions.

- C. The maximum allowed area for each freestanding or ground-mounted sign is determined based on gross floor area and number of tenant spaces:
  - 1. For frontages along streets other than those indicated in two below sign area allowed is calculated as follows:
    - a. The sign area allowed for signs pertaining to a single tenant:

Gross Floor Area in Single Building	Maximum Allowed Sign Area
26,000 SF or more	64 square feet

**Response:** The proposed building is greater than 26,000 square feet in size and is therefore allowed a maximum area of 64 square feet for freestanding and ground mounted signs. The proposed freestanding totem sign located at the driveway entrance is proposed to be 64 square feet in size (approximately 10.8 feet in height and 5.9 feet in width). Please see the attached sign sheet (Attachment 016) for details.

- D. Pole or sign support placement shall be installed in a full vertical position.

**Response:** All required sign support placements will be designed by a professional and licensed structural engineer to comply with all construction and design standards.

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

**Response:** The proposed freestanding totem sign is located completely on the subject site and outside of all public rights-of-way and vehicle maneuvering and parking areas. The sign is located just south of the driveway along SW Parkway Avenue. Please see the attached civil and architectural site plans (Sheet C-100 and A-101) for details.

- F. The location of free standing or ground mounted signs located adjacent to or near the Public Right-of-Way shall be in compliance with the City's Public Works Standards for sight distance clearance. Prior to construction, the location of the sign shall be approved by the City of Wilsonville Engineering Division.

**Response:** The proposed freestanding totem sign is located near the public right-of-way on SW Parkway Avenue. The sign is located outside of sight distance clearance areas and will be installed in compliance with the City's Public Works Standards. Please see the attached civil site plan (Sheet C-100) and the sign elevations (Attachment 016) for details.



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

**Response:** The proposed freestanding totem sign has been designed by a designer associated with the brand to match the design of the proposed building on site. Please see the attached sign elevations (Attachment 016) for details on design.

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

**Response:** The freestanding totem sign is proposed to be approximately 10.8 feet in height and 5.9 feet in width. The width of the sign does not exceed the height of the sign. Please see the attached sign elevations (Attachment 016) for details on design.

- I. *Along street frontages in the TC Zone and Old Town Overlay Zone monument style signs are required.*

**Response:** The project site is not located in the TC Zone or the Old Town Overlay Zone. Therefore, the above standard does not apply.

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

**Response:** The proposed freestanding totem sign is located approximately one foot from the property line and 5.5 feet from the public sidewalk on SW Parkway Avenue. Please see the attached site plan (Sheet C-100) for details on the location of the proposed sign.

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

**Response:** The applicant understands that the freestanding totem sign is required to include the address number of the proposed building unless otherwise approved in writing by the City and the Fire District.

- L. *When a sign is designed based on the number of planned tenant spaces it shall remain a legal, conforming sign regardless of the change in the number of tenants or configuration of tenant spaces.*

**Response:** The development is proposing a single building with a single tenant space. Therefore, the above standard does not apply to this project.

## 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:*
1. *The facade has one or more entrances open to the general public;*



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

**Response:** The proposed car dealership building has an entrance open to the general public and a façade that faces the front lot line on SW Parkway Avenue and the primary parking area for the building. Therefore, a building sign is allowed on the east façade of the building. On the west façade, a wall sign is proposed to advertise to those traveling along I-5.

**B. Sign Area Allowed:**

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

<b>Linear Length of Façade (feet)</b>	<b>Sign Area Allowed</b>
<i>Greater than 72</i>	<i>36 square feet plus 12 square feet for each linear foot or portion thereof greater than 72 up to a maximum of 200 square feet</i>

**Response:** The applicant is proposing two signs mounted to the building on both the west and east façades. Both of these facades are over 1,000 feet long, allowing the above sign area calculation. The two signs will be the same design, and approximately 4.8 feet wide by 5.2 feet tall (a total of 25.14 square feet). Please see the attached sign elevations (Attachment 016) for details on design and dimensions.

- 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: [...]*

**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.*

**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, the applicant can transfer sign area allowed from one of the locations described in a. and b. below. In no case shall the allowed sign area exceed an area equal to the allowed sign area for a sign eligible façade of the same linear length.*
  - a. *The freestanding sign along the Interstate 5 frontage. This generally involves placing building signs on the subject façade in lieu of installing a freestanding sign.*
  - b. *Adjacent façade up to 50 square feet, when a majority of the adjacent façade from which the sign area is being transferred is visible from Interstate 5.*



**Response:** The owner is not proposing a freestanding sign along Interstate 5. Rather, the owner is proposing to place a wall sign on the west facing façade instead.

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

**Response:** The proposed sign is less than five feet in length and does not exceed more than 75% of the length of the façade. Please see the attached sign elevations (Attachment 016) for details on design.

- 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.*

**Response:** The building sign on the east elevation is located within a definable horizontal band of black ACM, allowing definable space between the sign and top and bottom of the sign band. The building sign on the west elevation is located within a definable architectural feature brand wall which fronts I-5. This brand wall consists of black ACM and includes definable space between the sign and the top and bottom of the architectural feature brand wall. Please see the attached sign elevations (Attachment 016) for details on design of the proposed signs and A-221 for their proposed placement along the east and west facades.

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

**Response:** The proposed signs include the Lamborghini logo and will project slightly out from the wall within the borders of the sign. Please see the attached sign elevations (Attachment 016) for details on design.

#### **SECTION 4.167: GENERAL REGULATIONS – ACCESS, INGRESS, AND EGRESS**

- 01. Each access onto streets or private drives shall be at defined points as approved by the City and shall be consistent with the public's health, safety and general welfare. Such defined points of access shall be approved at the time of issuance of a building permit if not previously determined in the development permit.*

**Response:** The applicant is proposing a single access point onto SW Parkway Avenue (a public street) for ingress and egress. The driveway has been designed by a professional and licensed engineer to comply with all safety standards, including sight distance and ADA accessibility. The location of the driveway is on the northern portion of the property adjacent to SW Parkway Avenue due to the location of the existing wetland on site. Please see the attached site plan (Sheet C-100) for details on the location of the proposed access.

#### **SECTION 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.*

**Response:** The project site has an existing mapped wetland and SROZ on the property that is being avoided to the greatest extent possible. The building, parking lot, and other proposed site improvements have been located as far north as possible to not impact the SROZ or buffer. Please see the attached site plan and SRIR for details on the natural features on the project site.

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

**Response:** All proposed grading, filing, and excavation will be done in accordance with all applicable codes, including the Uniform Building Code. Please see the attached grading plan (Sheet C-200) for 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:*
  - a. accelerated erosion;*
  - b. pollution, contamination, or siltation of lakes, rivers, streams and wetlands;*
  - c. damage to vegetation;*
  - d. 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.*

**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: [...]*

**Response:** There are small areas on the site with slopes greater than 25 percent, but there is no development proposed on these hillsides. They are either along the property edge or within the SROZ and wetland where proposed development is not located. Please refer to the existing conditions plan (Sheet C-001) for details on site topography.

*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:
  1. Avoiding disturbance of the roots by grading and/or compacting activity.
  2. Providing for drainage and water and air filtration to the roots of trees which will be covered with impermeable surfaces.
  3. Requiring, if necessary, the advisory expertise of a registered arborist/horticulturist both during and after site preparation.
  4. Requiring, if necessary, a special maintenance, Management program to insure survival of specific woodland areas of specimen trees or individual heritage status trees.

**Response:** To the maximum extent possible, existing trees on the project site are being retained and protected through construction. However, 33 trees will need to be removed to accommodate the development. Of these 33 trees, 26 are non-native and do not require mitigation. The remaining 7 will be mitigated with additional plantings within the SROZ. All areas of the site not proposed for development or grading will be vegetated or landscaped. Please see the attached existing conditions plan (Sheet C-001) and the arborists report (Appendix 009) for details on tree preservation and protection, and the SRIR for details on impact to natural features.

*05. High Voltage Powerline Easements and Right-of-Way and Petroleum Pipeline Easements: [...]*

**Response:** The site does not have any existing or proposed high voltage powerline easements. Therefore, Standard (05) above does not apply, and the remaining code language has been removed.

*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.

**Response:** The proposed development has been designed by a team of qualified professionals and informed with reports that have comprehensively analyzed the site and site soil for stability. Please see the preliminary findings of the geotechnical report prepared by Carlson Geotechnical (Appendix 010). The development is provided with emergency access and the building itself will be constructed to satisfy all life and safety requirements of applicable state and local codes.

*07. Standards for Earth Movement Hazard Areas: [...]*

**Response:** There are no known earth movement hazard areas on the project site. Therefore, the above standards do not apply, and the remaining code language has been removed.

*08. Standards for Soil Hazard Areas: [...]*

**Response:** There are no known soil hazard areas on the project site. Therefore, the above standards do not apply, and the remaining code language has been removed.

#### SECTION 4.175: PUBLIC SAFETY AND CRIME PREVENTION

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

**Response:** The site has been designed by a licensed and professional architect and engineer to ensure the safety and security of all employees and customers, while deterring any crime on the property. This design includes adequate lighting, placement of building entrances and windows facing the parking lot, and adequate pedestrian walkways. Please see the attached site plan (Sheet C-100), proposed lighting cutsheets (Appendix 014), and the photometric plan (Appendix 015) for details.

*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.*

**Response:** The site has a single entrance for vehicles and pedestrians, allowing for easy navigation to the building proposed. All proposed signage will be reviewed and permitted prior to construction of such signage. Requirements pertaining to addressing requirements for buildings by emergency response personnel will be at the instruction of the Fire Department.

*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.*

**Response:** The proposed parking area has been designed to be located at the front of the building and is provided with adequate lighting to allow for surveillance by customers and employees. The loading spaces are proposed to be located inside the building, will be well lit, and secured when the dealership is closed. The vehicle parking lot and access aisles have been designed to allow for emergency vehicles and police cars to access the site. Please see the attached site plan (Sheet C-100), proposed lighting cutsheets (Appendix 014), and the photometric plan (Appendix 015) for details.

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

**Response:** Exterior lighting is provided on the project site to ensure safety of the pedestrian pathways, parking lot, outdoor waste storage area, and main building entrances. Please see the attached photometrics plan (Appendix 015) and lighting cut sheets (Appendix 014) for details.

#### 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).*

**Response:** All proposed landscaping on the project site has been designed by a professional and licensed landscape architect to comply with all applicable standards of this code.

*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).*

**Response:** The project site is approximately 100,284 square feet in size, requiring a minimum of 15,043 square feet of landscaping to comply with the 15% requirement. A total of 61,813 square feet of landscaping is proposed on the project site, including landscaping in the parking lot, throughout the site, and in the SROZ. Plantings are proposed along the public right-of-way and property lines to provide screening of the site, and within the SROZ to ensure continued vegetation in the area. Please see the attached landscape planting plan (Sheet L-100) for details on proposed landscaping on site.

*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.*

*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.*

**Response:** All of the surrounding uses are of similar density commercial properties, including other auto dealerships, medical clinics, and small business centers. The site is not adjacent to any residential areas.

*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.*

**Response:** Proposed ground mounted mechanical and utility equipment on the site is screened through landscaping or a formal enclosure. Roof mounted mechanical equipment is screened with a parapet wall. Please refer to sheet L100 and A-221 for details.

*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.*

**Response:** The only proposed outdoor storage area is the proposed waste storage area. This is located in the southwest corner of the property site where it is not visible from the public view and is screened with an

enclosure and landscaping. Please see the attached landscape plan (Sheet L-100), architectural plan (Sheet A-104), and the civil site plan (Sheet C-100) for details.

*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.*

**Response:** The proposed loading areas are proposed to be located within the building and are not visible from the right-of-way or public view. Please see the attached architectural plan (sheet A-101, A-102, and A-121) for details on the proposed loading area locations.

*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.*

**Response:** The proposed project is subject to review by the Development Review Board. Currently, no new fencing is proposed with this development. There are walls separating the unimpacted SROZ areas from the vehicular circulation areas, and those walls range in height from ½ a foot near Parkway Avenue to 8.6 feet at the west edge of the SROZ. Those walls will be screened with landscaping, retaining walls, and located below the rest of the site. See civil and architectural sheets (A-104 and C-200) for details. The proposed retaining wall will contain vehicle-grade barrier extending 42” above finish grade on the parking-lot side at locations where the site retaining wall extends 30” or higher than adjacent grade on opposing side of wall to meet fall protection requirements.

*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.)*

**Response:** The proposed development is surrounded by other commercial development. It does not appear that a site obscuring fence or planting is required for this development.

**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.*
- i. 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.*

**Response:** All shrubs proposed to be planted on the project site are in 2-gallon or 5-gallon containers and will meet all current AAN Standards. Some of the proposed shrub species include Purple New Zealand Flax, Ballerina Indian Hawthorn, Golmound Spirea, Bowles Golden Sedge, and Japanese Eyonymus. Please see the attached landscape plan (Sheet L-100) for details on proposed shrub plantings.

- ii. *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.*

**Response:** All proposed groundcover on the project site will be planted in 1-gallon containers and to the specified spacing standards above, as designed by a licensed and professional landscape architect. Some of the ground coverings proposed to be planted include Black Beard Mondo Grass, Kinnikinnick, and Elk Blue Gray Rush. Please see the attached landscape plan (Sheet L-100) for details on proposed groundcover.

- iii. *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.*

**Response:** Two seed mixes are proposed on the project site: Northwest Supreme Lawn Seed Mix and Native Meadow Seed Mix. These are proposed in minimal areas around the project site and will not cover more than 10% of the landscape areas. Please see the attached landscape plan (Sheet L-100) for details on proposed plantings on site.

- 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:*
  - i. *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.*
  - ii. *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.*
  - iii. *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.*
  - iv. *Large conifer trees such as Douglas Fir or Deodar Cedar shall be installed at a minimum height of eight feet.*
  - v. *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.*

**Response:** The applicant is proposing several distinct species of trees on the project site, including Freeman Maples, Victoria Magnolias, Pacific Fire Vine Maples, and Oregon White Oaks. All of the proposed trees will be planted in compliance with current AAN Standards and planted according to the above spacing and size standards. Please see the attached landscape plan (Sheet L-100) for details on proposed tree plantings.



- C. *Where a proposed development includes buildings larger than 24 feet in height or greater than 50,000 square feet in footprint area, the Planning Director or the Development Review Board, as applicable, may require larger or more mature plant materials.*

**Response:** Acknowledged by the applicant. The building is higher than 24 feet but is located lower than the adjoining street and built into the hillside. The applicant is not proposing more mature plant materials unless directed otherwise by the DRB.

- 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.*
- i. *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:*
    1. *Arterial streets—Three inches minimum caliper*
    2. *Collector streets—Two inches minimum caliper.*
    3. *Local streets or residential private access drives—1¼ inches minimum caliper.*
    4. *Accent or median tree—1¼ inches minimum caliper.*
  - ii. *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:*
    1. *Trees over 50 feet mature height: Quercus garryana (Native Oregon White Oak), Quercus rubra borealis (Red Oak), Acer Macrophyllum (Native Big Leaf Maple), Acer nigrum (Green Column Black Maple), Fraxinus americanus (White Ash), Fraxinus pennsylvannica 'Marshall' (Marshall Seedless Green Ash), Quercus coccinea (Scarlet Oak), Quercus pulustris (Pin Oak), Tilia americana (American Linden).*
    2. *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).*
    3. *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.*

**Response:** The site has limited frontage onto SW Parkway Avenue. As proposed, an existing 24-inch tree would remain near the driveway and a new Oregon White Oak would be planted south of the existing tree. Please see (Sheet L-100) for details.

E. *Types of Plant Species:*

- i. *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.*

**Response:** In some places on the project site, existing coniferous and deciduous trees are proposed to be retained and incorporated into the landscaping calculations. Two trees located along the north property line are proposed to be removed and are illustrated with the development plans as they will be impacted by development. The proposal includes replacing those two trees with similar species. The adjacent owner has provided a letter in support of the removal of the two trees (Appendix 017). All trees proposed to be preserved will be protected and maintained during the construction of site improvements. Please see the attached existing conditions plan (Sheet C-001) and arborist report (Appendix 009) for details on tree preservation and protection.

- ii. 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.*
- iii. 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.*

**Response:** The site has been designed by a professional licensed landscape architect and all plant materials selected have been chosen based on the climate and site-specific elements. No prohibited plant material is proposed with this application. Please see the attached landscape plan (Sheet L-100) for details on proposed planting.

- 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):*
  - i. 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.*
  - ii. 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.*

**Response:** Several existing trees are proposed to be preserved and have been incorporated into the proposed landscape screen. Those trees have been surveyed, their health analyzed by a certified arborist, and proposed for protection when possible. Please see sheet C-001 for existing conditions and proposed tree removal, sheet C-100 and C-200 for proposed preservation and protection, the arborist report for tree health and analysis (Appendix 009), and sheet L-100 for details on how those existing trees are to be preserved.

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.*

**Response:** All proposed plant material will be installed to current industry standards and shall be property staked to assure survival. Please see the attached landscape plan (Sheet L-100 and L-101) for details.

- 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.*

**Response:** The property owner understands that continued maintenance of landscaped areas will be required.

- 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:*
- i. *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.*
  - ii. *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.*
  - iii. *Other irrigation system specified by a licensed professional in the field of landscape architecture or irrigation system design.*
  - iv. *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.*

**Response:** A permanent, built-in irrigation system with automatic controls is proposed to be installed with the landscaping. Please see the attached landscape plan (Sheet L-200) for details on proposed irrigation location.

- 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.*

**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. All required setback and vision clearance standards are met with the proposed design. Please see sheet C-200.

*08. Landscaping on Corner Lots. [...]*

**Response:** The project site is not a corner lot. Therefore, the above standard does not apply, and the remaining code language has been removed.

*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 ( $\pm$  two inches per week): small convoluted lawns, lawns under existing trees, annual and perennial flower beds, and temperamental shrubs;*
- B. Moderate water usage areas ( $\pm$  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.*

**Response:** Landscape plans, including planting and irrigation plans, are included in the submitted plan set for this application. This includes details on existing and proposed landscaping and specific plant details. Please see the attached landscaping plans (Sheets L-100 to L-201) for details.

*10. 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.*

**Response:** The applicant understands no final certificate of occupancy shall be granted until the completion of landscaping or an adequate bond for the landscaping is completed.

## SECTION 4.177: STREET IMPROVEMENT STANDARDS

*This section contains the City's requirements and standards for pedestrian, bicycle, and transit facility improvements to public streets, or within public easements. The purpose of this section is to ensure that development, including redevelopment, provides transportation facilities that are safe, convenient, and adequate in rough proportion to their impacts.*

- 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: [...]*

**Response:** The project site takes access from SW Parkway Avenue, an existing public street. There are no proposed changes to the public street other than installing a driveway to access the property. There are no new streets proposed with this application.

- 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.*

**Response:** There are existing public sidewalks on SW Parkway Avenue along the entire frontage of the project site. This sidewalk is proposed to remain with the proposed development and be replaced where the driveway approach is constructed. Please see the attached site plan (Sheet C-100) for details.

- 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.*

**Response:** The City of Wilsonville's Transportation System Plan does not show bicycle facilities on SW Parkway Avenue (Figure 3-5). Therefore, there are no bicycle facilities proposed with this application.

- 05. Multiuse Pathways. [...]*

**Response:** The applicant is not proposing any multiuse pathways on or adjacent to the project site. There is a public sidewalk on Parkway Avenue, and no other pathways are proposed.

- 06. Transit Improvements. Development on sites that are adjacent to or incorporate major transit streets shall provide improvements as described in this section to any bus stop located along the site's frontage, unless waived by the City Engineer for reasons of safety or traffic operations. Transit facilities include bus stops, shelters, and related facilities. Required transit facility improvements may include the dedication of land or the provision of a public easement. [...]*

**Response:** The project site is not adjacent to any major transit streets. Therefore, no transit improvements are proposed with this application.

07. Residential Private Access Drives. [...]

**Response:** The proposed development does not include any residential private access drives. Therefore, the above standard does not apply, and the remaining code language has been removed.

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.*

**Response:** There is one access drive connecting the site to SW Parkway Avenue that has been designed to be free of obstructions. Please see the attached site plan (Sheet C-100) for details.

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

**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. Please see the attached site plan (Sheet C-100) for details.

- 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.*

**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 (Appendix 016) and the turning radii of the fire access lane on both the civil and architectural site plans.

- 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.*

**Response:** SW Parkway Avenue is not a collector or arterial street, and the applicant is only proposing one access approach onto the property. Please see the attached site plan (Sheet C-100) for details on the location of the proposed driveway.

- 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).*

**Response:** The area around the property is already built out and there are no opportunities for future extension through the site due to the presence of I-5, the SROZ, and existing development north of the site. Please see (Sheet C-100.)

- 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.*

**Response:** The driveway has been designed by a professional licensed engineer and will not require any vehicles to stop in the public right-of-way, obstruct movement on SW Parkway Avenue, or require backing up onto the public street. Please see the attached site plan (Sheet C-100) for details on the proposed driveway's location.

- 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.*

**Response:** The proposed driveway is wide enough to safely allow traffic to enter and exit the project site. The driveway's mouth on SW Parkway Avenue is proposed to be approximately 26 feet wide. Please see the attached site plan (Sheet C-100) for 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.*

**Response:** The applicant understands the city can require traffic-calming features if necessary.

- 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.*

**Response:** The entire project site, including the vehicular access and maneuvering, has been designed by a professional and licensed engineer to ensure adequate room and safety is achieved. Please see the attached site plan (Sheet C-100) for details.

- 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.*

**Response:** The proposed driveway does not cross a culvert or ditch. Therefore, the above standard does not apply to this application.

- 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.*

**Response:** A temporary driveway will be provided during construction of the proposed development and be replaced by the permanent driveway proposed.

- 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. [...]*

**Response:** The proposed development is not a residential or mixed-use development. Therefore, the above standard does not apply, and the remaining code language has been removed from this narrative.

#### **SECTION 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.*

**Response:** The proposed development includes an outdoor storage area for mixed solid waste and recycling in a screened and covered outdoor storage area in the southwest corner of the property. Please see the attached site plan (Sheet A-102 and sheet A-104) for details on the location and dimensions.

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.*

**Response:** The storage area square footage was not included in calculating the building floor area.

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.*

**Response:** The proposed building is comprised of two uses, both taking up more than 20% of the building area. Therefore, waste storage was calculated using both uses based on the square footage and is proposed to be shared in a single location on the project site.

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.*

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.*

**Response:** The total building area for the proposed auto dealership is 37,508 square feet. Assuming all retail space, the use would require 375 square feet of waste storage area. The applicant is providing 385 square feet of waste storage area in a single location on site. Please see the attached site plan (Sheet A-102) for details on the location and (Sheet A-104) for the dimensions of the proposed storage area.

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.*

**Response:** The applicant has received approval from the City's franchised garbage hauler, Republic Services. Please see enclosed Appendix 019 for Service Provider Letter.

08. *Existing multi-family residential and non-residential developments [...]*

**Response:** There are no existing developments on the project site. Therefore, the above standard does not apply, and the remaining code language has been omitted from this narrative.

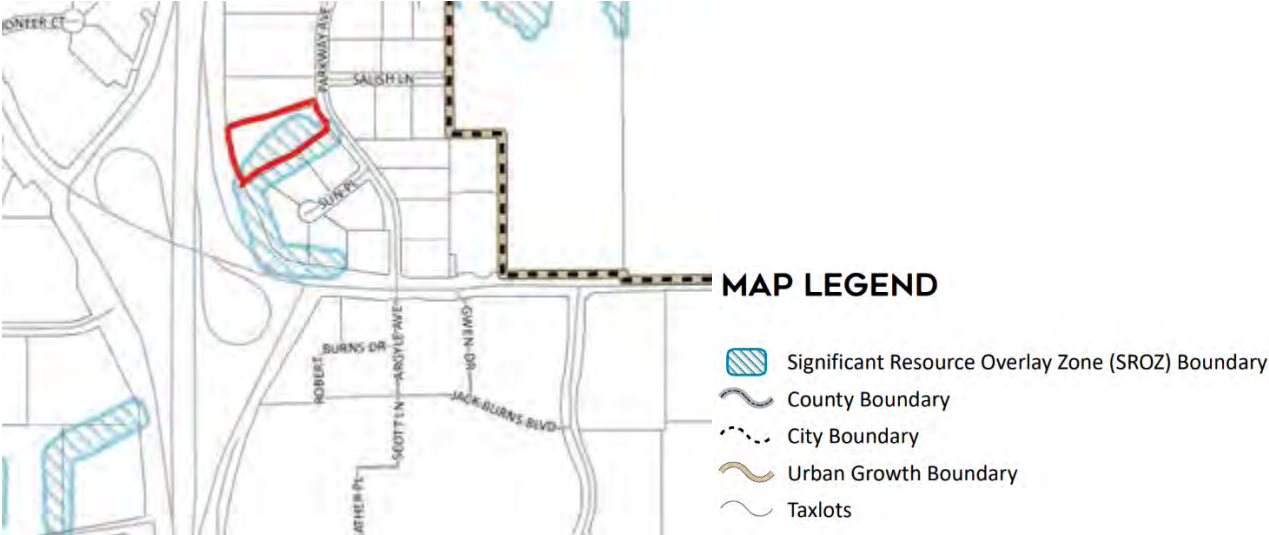
#### **SECTION 4.196: VARIANCES**

01. *Where difficulties exist rendering compliance with Chapter 4 impractical and such compliance would create unnecessary hardship to the owner or user of land or buildings, the Development Review Board may grant a variance from the provisions of this Code after the prescribed public hearing as set forth in Section 4.013, and after an investigation; provided all of the following conditions exist:*

- A. *The difficulty would apply to the particular land or building regardless of the owner.*

**Response:** The proposed project would require the approval of three variances. One variance to the minimum number of parking spaces, one variance to the loading spaces if they're required to be located outside of the building, and one variance to the minimum separation and landscaping requirement between the sidewalk and north property line. All three variances are created by the same issue. The difficulties of developing this property would apply uniformly to any prospective owner or developer. The property is 2.3 acres in size and zoned Planned Development Commercial. Approximately 0.71 acres of the site is within a wetland and additional area set aside for riparian protection enlarges the total area of the site attributed by resource protection and unavailable for development. The presence of the resource and associated buffers on this site significantly restricts traditional development approaches to the site. The following figure illustrates the City of Wilsonville

2023 SROZ map. This application also includes a Significant Resource Impact Report (SRIR) prepared by John Van Staveren, PWS, a reputable Senior Scientist with over 23 years of experience and president of Pacific Habitat Services, Inc., a letter of concurrence by the Oregon Division of State Lands, and a site plan illustrating the limits of the SROZ and associated impact areas. (Civil sheet C-100). The difficulties posed by the presence of the resources are intrinsic to the land itself regardless of the owner of the property.



*B. The request for a variance is not the result of an illegal act on the part of the applicant or the applicant's agent.*

**Response:** The variances are being requested to balance the competing interests of the various chapters of the development code with the owners’ interest in developing the property with a permitted use. There have been no illegal actions on the part of the applicant or their representatives. Instead, the requested variances are grounded in a commitment to lawful and responsible development practices, governing land use and environmental protection.

*C. The plight of the owner is due to unique circumstances, such as lot size or shape, topography, and size or shape of building, which are not typical of the general conditions of the surrounding area.*

**Response:** The challenges associated with meeting the regulations that the applicant is asking to be varied are directly tied to distinctive characteristics about this property, which distinguish it from the surrounding area. It’s one of three properties within the immediate area that are impacted by this particular resource. Two of those properties are directly south of this site and are developed with a hotel and associated parking lot. The property is zoned for commercial development, but over half of the property is encumbered by the resource and its associated buffers. These unique circumstances do not allow the property to be developed with a traditional approach. The distinctive features of the subject site are not typical of the conditions of other properties in the surrounding area.



- D. *The practical difficulty or unnecessary hardship asserted as a ground for a variance must relate to the premises for which the variance is sought and not to other premises or the personal conditions of the applicant.*

**Response:** All three of the requested variances are a result of specific characteristics of the subject property. The constraints imposed by the wetlands and associated regulations are specific to the property for which the variances are proposed. The focus of developing the property in an economically beneficial manner is based on resource and protection areas specific to this property. The proposed variances do not impact the developability of adjacent properties.

- E. *The variance does not allow the property to be used for purposes not authorized within the zone involved.*

**Response:** The requested variances are not related to the use of the property as permitted within the designated zoning district. The proposed variances are to the number of required parking spaces, perimeter buffering along the north property line (if required), and setbacks. They would not enable activities that are incompatible with the underlying zone.

- F. *The variance is the minimum necessary to relieve the hardship.*

**Response:** The development has been tailored to address the specific hardships posed by the wetlands and associated buffers. The proposed variances are essential to balancing the regulatory requirements with the property owners' desire to develop the subject property with a use allowed in the zone. The proposed variances represent the minimum relief necessary to mitigate the constraints imposed by the wetlands without compromising the overall purpose of the development regulations.

- G. *Where the variance is sought to allow development within a flood zone, the following additional standards shall apply: [...]*

**Response:** The property does not include a mapped flood zone. These standards are not applicable to the proposed development.

#### **SECTION 4.199.40: LIGHTING SYSTEMS STANDARDS FOR APPROVAL**

##### *01. Non-Residential Uses and Common Residential Areas.*

- A. *All outdoor lighting shall comply with either the Prescriptive Option or the Performance Option below.*
- 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.*
  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.*
  3. *The maximum pole or mounting height shall be consistent with Table 8.*
  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.*
- 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: [...]*

**Response:** The proposed lighting on the project site complies with the above prescriptive option standards, apart from lighting adjacent to the SROZ area on site (Standard e above). The proposed wattage on site ranges from 14 to 42 and has been designed by a professional lighting engineer. Please see the attached photometrics plan and lighting cut sheets for details (Appendices 014 and 015).

- 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.*

**Response:** The property owner understands that all exterior lighting systems proposed on the project site need to be controlled by automatic devices or a system that follows all above light curfew standards.

## SITE DESIGN REVIEW

### SECTION 4.400: PURPOSE

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;

**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 car dealership for employees and customers, while ensuring a visual aesthetic building and protection of natural resources, including the SROZ and wetlands. Please see the attached plan set for details on the proposed site and building design.

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

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

- 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;

**Response:** As mentioned, the proposed building is setback to the rear of the site to preserve the existing SROZ and wetland on site. To the maximum extent possible, the existing landscaping is proposed to be preserved on the project site, and mitigation 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;

**Response:** The proposed use of a car dealership and car repair is a permitted use within the PDC 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;

**Response:** The project site is currently undeveloped, and the proposed car dealership will improve the property value of the area.

- 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.*

**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 attached utility plan (Sheet C-300) 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;*

**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, building entrances facing the 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;*

**Response:** The project site is currently an undeveloped property within the City limits and the urban growth boundary that is zoned for commercial development. The proposed car dealership will improve the use of the site and provide growth in the community.

#### **SECTION 4.421: CRITERIA AND APPLICATION OF DESIGN STANDARDS**

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

- J. 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.*

**Response:** The site has been designed to preserve existing landscape where possible, specifically within the wetland and SROZ buffer. 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. There are two trees on the adjacent property to the north proposed to be removed. The property owner of the subject site has been in correspondence with the adjacent property owner and has received a letter allowing for the trees to be removed. Please see the existing conditions plan (Sheet C-001) for details on landscape preservation.

- K. 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.*

**Response:** The site has been designed to locate the proposed building outside of the mapped wetland and SROZ on the project site as much as possible. The proposed location allows for minimal impacts to the SROZ and buffer, as well as the preservation of as many trees as possible. Please see the attached site plan (Sheet C-100) for details.

- L. 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.*

**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 and minimum drive aisle widths. Please see the attached site plan (Sheet C-100) and Section 4.155 and 4.167 of this narrative for details on proposed on-site circulation.

- M. 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.*

**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. Please see the preliminary stormwater report (Appendix 013) and the attached utility plan (Sheet C-300) for details.

- N. 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.*

**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 are the required stormwater planters. Please see the attached utility plan (Sheet C-300) for details.

*O. 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.*

**Response:** A comprehensive plan sign is proposed and illustrated within Appendix 016. All signs will be permitted as required.

*P. 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.*

**Response:** The proposed development does not include any of the above special features. 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.

#### **SECTION 4.430: LOCATION, DESIGN, AND ACCESS STANDARDS FOR MIXED SOLID WASTE AND RECYCLING**

##### *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.*

**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 (Sheet A-102) 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.*

**Response:** The site has been designed by a professional licensed engineer to comply with all applicable Uniform Building and Fire Code requirements in mind. The proposed trash enclosure will be screened and covered with a roof. Please see (Sheet A-104) for details.

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

**Response:** The required storage area for both solid waste and recycling are satisfied with a single location south of the proposed building adjacent to the vehicle maneuvering area/fire turn around lane. Please see the discussion earlier in this narrative on the size of the enclosure, (Sheet A-102) for the proposed location and the attached architectural detail sheet (Sheet A-104) for details of the proposed trash and recycling enclosure.



- 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.*

**Response:** The proposed exterior storage area is located six feet from the rear yard property line, complying with the minimum three feet required in the above standard. Please see the attached site plan (Sheet C-100) 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.*

**Response:** The proposed exterior storage area is located in a high visibility location that will ensure convenience and security for the users. With the proposed use of an auto dealership, the waste and recycling storage area will be used exclusively by employees and locked when not in use. The proposed location allows for easy and safe access while keeping the exterior storage area away from the location customers will regularly be expected on site.

- F. Exterior storage areas can be located in a parking area if the proposed use provides at least the minimum number of parking spaces required for the use after deducting the area used for storage. Storage areas shall be appropriately screened according to the provisions of Section 4.430(.03), below.*

**Response:** The proposed exterior storage area is not located in the parking lot, but south of the building adjacent to the fire access and turnaround. Please see the attached site plan (Sheet C-100) for details on the location of the trash and recycling storage on site.

- 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.*

**Response:** The location of the storage area is located adjacent to the fire lane turnaround, which will provide ample room for collection vehicles to access the storage area while avoiding any obstruction to pedestrian or vehicular movement on site. Please see the attached site plan (Sheet C-100) for details on the location of the trash and recycling storage on site.

### *03. Design Standards:*

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

**Response:** The proposed exterior storage area is approximately 18.5 feet wide and 23 feet deep. This is consistent with current methods of local collection and will allow the servicer to access the trash and recycling bins easily. Please see the attached site plan (Sheet A-102) for details.

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

**Response:** The property owner will ensure the storage containers used for the trash enclosure meets Uniform Fire Code standards. As proposed, the enclosure is covered with a roof. Please refer to (Sheet A-104) for details.

- 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.*

**Response:** The exterior storage area is enclosed by a CMU wall that is 6 feet 8 inches in height. The enclosure is accessible by a metal gate that is over 10 feet wide and can be secured in both an open and closed position. Please see the attached architectural plans (Sheets A-102 and A-104) for details on the design of the trash enclosure. The location has been approved by Republic Services, the service provider. Please see Appendix 019.

*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.*

**Response:** The waste storage area will be accessible to employees and users during business hours and to collection vehicles during the days scheduled for service. When the business is not in operation, the trash enclosure gates will be secured.

- 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.*

**Response:** The storage area is located south of the building and accessible by the primary drive aisle/fire access route, which is paved and graded for easy vehicle access. It is adjacent to a turn around and there are 20 feet of horizontal clearance and nine feet of vertical clearance within the storage area. Please see the attached architectural detail sheet (Sheet A-104) for details.

- 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.*

**Response:** The storage area is proposed to be located adjacent to a hammerhead turn around, ensuring collection vehicles will have easy access to the trash enclosure and be able to turn around and exit the site in a forward motion without backing up along the drive aisle or within the public right-of-way. Please see the attached site plan (Sheet C-100) for details.

## TREE PRESERVATION AND PROTECTION

### SECTION 4.610.10: STANDARDS FOR TREE REMOVAL, RELOCATION, OR REPLACEMENT

1. *Except where an application is exempt, or where otherwise noted, the following standards shall govern the review of an application for a Type A, B, C or D Tree Removal Permit:*
  - A. *Standard for the Significant Resource Overlay Zone. The standard for tree removal in the Significant Resource Overlay Zone shall be that removal or transplanting of any tree is not inconsistent with the purposes of this Chapter.*

**Response:** Several trees are proposed for removal within the 50-foot SROZ buffer, but not within the mapped resource. Please see the existing conditions plan (Sheet C-001) for details on what trees are proposed to be removed.

- B. *Preservation and Conservation. No development application shall be denied solely because trees grow on the site. Nevertheless, tree preservation and conservation as a design principle shall be equal in concern and importance to other design principles.*
- C. *Developmental Alternatives. Preservation and conservation of wooded areas and trees shall be given careful consideration when there are feasible and reasonable location alternatives and design options on-site for proposed buildings, structures or other site improvements.*

**Response:** To the maximum extent possible, trees on the project site are proposed to be preserved with this development application. The site has several constricting existing conditions, including the topography and wetland. Tree removal is the minimum possible to allow for the site to be developed with a permitted use and the existing natural resources to remain.

- D. *Land Clearing. Where the proposed activity requires land clearing, the clearing shall be limited to designated street rights-of-way and areas necessary for the construction of buildings, structures or other site improvements.*

**Response:** Any land clearing required before and during the proposed construction will be limited to designated rights-of-way and areas necessary for the construction of buildings and site improvements. Please see the attached site plan (Sheet C-100) and preliminary grading plan (Sheet C-200) for details.

- E. *Residential Development. [...]*

**Response:** The proposed development is commercial in nature and there are no residential uses included with this application. Therefore, Standard (E) does not apply, and the remaining code language has been omitted from this narrative.

- F. *Compliance With Statutes and Ordinances. The proposed activity shall comply with all applicable statutes and ordinances.*

**Response:** The proposed development, including tree removal and mitigation, will comply with all applicable statutes and ordinances as demonstrated within this narrative and supporting documents and reports.

- G. *Relocation or Replacement.* The proposed activity shall include necessary provisions for tree relocation or replacement, in accordance with WC 4.620.00, and the protection of those trees that are not to be removed, in accordance with WC 4.620.10.

**Response:** The proposed development includes the minimum amount of tree removal possible while still allowing the site to be developed with a permitted use. All applicable code standards for tree replacement are complied with, as demonstrated in this narrative and the attached plan set and arborist report.

- H. *Limitation.* Tree removal or transplanting shall be limited to instances where the applicant has provided completed information as required by this Chapter and the reviewing authority determines that removal or transplanting is necessary based on the criteria of this subsection.
1. *Necessary For Construction.* Where the applicant has shown to the satisfaction of the reviewing authority that removal or transplanting is necessary for the construction of a building, structure or other site improvement, and that there is no feasible and reasonable location alternative or design option on-site for a proposed building, structure or other site improvement; or a tree is located too close to existing or proposed buildings or structures, or creates unsafe vision clearance.
  2. *Disease, Damage, or Nuisance, or Hazard.* Where the tree is diseased, damaged, or in danger of falling, or presents a hazard as defined in WC 6.208, or is a nuisance as defined in WC 6.200 et seq., or creates unsafe vision clearance as defined in this Code.(a)As a condition of approval of Stage II development, filbert trees must be removed if they are no longer commercially grown or maintained.
  3. *Interference.* Where the tree interferes with the healthy growth of other trees, existing utility service or drainage, or utility work in a previously dedicated right-of-way, and it is not feasible to preserve the tree on site.
  4. *Other.* Where the applicant shows that tree removal or transplanting is reasonable under the circumstances.

**Response:** Tree removal is proposed for 29 trees (27 on-site trees and 2 trees located on the adjacent property to the north). All of the trees proposed for removal are in conflict with the sidewalk on Parkway Avenue or necessary for construction and development of the site. A detailed list of the specific trees proposed for removal, including the location, species, and size of the tree, is provided in the attached arborist report.

- I. *Additional Standards for Type C Permits.*
1. *Tree survey.* For all site development applications reviewed under the provisions of Chapter 4 Planning and Zoning, the developer shall provide a Tree Survey before site development as required by WC 4.610.40, and provide a Tree Maintenance and Protection plan, unless specifically exempted by the Planning Director or DRB, prior to initiating site development.

**Response:** A tree survey is provided in the plan set and arborist report that complies with the information required by WC 4.610.40. Please see Sheet C-001 and attachment 1 and 2 in the arborist report for details.

2. *Platted Subdivisions. [...]*

**Response:** The project site is not a platted subdivision. Therefore, Standard (2) above does not apply, and the remaining code language has been omitted.

3. *Utilities. The City Engineer shall cause utilities to be located and placed wherever reasonably possible to avoid adverse environmental consequences given the circumstances of existing locations, costs of placement and extensions, the public welfare, terrain, and preservation of natural resources. Mitigation and/or replacement of any removed trees shall be in accordance with the standards of this subchapter.*

**Response:** The site has been designed by a licensed and professional engineer to avoid conflict with the existing landscaping proposed to be preserved and to avoid any adverse environmental consequences. Please see the attached utility plan (Sheet C-300) for details on the location and construction of utilities proposed on the project site.

#### **SECTION 4.620.00: TREE RELOCATION, MITIGATION, OR REPLACEMENT**

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

**Response:** The applicant is proposing to remove 29 trees on the project site (including two trees on the adjacent private property to the north). A total of 27 existing trees will be retained and protected on-site. Therefore, a Type C Tree Removal Permit is required as part of this application.

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

**Response:** The applicant is proposing to remove a total of 29 trees and plant a total of 40 trees. This mitigation planting includes 5 bigleaf Maples, 10 Oregon White Oaks, and 5 Willamette Valley Ponderosa Pines in the upland planting area on site and 5 Balsam Poplars and 15 Oregon Ashes in the wetland planting area on the project site. Please see the attached landscaping plan (Sheet L-100) for details on proposed mitigation planting.

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

**Response:** All trees proposed to be planted for mitigation are included in the landscaping plan (Sheet L-100) in the Mitigation Planting Table. These tree species were selected with the specific site conditions in mind and will be planted to the above standards.

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

**Response:** All trees proposed to be planted on the project site will meet the requirements of the American Association of Nurserymen American Standards for Nursery Stock for top grade trees. Please see the attached landscaping plan (Sheet L-100) for details.

5. *Replacement Tree Location.*

- A. *City Review Required. The City shall review tree relocation or replacement plans in order to provide optimum enhancement, preservation and protection of wooded areas. To the extent feasible and desirable, trees shall be relocated or replaced on-site and within the same general area as trees removed.*
- B. *Relocation or Replacement Off-Site. When it is not feasible or desirable to relocate or replace trees on-site, relocation or replacement may be made at another location approved by the City.*

**Response:** The proposed mitigation trees will be planted within the center of the project site and within the wetland limits and SROZ buffer. Half of the trees will be planted in the upland planting area and half will be planted in the wetland planting area. Please see the attached landscaping plan (Sheet L-100) for details.

#### **SECTION 4.620.10: TREE PROTECTION DURING CONSTRUCTION**

1. *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.*

**Response:** All trees proposed to be protected on the project site will be clearly labeled during construction. Please see the demolition and existing conditions plan (Sheet C-001) and the arborist report for details on tree protection during construction.

- 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.*

**Response:** The applicant will not place construction materials near trees nor attach anything to trees during construction on the project site. Please see the arborist report for details on tree preservation proposed during construction.

- 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. Please see the arborist report for details on the proposed protective barrier

#### **SECTION 4.620.20: MAINTENANCE AND PROTECTION STANDARDS**

- 1. 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.*
  - 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 the attached arborist report for details on proposed maintenance and protection.

### **III. CONCLUSION**

This written statement and the accompanying supporting documents demonstrate that it is feasible for the proposed development to comply with the applicable approval criteria for a Planned Development Permit, Site Design Review, Variance(s), SROZ Map Verification, and Significant Resource Impact Review in the City of Wilsonville. The applicant respectfully requests that the City approve the application.

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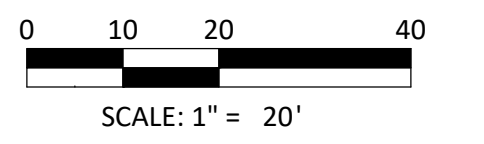
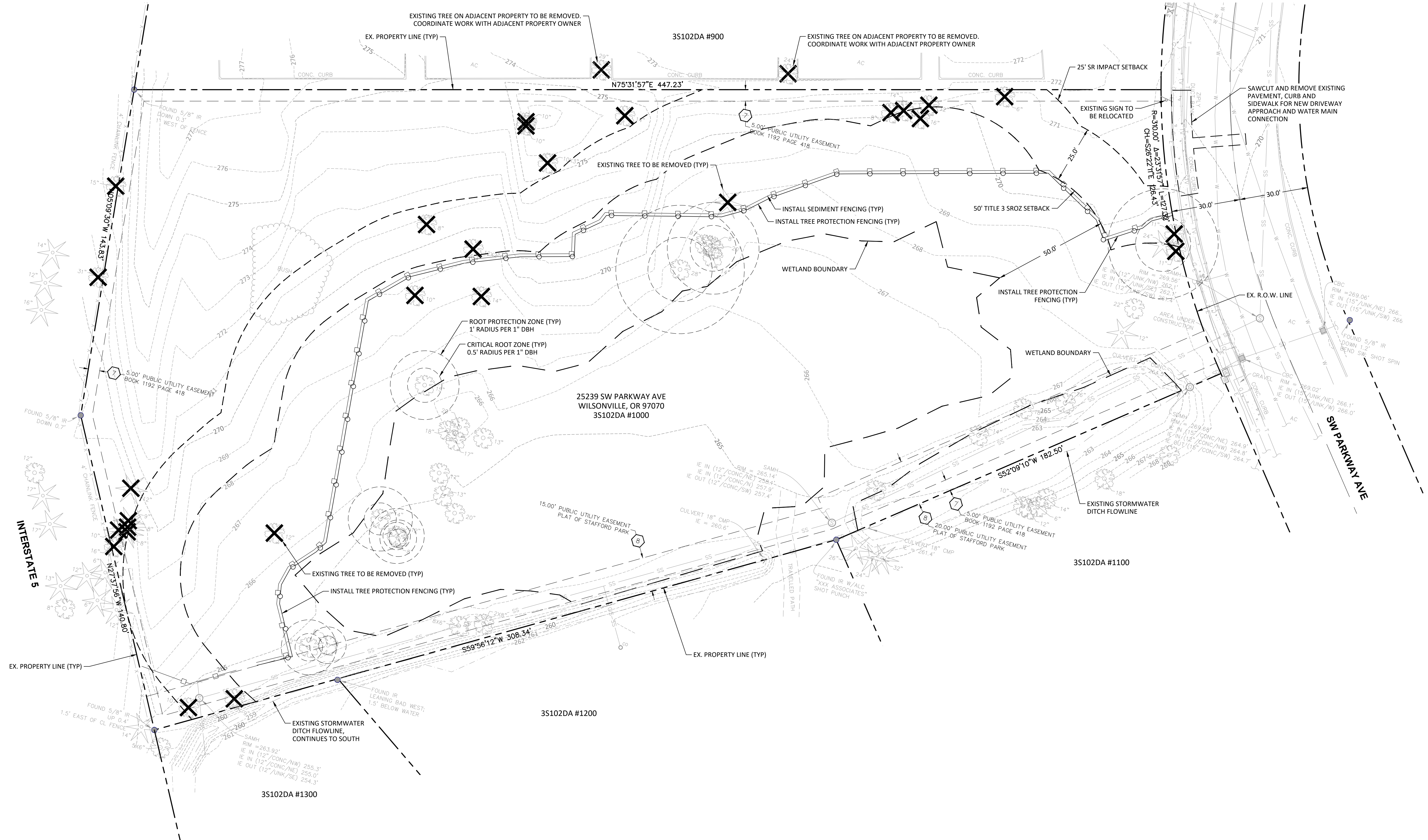
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25239 SW PARKWAY AVE  
WILSONVILLE, OR 97070

REVISIONS		
No.	Description	Date

DRAWN BY: HHPR  
 CHECKED BY: HHPR  
 JOB NO: 22-033  
 DATE: 10/04/2024  
 ISSUED FOR: PRELIMINARY  
 SHEET TITLE  
 EXISTING CONDITIONS & DEMO  
 PLAN  
 SHEET NO.

EXISTING CONDITIONS LEGEND:

- FOUND MONUMENT AS NOTED
- CATCH BASIN CENTER
- ▽ STORM CULVERT
- STORM DRAIN MANHOLE
- CLEAN OUT
- SANITARY SEWER MANHOLE
- WATER VALVE
- ELECTRIC VAULT
- TELE RISER
- END LOCATES (SERVICE MAY CONTINUE)
- EXCEPTION NUMBER
- SIGN
- TEST PIT
- DECIDUOUS TREE
- EVERGREEN TREE
- SS UNDERGROUND SANITARY SEWER LINE
- SD UNDERGROUND STORM DRAIN LINE
- W UNDERGROUND WATER LINE
- G UNDERGROUND GAS LINE
- E UNDERGROUND POWER LINE
- T UNDERGROUND TELE-COM LINE
- TV UNDERGROUND CATV LINE
- CENTERLINE DITCH/FLOWLINE
- BUSH LINE
- FENCE AS NOTED
- EASEMENT LINE
- CONCRETE
- AC ASPHALT CONCRETE
- CONC. CONCRETE
- DOC. NO. DOCUMENT NUMBER, WASHINGTON COUNTY DEED RECORDS
- IR IRON ROD
- W/ WITH
- ALC ALUMINUM CAP
- UNK UNKNOWN
- CMP CORRUGATED METAL PIPE
- DELINEATED WETLAND BOUNDARY
- SROZ BOUNDARY (50' SETBACK)
- SROZ IMPACT AREA (25' SETBACK FROM SROZ)
- PROPOSED TREE PROTECTION FENCING
- PROPOSED EROSION CONTROL SEDIMENT FENCING
- ✕ REMOVE EXISTING TREE





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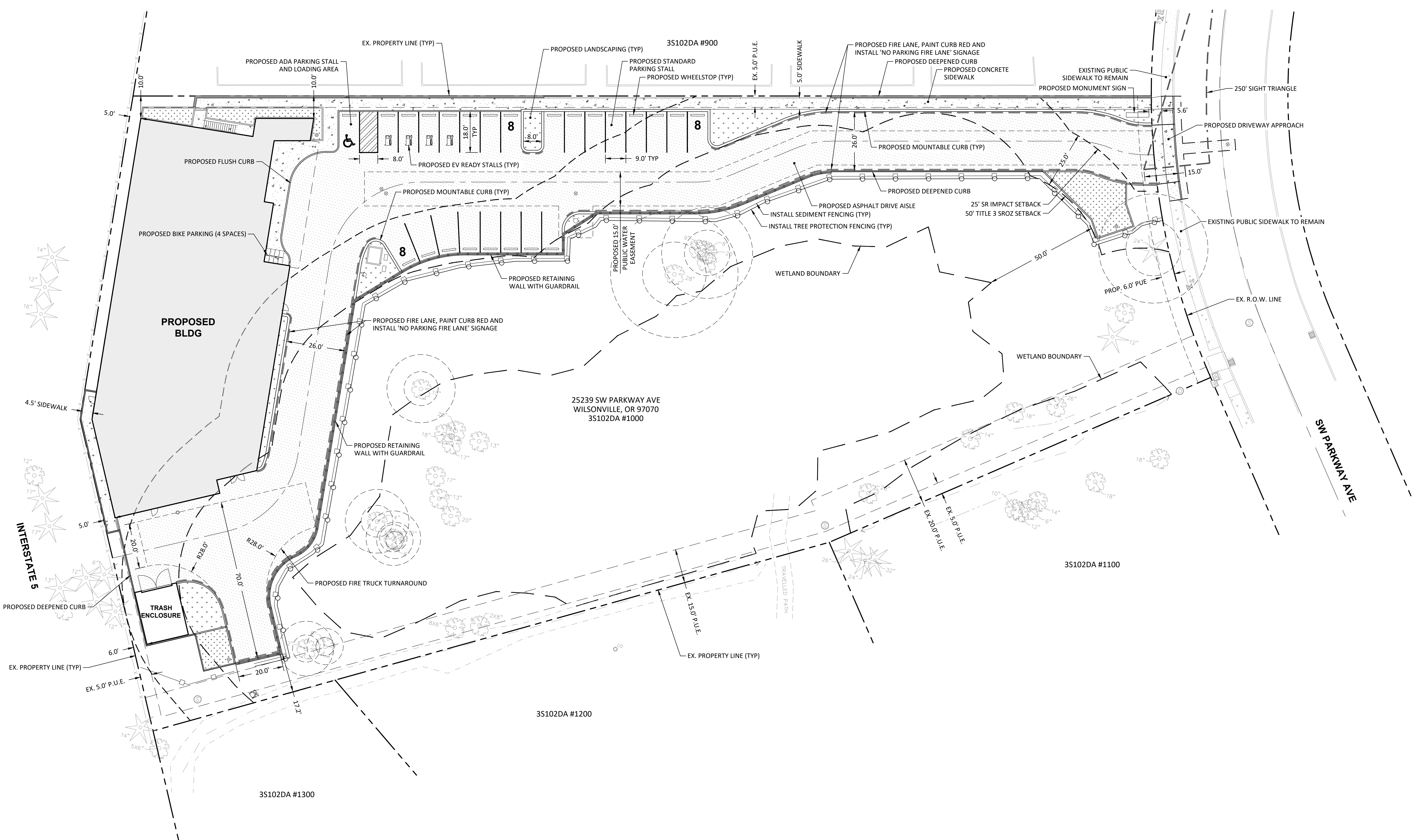
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 PRELIMINARY CIVIL SITE PLAN  
 SHEET NO.



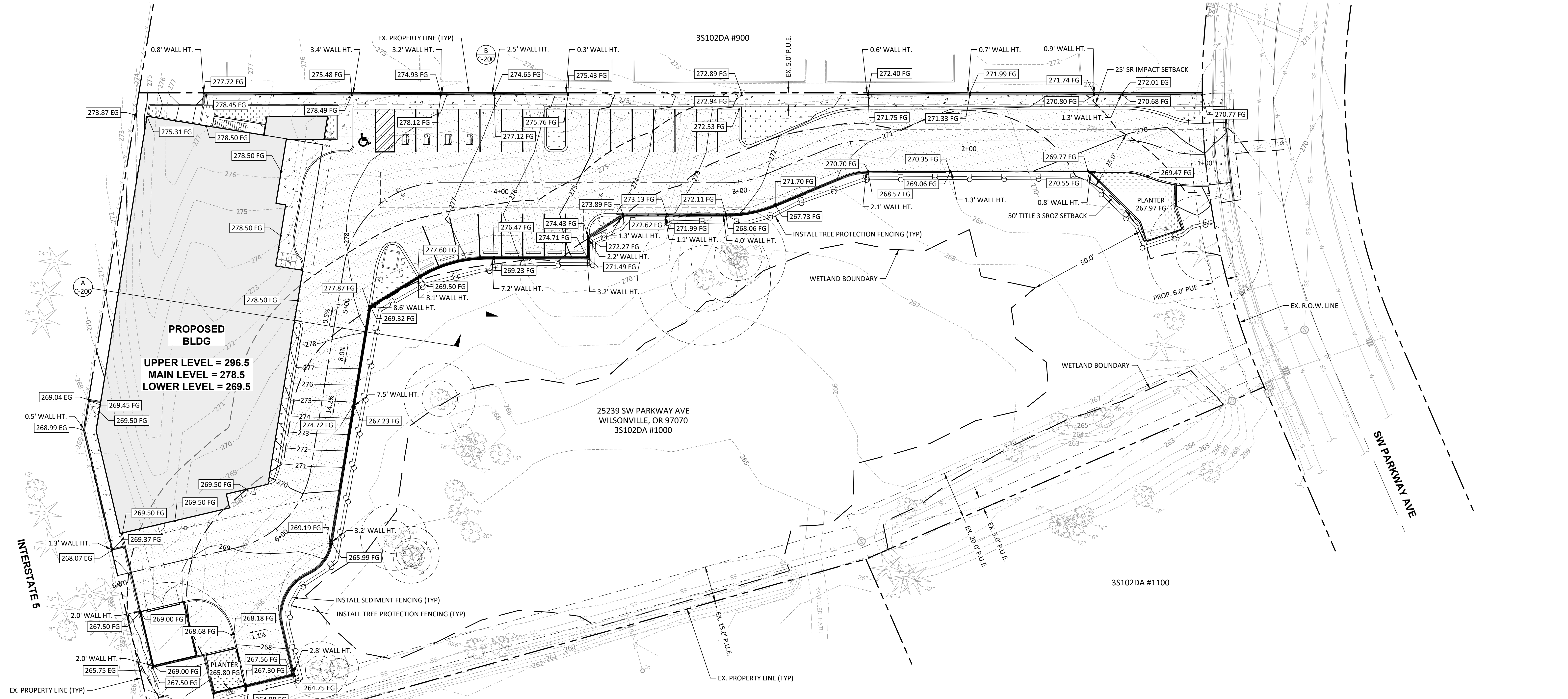
- LEGEND:**
- EXISTING PROPERTY / RIGHT-OF-WAY LINE
  - - - EXISTING EASEMENT
  - - - DELINEATED WETLAND BOUNDARY
  - - - SROZ BOUNDARY (50' SETBACK)
  - - - SROZ IMPACT AREA (25' SETBACK FROM SROZ)
  - PROPOSED TREE PROTECTION FENCING
  - PROPOSED SEDIMENT FENCING
  - PROPOSED GUARDRAILING
  - ▨ PROPOSED STORM PLANTER
  - ▨ PROPOSED GENERAL LANDSCAPING
  - ▨ PROPOSED ASPHALT PAVEMENT
  - ▨ PROPOSED CONCRETE SIDEWALK

F:\01-Portland\ADC (Axis Design Group)\ADC-122 (Wilsonville Lamborghini)\ADG122-DWGS\Sheets\Sheet\_VDC122 - C-100 - SITE PLAN.dwg @Plot Date: Jun 13 24 @ Time: 1:38 PM

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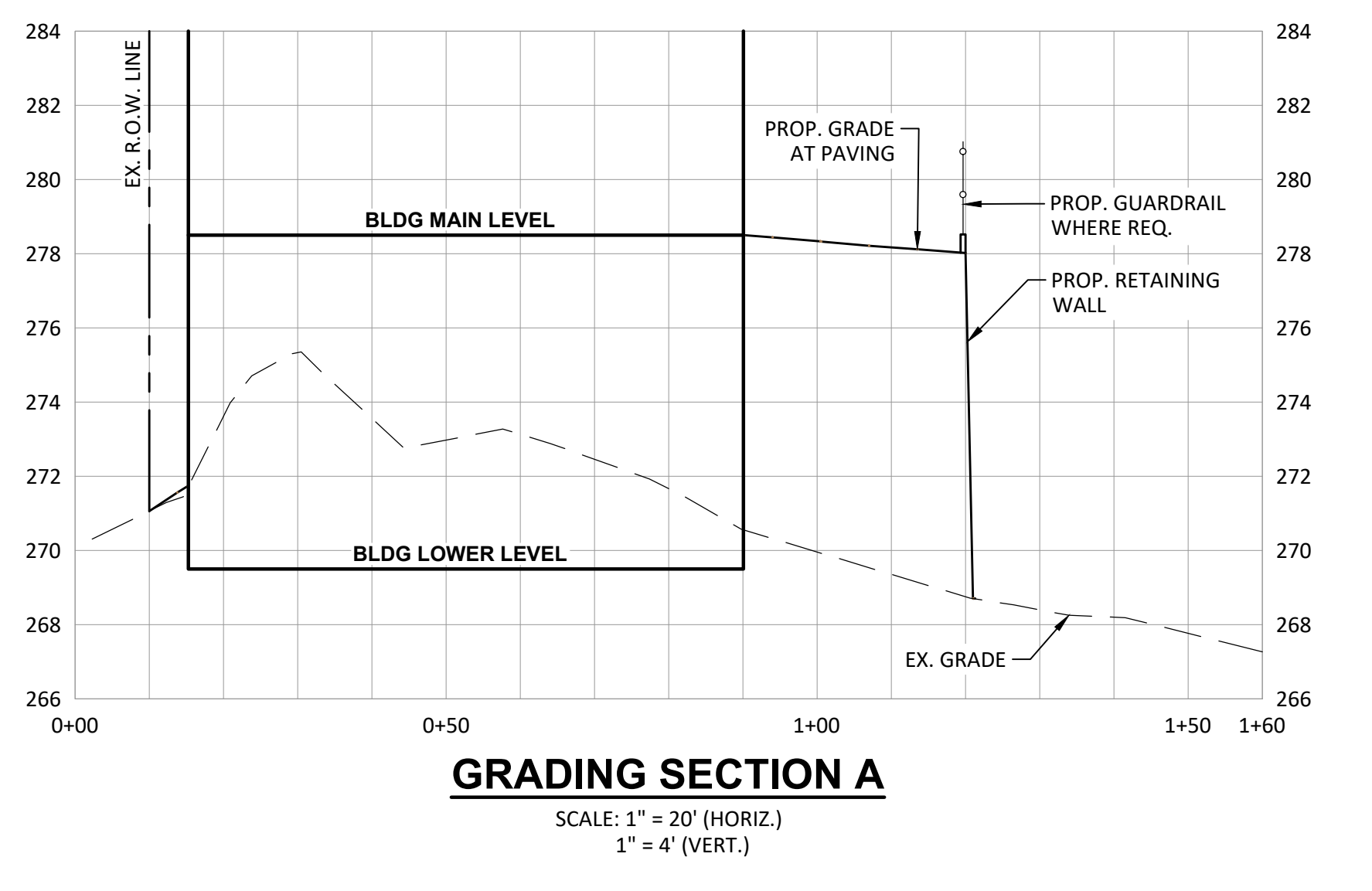


**TONKIN LAMBORGHINI**  
25239 SW PARKWAY AVE  
WILSONVILLE, OR 97070

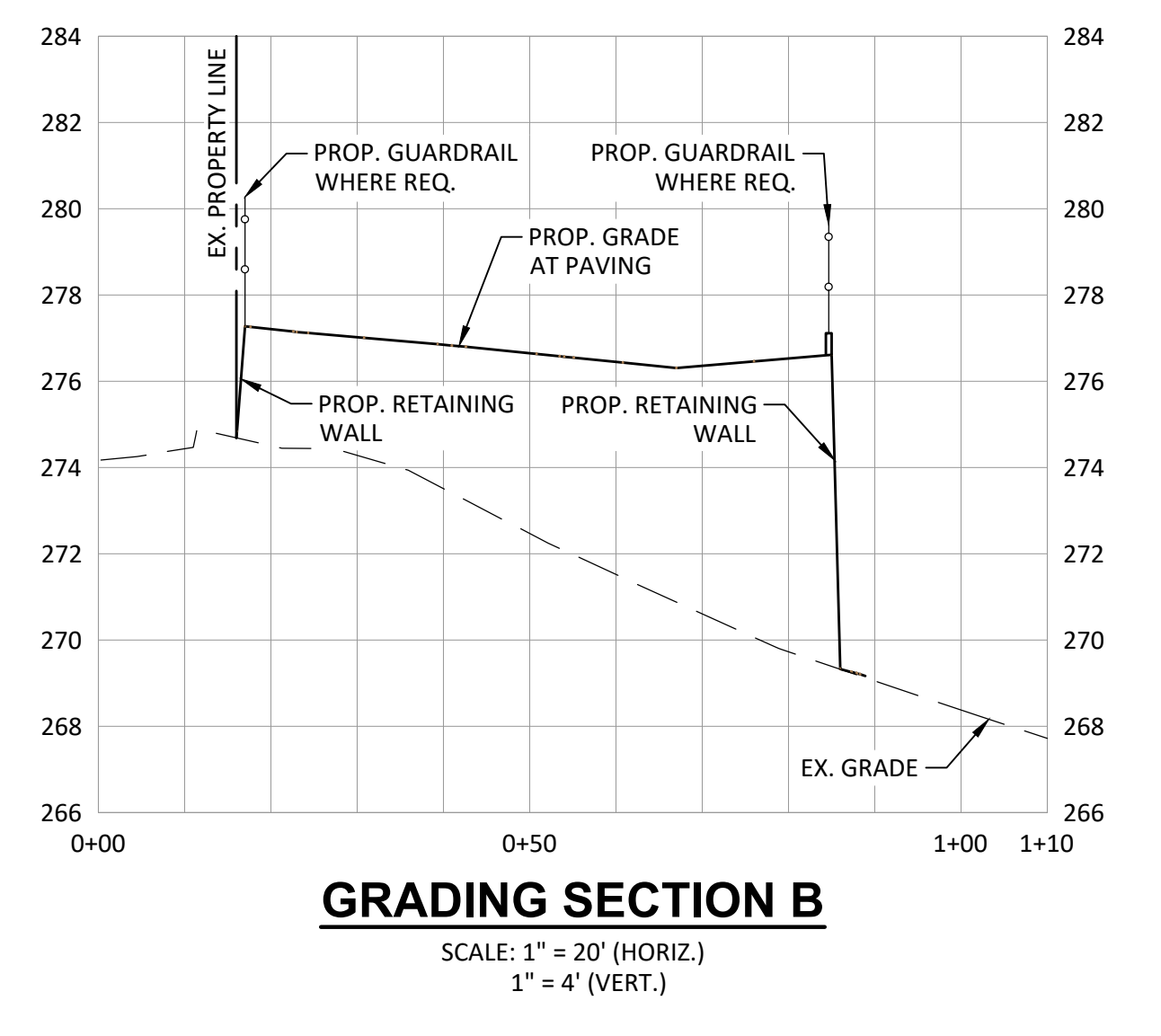


**PROPOSED BLDG**  
UPPER LEVEL = 296.5  
MAIN LEVEL = 278.5  
LOWER LEVEL = 269.5

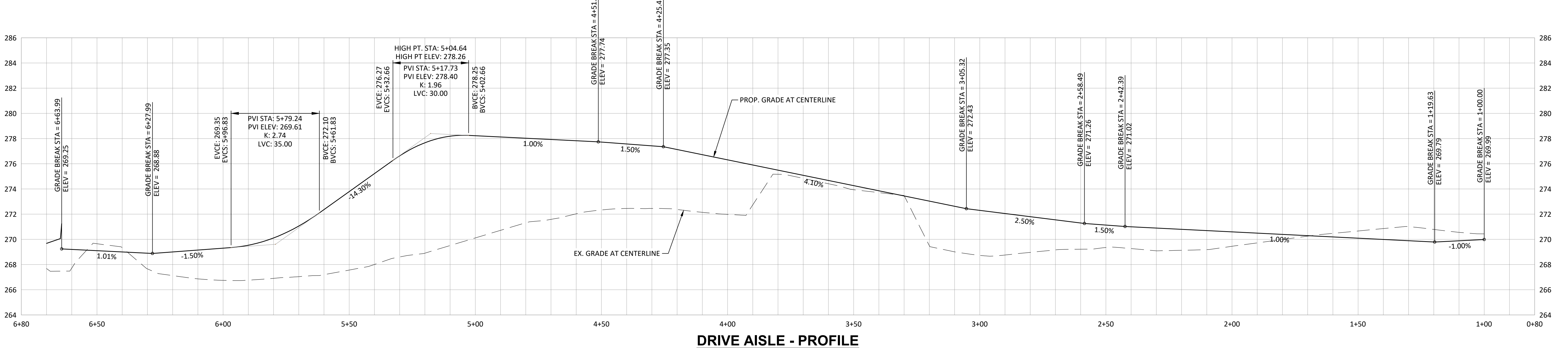
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35102DA #1000



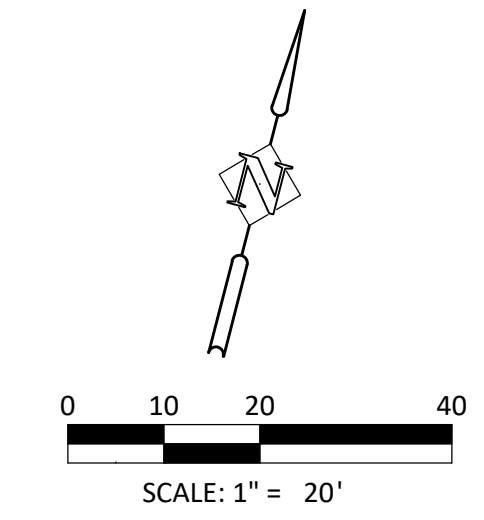
**GRADING SECTION A**  
SCALE: 1" = 20' (HORIZ.)  
1" = 4' (VERT.)



**GRADING SECTION B**  
SCALE: 1" = 20' (HORIZ.)  
1" = 4' (VERT.)



**DRIVE AISLE - PROFILE**  
SCALE: 1" = 20' (HORIZ.)  
1" = 4' (VERT.)



REVISIONS

No.	Description	Date

DRAWN BY: HHPR  
CHECKED BY: HHPR  
JOB NO: 22-033  
DATE: 10/04/2024  
ISSUED FOR: PRELIMINARY  
SHEET TITLE:  
PRELIMINARY GRADING PLAN  
SHEET NO.

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REVISIONS		
No.	Description	Date

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CHECKED BY: HHPR

JOB NO: 22-033

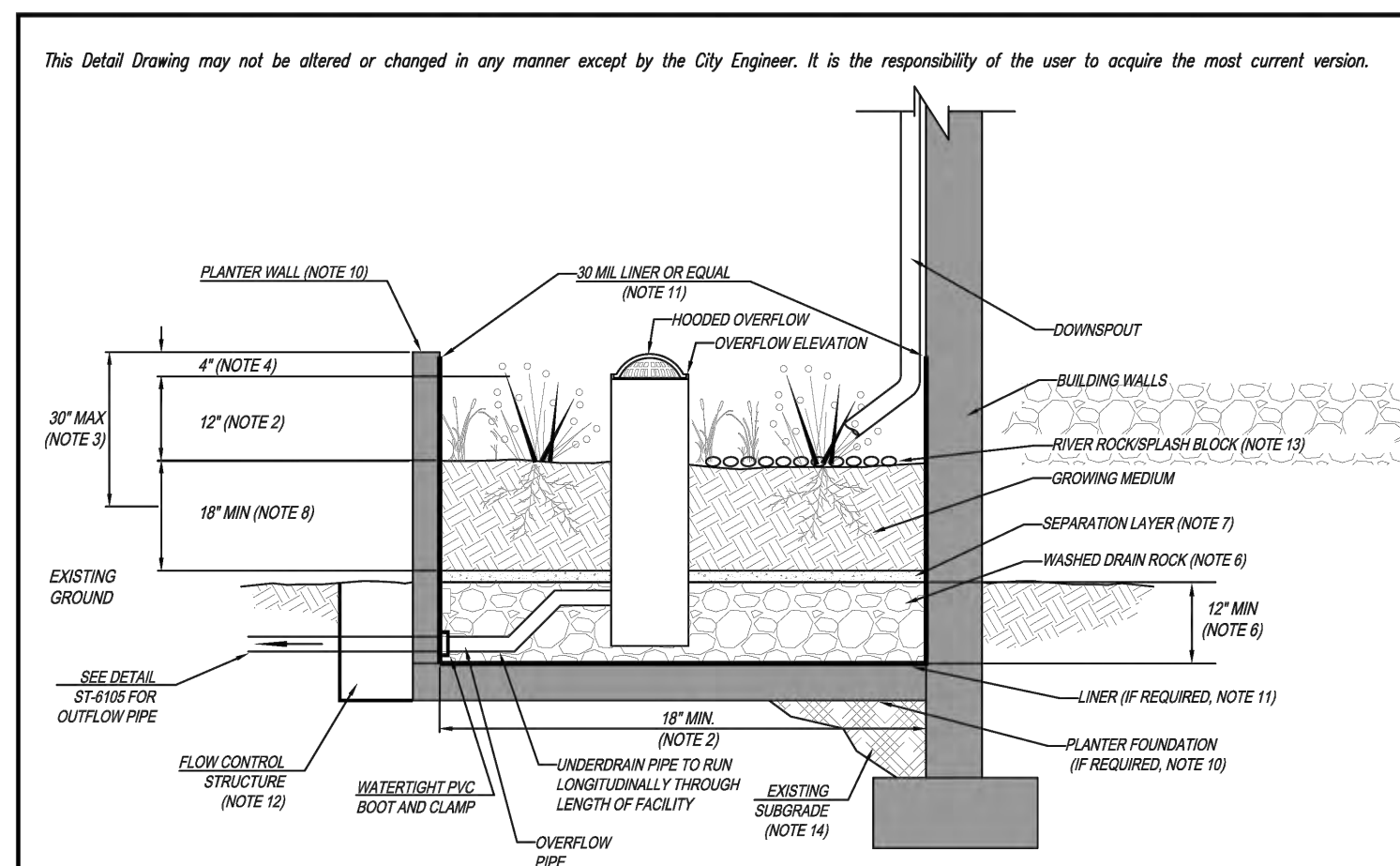
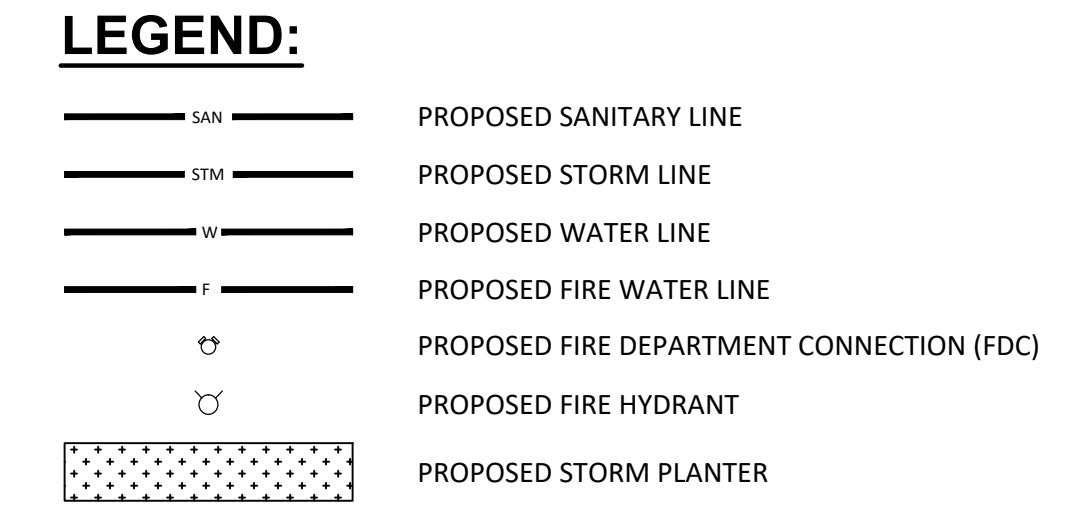
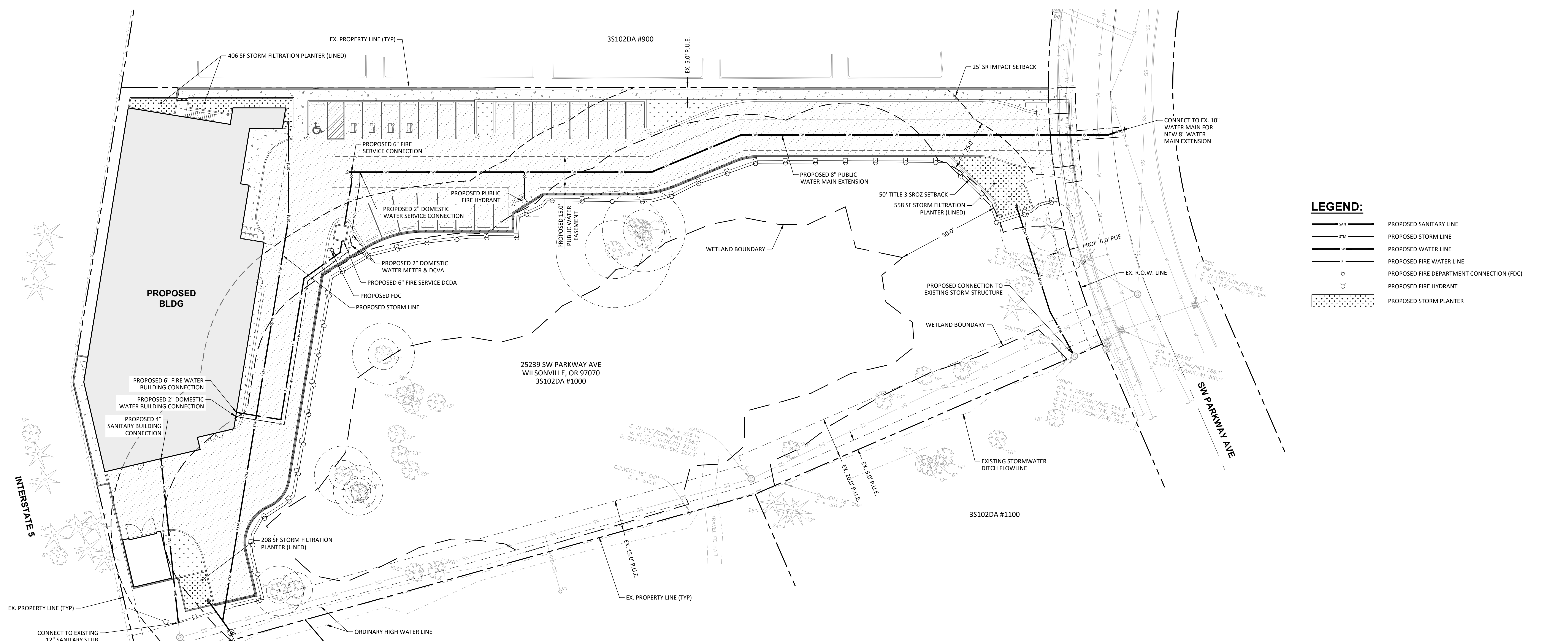
DATE: 10/04/2024

ISSUED FOR: PRELIMINARY

SHEET TITLE  
PRELIMINARY UTILITY PLAN

SHEET NO.

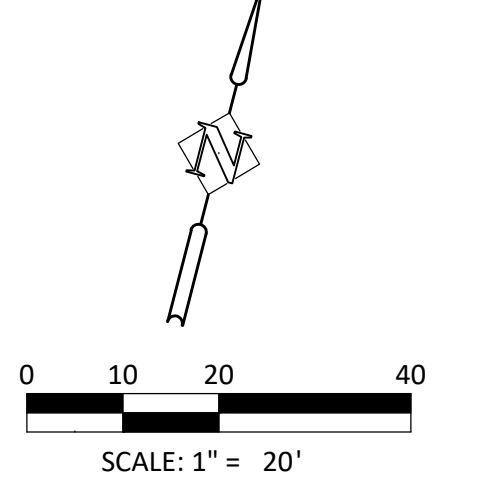
C-300



- GENERAL NOTES:**
- PROVIDE PROTECTION FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION. WOOD UNDER DRAIN IN FILTER FABRIC TO REDUCE TRANSPORT OF FINES.
  - MINIMUMS:**  
DEPTH OF PLANTER FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION: 12"  
SLOPE OF PLANTER: 2% OR LESS  
HEIGHT FROM TRACK  
PLANTER SHALL BE LESS THAN 30" IN HEIGHT ABOVE SURROUNDING AREA  
PLANTERS SHALL BE MINIMUM OF 5 FEET FROM PROPERTY LINE
  - OVERFLOW:**  
TILEY ELEVATION SHALL ALLOW FOR 4" OF FREEBOARD. MINIMUM PROJECT FROM CURB AND SEGMENT WITH STRAKE OR GRATE
  - PIPING:**  
UNDER DRAIN PIPING SHALL RUN LONGITUDINALLY THROUGH LENGTH OF FACILITY. SHALL BE ABS SCH. 40, CAST IRON, OR PVC SCH 40, 6" MINIMUM DIAMETER. PIPING SHALL HAVE 2% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND. WORN UNDER DRAIN 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 2% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND.
  - DRAIN ROCK:**  
SIZE OF DRAIN THROUGH PLANTER: 1 1/2" - 3/4" WASHED  
DEPTH: 12" MINIMUM
  - SEPARATION BETWEEN DRAIN ROCK AND GROWING MEDIUM SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE.
  - GROWING MEDIUM:**  
DEPTH: 8" MINIMUM  
SEE APPENDIX A FOR SPECIFICATION OR USE SAND/LOAM/COMPOST 3-WAY MIX.  
FACILITY SHALL HAVE 2% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. P.C. NOT ALLOWED ABOVE GROUND. WORN UNDER DRAIN IN FILTER FABRIC TO REDUCE TRANSPORT OF FINES.
  - PLANTER FOUNDATION AND WALLS:**  
MATERIALS SHALL BE 4" REINFORCED CONCRETE, STONE, BRICK, OR OTHER DURABLE MATERIAL.  
CONCRETE, BRICK, OR STONE SHALL BE INCLUDED ON FOUNDATION PLANS.  
INSTALL INVERTED CURB AS NEEDED BETWEEN PLANTER AND ROAD SURGRADE.  
SUBMIT RETAINING WALL DESIGN IN ACCORDANCE WITH APPLICABLE STRUCTURAL CODES FOR REVIEW AND APPROVAL.
  - WATERPROOFING (IF REQUIRED):**  
WALL SHALL BE 20 MIL POLYESTER EQUIVALENT, FOR FLOW THROUGH FACILITIES.  
WALL TOP SHALL BE 1/2" ABOVE FINISH GRADE. IF THE FOUNDATION OR WALL MATERIAL IS WATERPROOF REINFORCED CONCRETE OR APPROVED EQUAL.
  - FLOW CONTROL STRUCTURE:** SEE DETAIL ST-600.
  - INVERT:** INVERT SHALL BE 18" ABOVE FINISH GRADE. INVERT SHALL BE 18" ABOVE FINISH GRADE. INVERT SHALL BE 18" ABOVE FINISH GRADE. INVERT SHALL BE 18" ABOVE FINISH GRADE.
  - SEASONAL HIGH GROUNDWATER SEPARATION:**  
SEPARATION DISTANCE AS REQUIRED BY THE CITY.

Stormwater Planter - Filtration  
CITY OF WILSONVILLE  
PUBLIC WORKS STANDARDS

DRAWING NUMBER: ST-6005    DRAWN BY: SR    SCALE: N.T.S.  
FILE NAME: ST-6005.DWG    APPROVED BY: NK    DATE: 4/16/18



**KEY NOTES**

- 1 PLACE 12" AMENDED TOPSOIL IN SHRUB AREAS, TYP.
- 2 PLACE 3" BARK MULCH IN SHRUBS AREAS, TYP.
- 3 PLACE 6" AMENDED TOPSOIL IN SEEDED LAWN AREAS, TYP.
- 4 WETLAND MITIGATION PLANTINGS. SEE MITIGATION PLANTING TABLE, DETAIL 6/L101 AND NOTES SHEET L101.
- 5 UPLAND MITIGATION PLANTINGS. SEE MITIGATION PLANTING TABLE, DETAIL 6/L101 AND NOTES SHEET L101.

**PLANT SCHEDULE**

TREES

- 2 EXISTING CONIFEROUS TREE TO BE RETAINED
- 29 EXISTING DECIDUOUS TREE TO BE RETAINED
- 20 EXISTING TREE TO BE REMOVED
- 3 Acer x freemanii 'Jeffersred' - Freeman maple  
2.5" CAL. B&B, WELL BRANCHED, LIMBED TO 6'  
SIZE AT MATURITY: 40' HGT X 30' WIDE
- 2 Magnolia Victoria - Victoria Magnolia  
2" CAL. B&B, WELL BRANCHED, LIMBED TO 6'  
SIZE AT MATURITY: 25' HGT X 20' WIDE
- 1 Quercus garryana - Oregon White Oak  
2" CAL. B&B, WELL BRANCHED, LIMBED TO 6'

SHRUBS

- 1 Phormium tenax Purpurarum - Purple New Zealand Flax  
5 GAL. CONT., FULL PLANTS, SPACING AS SHOWN
- 11 Rhampholopis indica 'Ballerina' - Ballerina Indian Hawthorn  
5 GAL. CONT., FULL PLANTS, SPACING AS SHOWN
- 13 Spiraea japonica 'Goldmound' - Goldmound Spirea  
5 GAL. CONT., FULL PLANTS, SPACING AS SHOWN
- 24 Euonymus japonicus 'Grandifolius' - Japanese Euonymus  
5 GAL. CONT., FULL PLANTS, SPACING AS SHOWN
- 24 Buxus sempervirens 'Green Pillar' - Green Pillar Boxwood  
5 GAL. CONT., FULL PLANTS, SPACING AS SHOWN

GROUND COVER

- 40 Ophiopogon planiscapus 'Yapard' - Black Beard Mondo Grass  
1 GAL. CONT., FULL PLANTS, 18" O.C.
- 138 Arctostaphylos uva-ursi 'Massachusetts' - Kinnikinnick  
1 GAL. CONT., FULL PLANTS, 30" O.C.
- 40 Hakonechloa macra 'All Gold' - All Gold Japanese Forest Grass  
1 GAL. CONT., FULL PLANTS, 24" O.C.
- 123 Nandina domestica 'Firepower' - Firepower Heavenly Bamboo  
1 GAL. CONT., FULL PLANTS, 24" O.C.

SEEDING

- NORTHWEST SUPREME LAWN SEED MIX BY SUNMARK SEEDS  
8 LBS / 1000 SF
- NATIVE MEADOW SEED MIX BY SUNMARK SEEDS  
1 LBS / 1000 SF

VINES

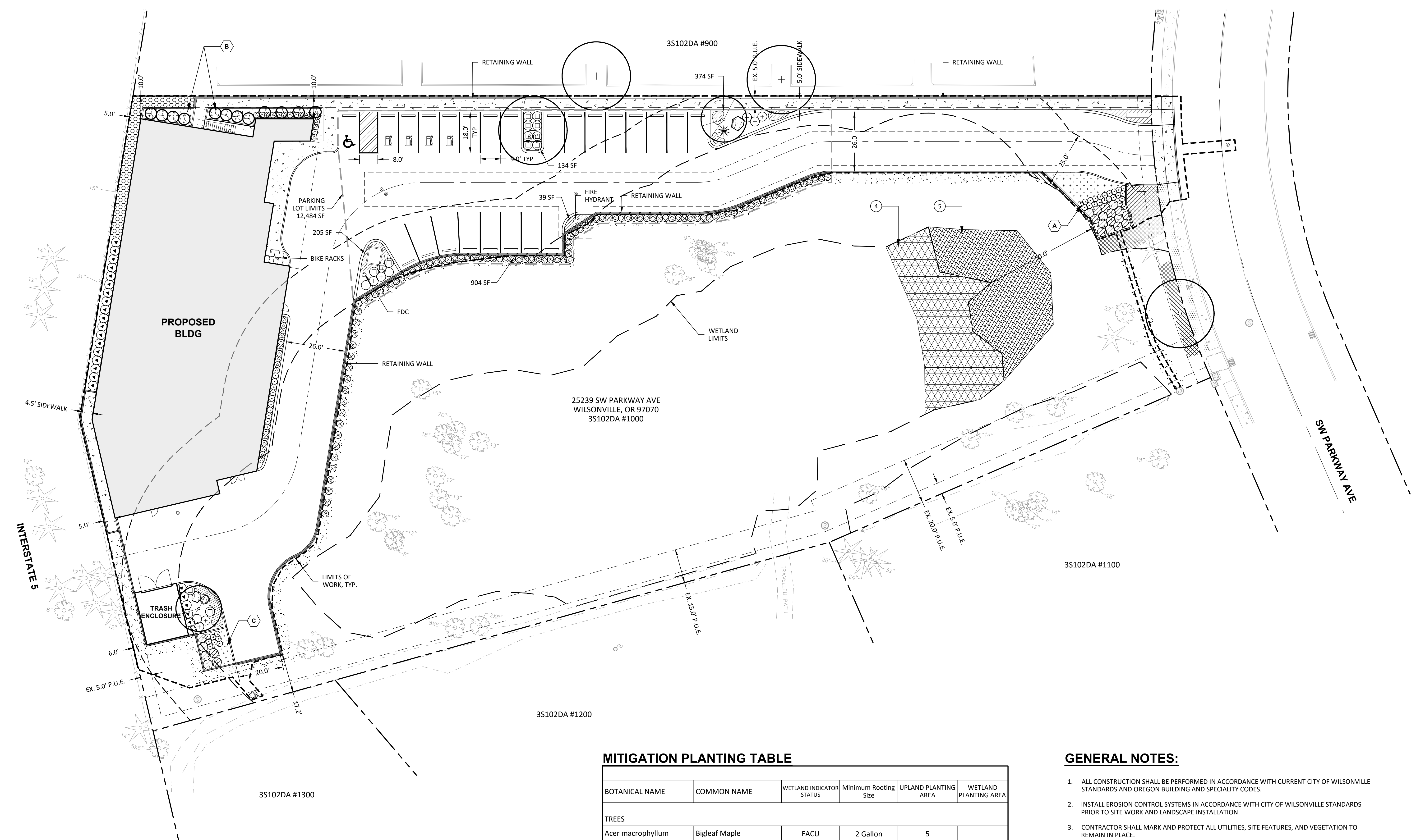
- 57 Euonymus fortunei 'Wolong Ghost' - Silver-Veined Wintercreeper  
1 GAL. CONT., FULL PLANTS, SPACING AS SHOWN

MITIGATION PLANTINGS

- WETLAND - 2000 SF (SEE MITIGATION PLAN TABLE)
- UPLAND - 2000 SF (SEE MITIGATION PLAN TABLE)

STORM WATER FACILITIES

- 7 Acer circinatum 'Pacific Fire' - Pacific Fire Vine Maple  
60" HGT. WELL BRANCHED, MULTI-TRUNKED SMALL TREE
- 14 Salix purpurea 'Nana' - Dwarf Blue Arctic Willow  
30" HGT. FULL PLANTS, SPACING AS SHOWN  
LARGE SHRUB
- 30 Cornus kelseyi - Kelsey Dogwood  
1 GAL. CONT., FULL PLANTS, SPACING AS SHOWN  
SMALL SHRUB
- 16 Polystichum munitum - Western Sword Fern  
1 GAL. CONT., FULL PLANTS, SPACING AS SHOWN  
SMALL SHRUB
- 1348 Carex testacea - Orange New Zealand Sedge



**STORM WATER FACILITY TABLE**

Basin Number	SW Facility SF	SW Facility Zone A	SW Facility Zone B	Trees / Large Shrubs	Small Shrubs	Groundcover
A	558	558	0	17	22	642
B	406	406	0	12	16	467
C	208	208	0	6	8	239
TOTAL	1172	1172	0	35	46	1348

ZONE A : 3 LARGE SHRUBS / SMALL TREES, 4 SMALL SHRUBS, 115 GROUND COVERS PLANTS (PER 100 SF)

**PLANNING NOTES**

CITY OF WILSONVILLE CODE COMPLIANCE

SITE AREA	100,284 SF
LANDSCAPE REQUIRED (15%)	15,043 SF
LANDSCAPE PROVIDED:	
SROZ	56,221 SF
PARKING LOT LANDSCAPING	2,172 SF
SITE LANDSCAPING	3,426 SF
TOTAL (62%)	61,819 SF
PARKING LOT AREA	12,484 SF
LANDSCAPE REQUIRED (10%)	1,248 SF
PARKING LOT LANDSCAPE PROVIDED (13%)	1,617 SF
REQUIRED PL TREES (1 / 8 STALLS)	
24 STALLS = 3 TREES REQUIRED	

**MITIGATION PLANTING TABLE**

BOTANICAL NAME	COMMON NAME	WETLAND INDICATOR STATUS	Minimum Rooting Size	UPLAND PLANTING AREA	WETLAND PLANTING AREA
<b>TREES</b>					
Acer macrophyllum	Bigleaf Maple	FACU	2 Gallon	5	
Quercus garryana	Oregon White Oak	UPL	2 Gallon	10	
Populus balsamifera	Balsam Poplar	FAC	2 Gallon		5
Pinus ponderosa var. willamettensis	Willantte Valley Ponderosa Pine	FACU	2 Gallon	5	
Fraxinus latifolia	Oregon Ash	FACW	2 Gallon		15
Total trees				20	20
<b>SHRUBS</b>					
Amelanchier alnifolia	Western Serviceberry	FACU	1 Gallon	5	
Symphoricarpos alba	Snowberry	FACU	1 Gallon	5	
Mahonia aquifolium	Tall Oregon Grape	UPL	1 Gallon	10	
Polystichum munitum	Pacific Sword Fern	FACU	1 Gallon		
Cornus sericea ssp. sericea	Red-osier Dogwood	FACW	1 Gallon		5
Salix hookeriana	Hooker's Willow	FACW	1 Gallon		10
Spiraea douglasii	Douglas spirea	FACW	1 Gallon		5
Total shrubs				20	20
<b>GRASSES AND FORBS*</b>					
Elymus glaucus	Blue Wild-rye	FACW	5 lbs		X
Festuca idahoensis	Idaho Fescue	FACU	5 lbs	X	

\*Grass seed to be applied in all temporary disturbed areas following construction at 7-10 PLS / Acre

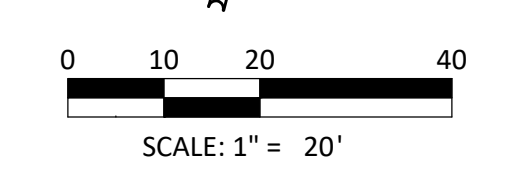
**GENERAL NOTES:**

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT CITY OF WILSONVILLE STANDARDS AND OREGON BUILDING AND SPECIALTY CODES.
2. INSTALL EROSION CONTROL SYSTEMS IN ACCORDANCE WITH CITY OF WILSONVILLE STANDARDS PRIOR TO SITE WORK AND LANDSCAPE INSTALLATION.
3. CONTRACTOR SHALL MARK AND PROTECT ALL UTILITIES, SITE FEATURES, AND VEGETATION TO REMAIN IN PLACE.
4. CONTRACTOR SHALL REMOVE ALL WEEDS AND INVASIVE SPECIES PRIOR TO PLANTING OR SEEDING.
5. ALL DISTURBED AREAS SHALL BE SEED.
6. PRIOR TO PLANTING, CONTRACTOR SHALL TEST ON-SITE SOILS FOR SOIL FERTILITY BY CERTIFIED TESTING LAB. IF NECESSARY, BACKFILL SOILS FOR TREE PITS, SHRUB AND GROUND COVER AREAS SHALL BE AMENDED AS RECOMMENDED BY SOIL ANALYSIS REPORT.
7. ALL SEEDED AREAS SHALL BE STRIPPED OF VEGETATION, SCARIFIED AND RECEIVE 4" OF TOPSOIL PRIOR TO APPLICATION OF SEED.
8. ALL PLANTER BEDS SHALL BE SCARIFIED 12" BELOW FINISHED GRADE AND HAVE 12" OF TOPSOIL ADDED TO BRING BACK TO FINISHED GRADE PRIOR TO PLANTING.
9. CONTRACTOR TO INSTALL 3" LAYER OF COMPOST MULCH AT ALL TREE, SHRUB AND GROUND COVER AREAS.
10. LANDSCAPE INSTALLATION SHALL INCLUDE PROVISION OF AN AUTOMATIC IRRIGATION SYSTEM TO SUSTAIN LANDSCAPE PLANTINGS, MEETING LOCAL AND STATE BUILDING CODES.
11. PLANT MATERIAL INSTALLED SHALL CONFORM IN SIZE AND GRADE TO THE "AMERICAN STANDARD FOR NURSERY STOCK" CURRENT EDITION.
12. QUANTITIES OF PLANT MATERIALS SHALL BE AS DETERMINED BY CONTRACTOR IN ACCORDANCE WITH SPECIFIED SPACING OR LOCATION ON PLAN. MATERIAL QUANTITIES SHOWN ON PLAN ARE FOR CONTRACTOR CONVENIENCE ONLY AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO INSTALLATION. SURPLUS OR SHORTAGES OF PLANT QUANTITIES SHALL BE RESPONSIBILITY OF CONTRACTOR.
13. LANDSCAPE CONTRACTOR SHALL WATER PLANTINGS FOR DURATION OF 1-YEAR WARRANTY PERIOD AFTER INSTALLATION AND GUARANTEE ALL PLANTINGS TO BE IN SATISFACTORY HEALTH. LANDSCAPE CONTRACTOR SHALL REPLACE ALL DAMAGED, DEAD, OR DYING PLANTS COVERED BY WARRANTY WITHIN 30 DAYS OF INITIAL IDENTIFICATION OF CONDITION.

**REVISIONS**

No.	Description	Date

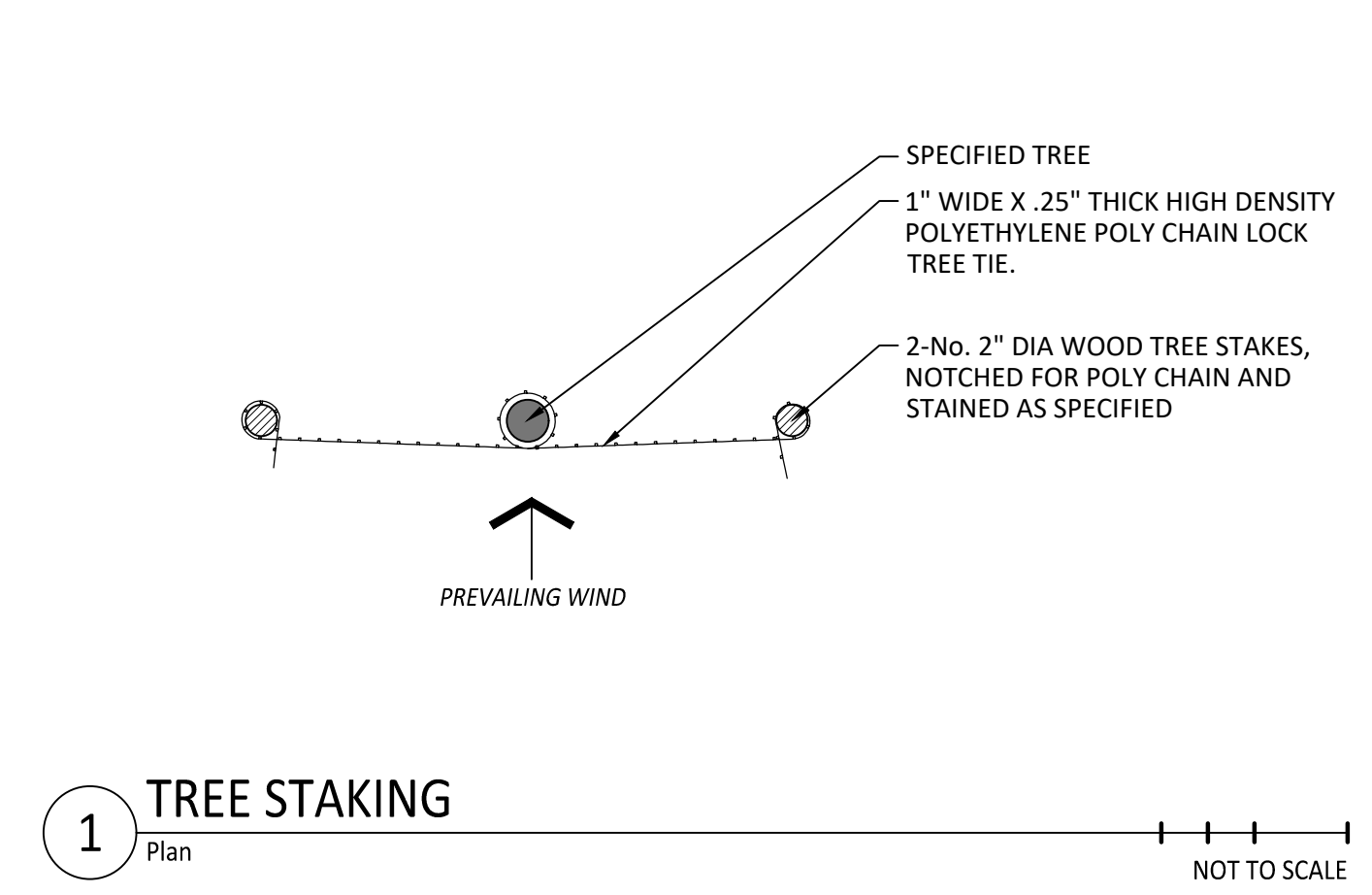
DRAWN BY: HHPR  
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PLANTING PLAN  
SHEET NO.



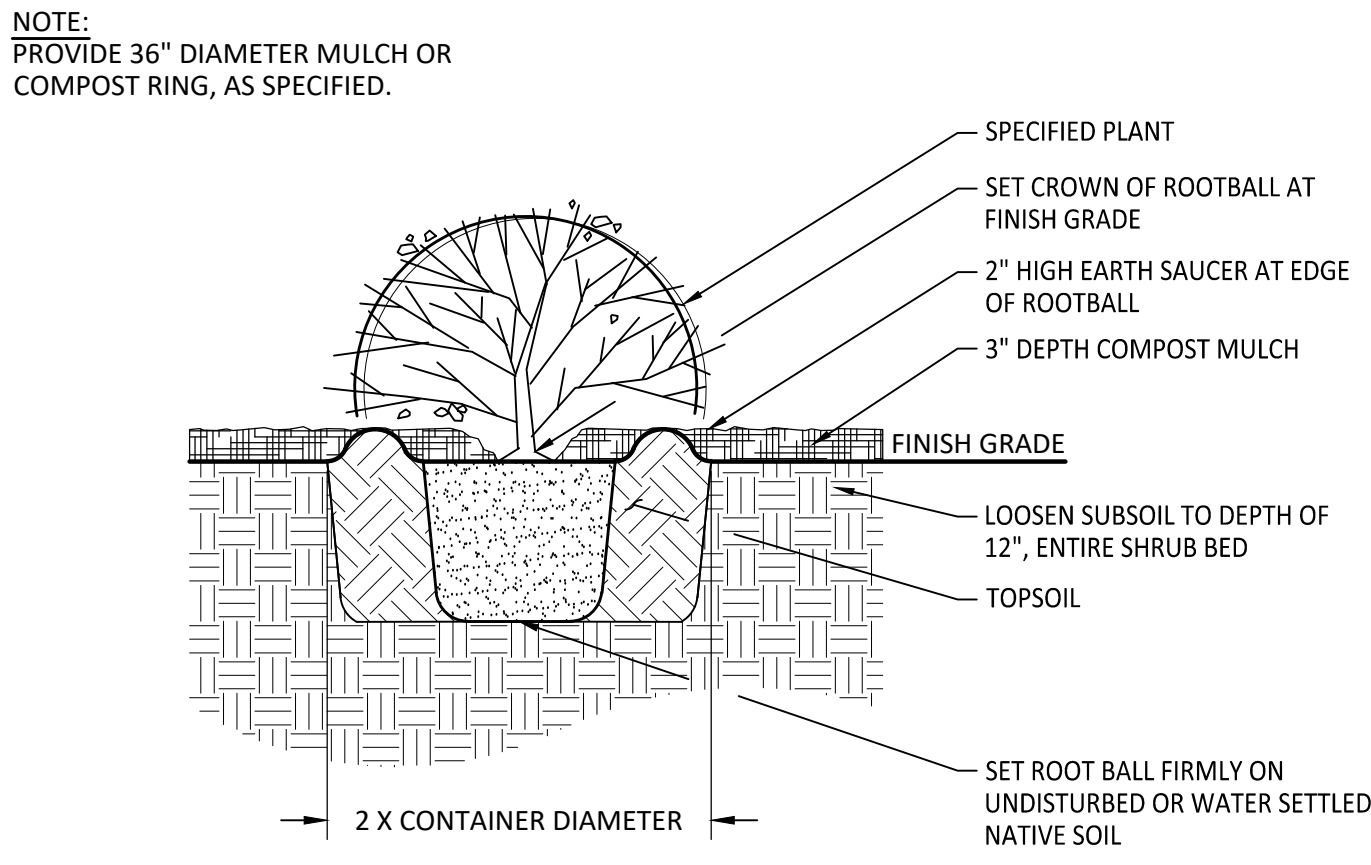
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PLANTING DETAILS  
SHEET NO.

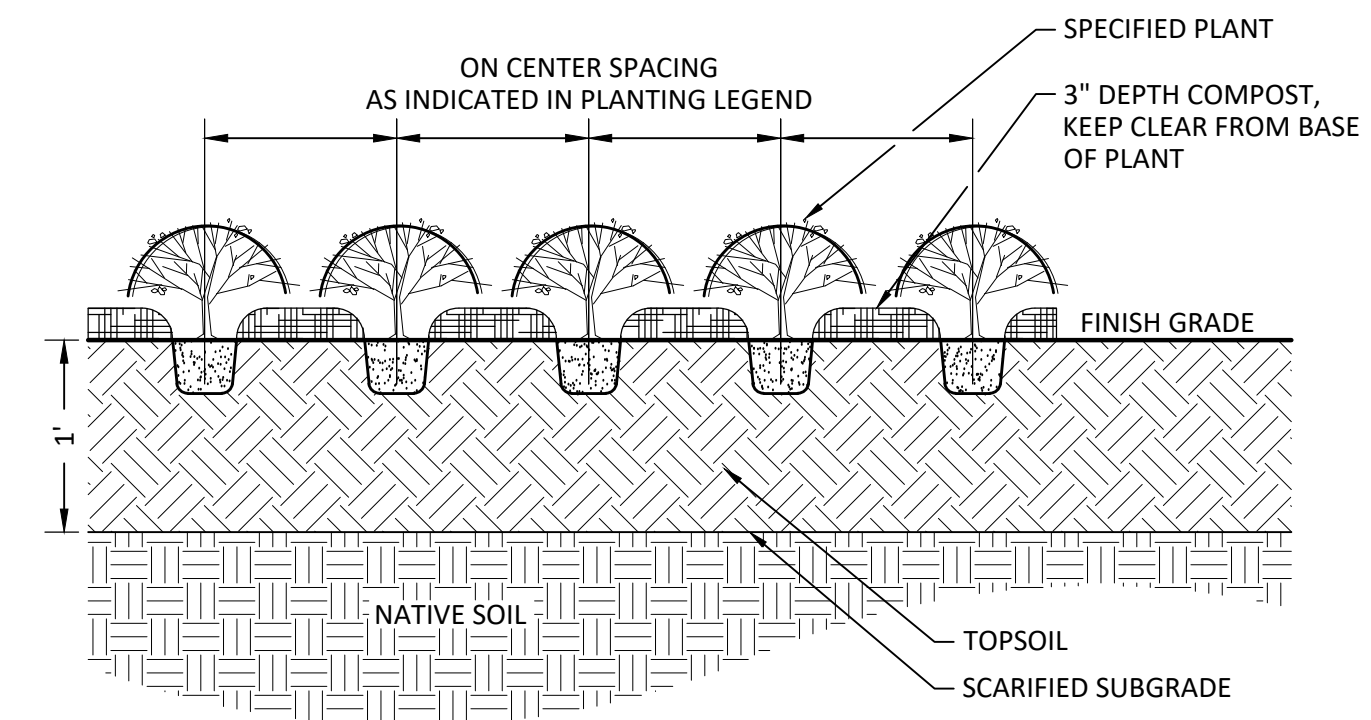
NOTE: WRAP POLY CHAIN AROUND NOTCHED STAKE AND LOCK TO SECURE. WRAP CENTER OF POLY CHAIN AROUND TREE TRUNK TO MOVE 3" IN ALL DIRECTIONS.



1 TREE STAKING Plan NOT TO SCALE

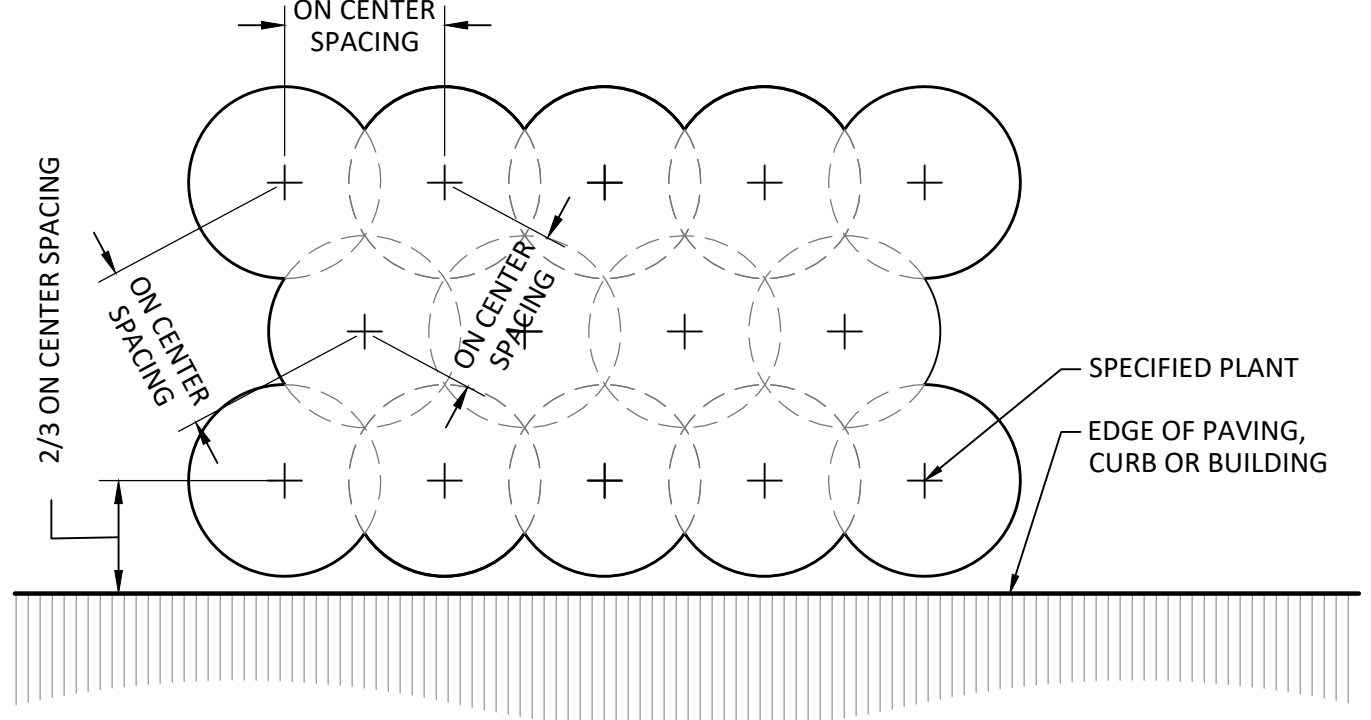


3 SHRUB PLANTING Section NOT TO SCALE

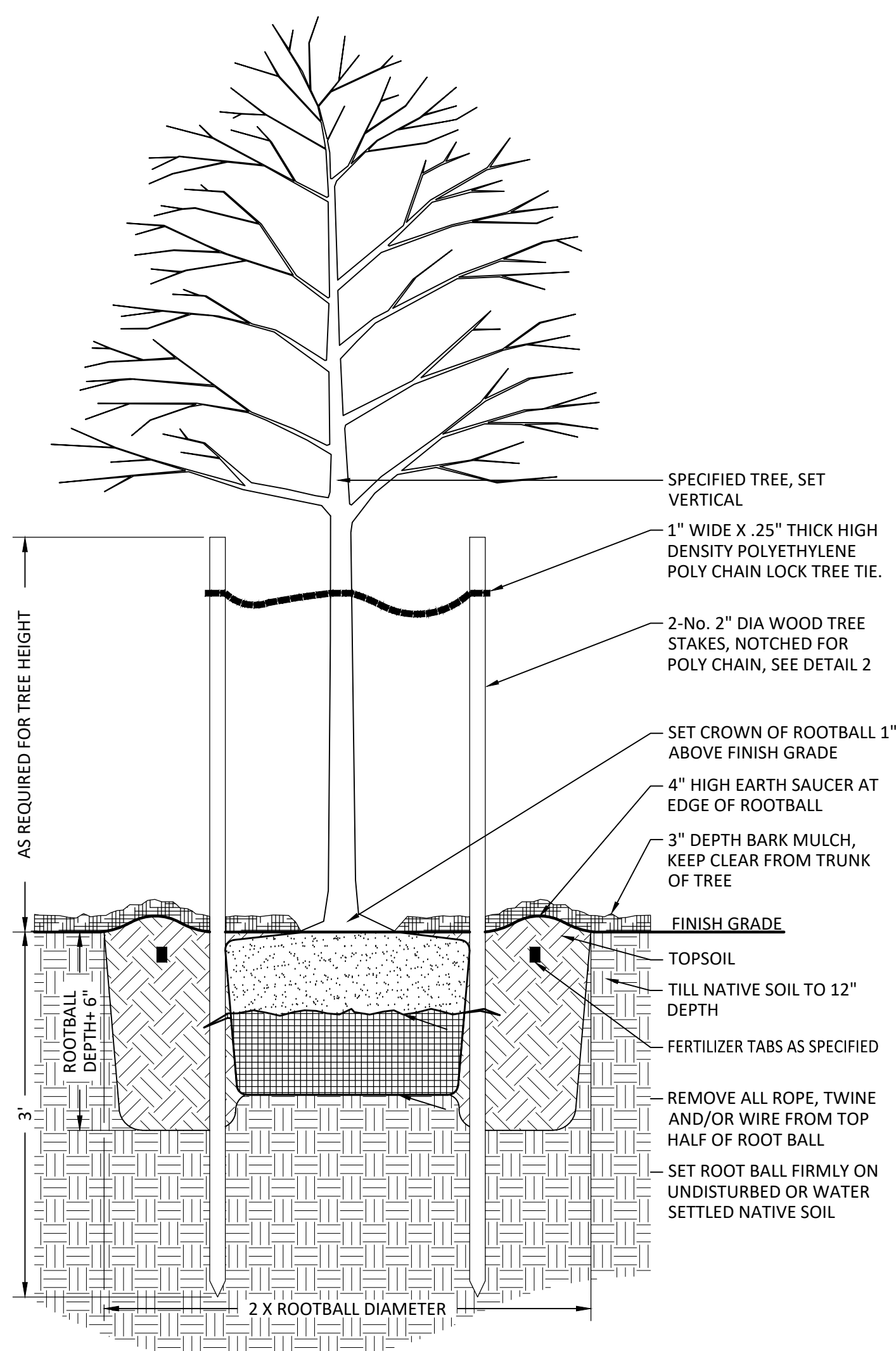


4 GROUNDCOVER PLANTING Section NOT TO SCALE

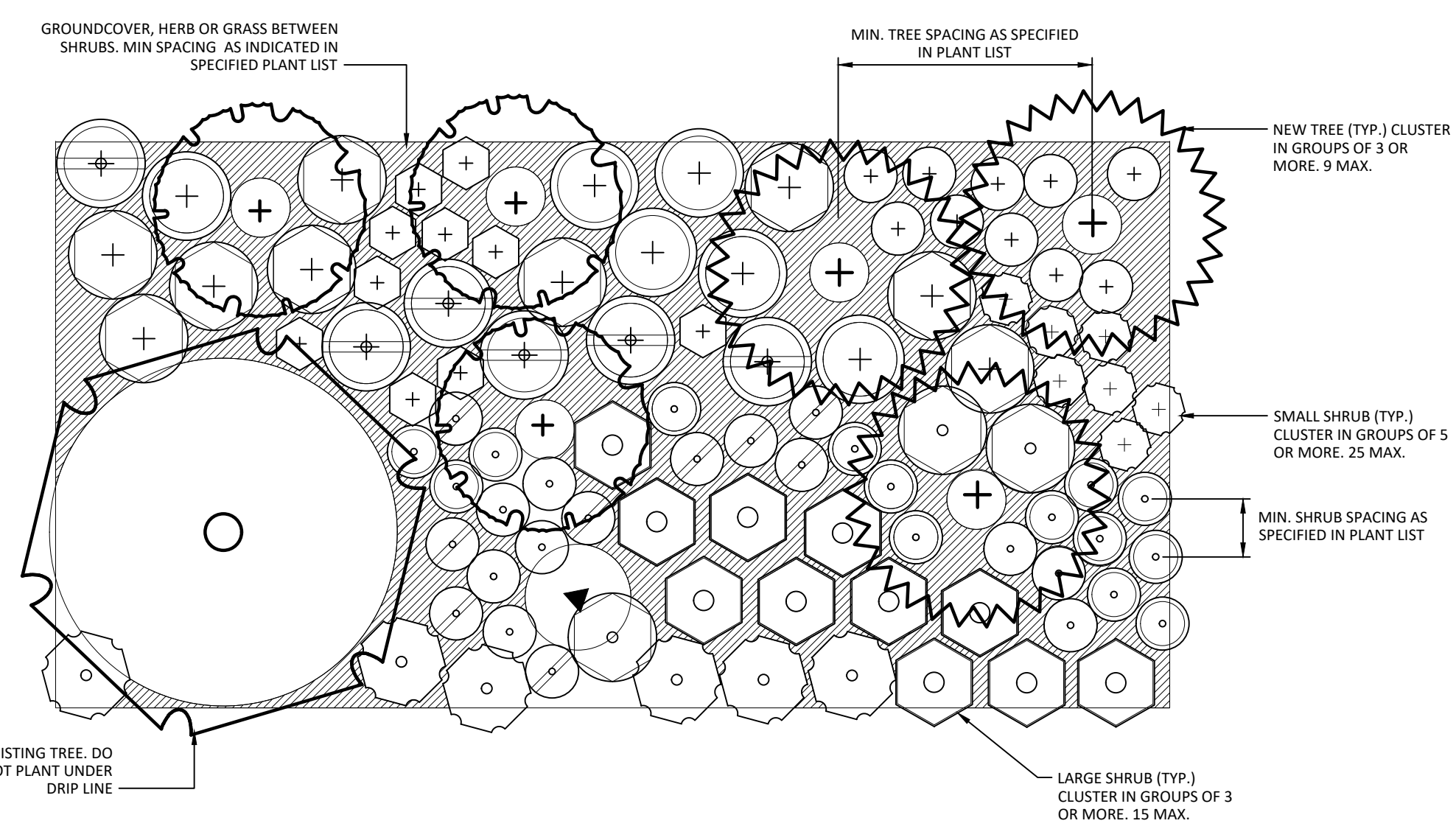
NOTE: ON CENTER SPACING SHALL BE AS INDICATED IN PLANTING LEGEND.



5 TRIANGULAR SPACING Plan SCALE: N.T.S. NOT TO SCALE



2 DECIDUOUS TREE PLANTING Section NOT TO SCALE



6 TYPICAL MITIGATION PLANTING Section Scale: 1"=8'-0"

**MITIGATION PLANTING NOTES:**

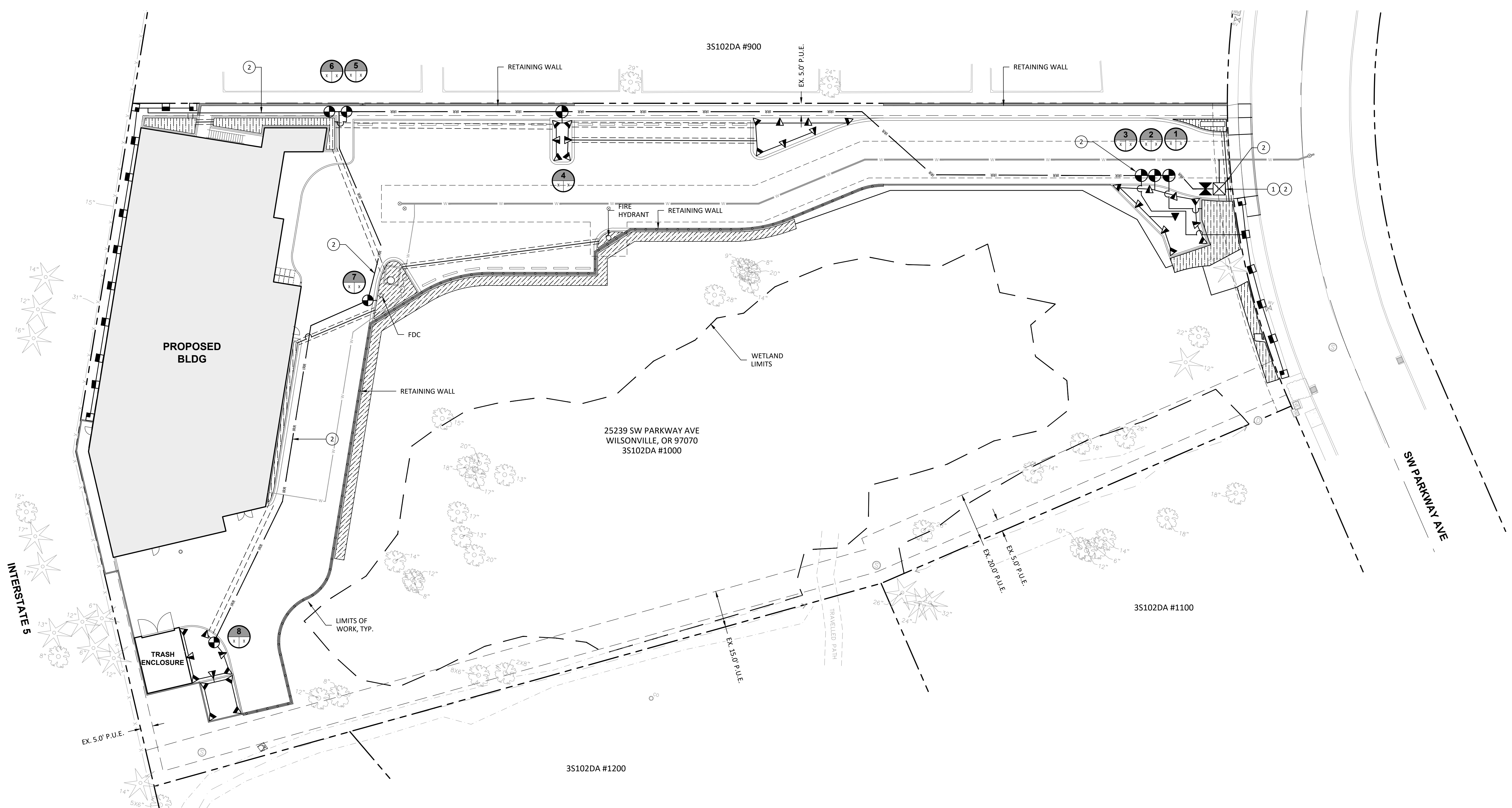
- PLANTING METHODS, QUANTITIES AND PLACEMENT**
- DEEP ROOTING TREES AND SHRUBS SHALL NOT BE PLANTED ON TOP OF CONCRETE PIPES OR WITHIN 10 FEET OF RETAINING WALLS, INLET/OUTLET STRUCTURES OR OTHER CULTIVETS.
  - LARGE TREES OR SHRUBS SHALL NOT BE PLANTED ON BERMS OVER 4 FEET TALL THAT IMPOUND WATER. SMALL TREES OR SHRUBS WITH FIBROUS ROOT SYSTEMS MAY BE INSTALLED ON BERMS THAT IMPOUND WATER AND ARE LESS THAN 4 FEET TALL.
  - CONTAINERIZED STOCK SHALL BE INSTALLED ONLY FROM FEBRUARY 1 THROUGH MAY 1 AND OCTOBER 1 THROUGH NOVEMBER 15. IF PLANTING OUTSIDE OF THESE TIMES IS PROPOSED, CONTRACTOR SHALL SUBMIT PROCEDURES OF ADDITIONAL MEASURES TO BE IMPLEMENTED TO ENSURE SURVIVAL.
- MULCHING AND IRRIGATION**
- TREES, SHRUBS AND GROUNDCOVERS PLANTED IN UPLAND AREAS SHALL BE MULCHED A MINIMUM 3" DEPTH AND 18" DIAMETER. APPROPRIATE MULCHES SHALL BE DERIVED FROM COMPOSTED BARK OR LEAVES THAT HAVE NOT BEEN CHEMICALLY TREATED. ORGANIC MULCH SHALL NOT BE USED IN FREQUENTLY INUNDATED AREAS (SWALE TREATMENT AREA).
  - CONTRACTOR SHALL SUBMIT SUPPLEMENTAL WATERING PLAN FOR APPROVAL BY CITY. CONTRACTOR SHALL WATER FOR A MINIMUM 2-YEAR PLANT ESTABLISHMENT PERIOD. WATERING SHALL BE A MINIMUM RATE OF 1 INCH PER WEEK FROM JUNE 15 THROUGH OCTOBER 15.
- EROSION CONTROL**
- INSTALL AND/OR MAINTAIN EROSION CONTROL SYSTEMS IN ACCORDANCE WITH CITY OF WILSONVILLE & CLATSOP COUNTY STANDARDS PRIOR TO SITE WORK AND LANDSCAPE INSTALLATION.
  - GRADING, SOIL PREPARATION, AND SEEDING SHALL BE PERFORMED DURING OPTIMAL WEATHER CONDITIONS AND AT LOW FLOW LEVELS TO MINIMIZE SEDIMENT IMPACTS.
  - SITE DISTURBANCE SHALL BE MINIMIZED AND DESIRABLE NATIVE VEGETATION RETAINED WHERE POSSIBLE.
  - PLASTIC MESH THAT CAN ENTANGLE WILDLIFE IS NOT PERMITTED.
- WWT/LAND PLANTING GENERAL NOTES**
- ALL INVASIVE, NON-NATIVE OR NOXIOUS PLANT MATERIAL IS TO BE REMOVED. THE SUBJECT SITE IS TO EMPLOY MANUAL/MECHANICAL MANAGEMENT STRATEGIES AND PESTICIDE MANAGEMENT STRATEGIES THROUGHOUT MAINTENANCE PERIOD OR UNTIL HEALTHY STAND OF DESIRABLE VEGETATION IS ESTABLISHED.
  - PRESERVE SITE'S EXISTING NATIVE VEGETATION TO THE MAXIMUM EXTENT PRACTICABLE. EVERY EFFORT SHALL BE MADE TO PROTECT A SITE'S EXISTING NATIVE VEGETATION. NATIVE VEGETATION ALONG SENSITIVE AREAS AND VEGETATED CORRIDORS SHALL BE RETAINED TO THE MAXIMUM EXTENT PRACTICABLE.
  - REPLANTING/ENHANCEMENT AS FOLLOWS:
    - REFER TO PLANT TABLE, DETAILS AND PLAN FOR PLANT SPECIES, LOCATION, DISTRIBUTION, QUANTITIES, SIZE, CONDITION AND REQUIREMENTS.
    - ALL PLANTS TO BE PLANTED WITH ADDITIONAL ORGANIC MATTER IF REQUIRED BUT NO TRADITIONAL FERTILIZER IS NECESSARY. PLANT PLACEMENT SHALL BE CONSISTENT WITH THE FORM OF THE NATURALLY OCCURRING PLANT COMMUNITY. SHRUBS SHALL BE PLACED IN SINGLES OR CLUSTERS OF THE SAME SPECIES TO PROVIDE A NATURAL PLANTING SCHEME.
  - PLANT INSTALLATION REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF SITE PLANTING AS SPECIFIED. ALL TREES AND SHRUBS PLANTED IN THE UPLAND AREA ARE TO BE MULCHED A MINIMUM OF THREE INCHES IN DEPTH AND 18 INCHES IN DIAMETER. APPROPRIATE MULCHES INCLUDE THOSE MADE FROM COMPOSTED LEAVES OR BARK THAT HAVE NOT BEEN CHEMICALLY TREATED. TEMPORARY IRRIGATION WILL BE PROVIDED AND USED DURING THE TWO YEAR MAINTENANCE PERIOD.
  - MONITORING AND MAINTENANCE. CONTRACTOR IS RESPONSIBLE FOR MONITORING AND MAINTAINING THE SITE. ALL NEW PLANT MATERIAL IS TO BE TAGGED. THE REMOVAL OF NON-NATIVE, INVASIVE WEEDS IS NECESSARY THROUGHOUT THE TWO YEAR MAINTENANCE PERIOD, OR UNTIL A HEALTHY STAND OF DESIRABLE VEGETATION IS ESTABLISHED. THE SITE IS TO BE MONITORED A MIN. OF 4 TIMES PER YEAR, OR 3 TIMES PER GROWING SEASON. IF AT ANY TIME THE LANDSCAPING FALLS BELOW THE 80% SURVIVAL LEVEL, THE CONTRACTOR SHALL REINSTALL ALL DEFICIENT PLANTING AT THE NEXT APPROPRIATE OPPORTUNITY AND THE TWO YEAR MAINTENANCE PERIOD SHALL BEGIN AGAIN FROM THE DATE OF THE REPLANTING.
  - PLANT TIMING. CONTAINERIZED STOCK SHALL BE INSTALLED ONLY FROM FEBRUARY 1 THROUGH MAY 1 AND OCTOBER 1 THROUGH NOVEMBER 15. BARE ROOT STOCK SHALL BE INSTALLED ONLY FROM DECEMBER 15 THROUGH APRIL 15. PLANTINGS OUTSIDE THESE TIMES MAY REQUIRE ADDITIONAL MEASURES TO ENSURE SURVIVAL WHICH SHALL BE SPECIFIED ON THE PLANS.
- SITE PREPARATION**
- CONTRACTOR SHALL REMOVE ALL WEEDS AND INVASIVE SPECIES PRIOR TO PLANTING. ALL SEEDED AREAS SHALL BE STRIPPED OF VEGETATION, SCARIFIED AND RECEIVE 4" OF TOPSOIL PRIOR TO APPLICATION OF SEED.
  - FOR UPLAND SITES WITH AT LEAST ONE FOOT OF NATIVE TOPSOIL, BUT CONTAINING A NON-NATIVE, INVASIVE SEED BANK OR PLANTS, REMOVE THE UNDESIRABLE PLANTS, ROOTS, AND SEEDS PRIOR TO PLANTING.
  - ALL TREE AND SHRUB PLANTING AREAS SHALL BE SCARIFIED 12" BELOW FINISHED GRADE AND HAVE 12" OF TOPSOIL ADDED TO BRING BACK TO FINISHED GRADE PRIOR TO PLANTING.
  - FOR UPLAND SITES WITH EITHER DISTURBED AND COMPACTED SOILS OR LESS THAN ONE FOOT OF TOPSOIL AND INVASIVE, NON-NATIVE SEED BANK OR PLANTS THAT HAVE BECOME ESTABLISHED:
    - REMOVE UNDESIRABLE PLANTS, ROOTS, AND SEEDS PRIOR TO ADDING TOPSOIL.
    - TILL SUB-GRADE IN THESE AREAS TO DEPTH OF AT LEAST FOUR INCHES AND ADD 12" MINIMUM CLEAN COMPOST-AMENDED TOPSOIL. COMPOST AMENDED TOPSOIL SHALL HAVE THE FOLLOWING CHARACTERISTICS:
      - TEXTURE: MATERIAL PASSES THROUGH 1-INCH SCREEN
      - FERTILITY: 35% ORGANIC MATTER
    - IN THE EVENT OF FLOODPLAIN GRADING, OVER-EXCAVATE SUB-GRADE TO ENSURE 12 INCHES OF TOPSOIL CAN BE APPLIED WITHOUT IMPACTING SURFACE WATER ELEVATIONS.
  - WHERE APPROPRIATE AND NECESSARY FOR EROSION CONTROL OR TO ENHANCE ORGANIC MATTER, LEAF COMPOST MAY BE PLACED UNIFORMLY ON TOPSOIL. OTHER AMENDMENTS, CONDITIONERS, AND BIO-AMENDMENTS MAY BE ADDED AS NEEDED TO SUPPORT SPECIFIED PLANTS OR ADJUST SOIL pH. CONVENTIONAL FERTILIZERS (N-P-K) SHALL NOT BE USED FOR NATIVE PLANTINGS.
- MAINTENANCE**
- CONTRACTOR SHALL PROVIDE MONITORING AND MAINTENANCE OF MITIGATION PLANTINGS AND VEGETATED CORRIDOR FOR A PERIOD OF 2 YEARS FOLLOWING SUBSTANTIAL COMPLETION AND ACCEPTANCE.

**KEY NOTES**

- POINT OF CONNECTION - DOMESTIC WATER LINE, SEE CIVIL UTILITY PLANS
- IRRIGATION PLANS ARE SCHEMATIC REPRESENTATIONS ONLY. PLACE LINES AND VALVES IN PLANTER AREAS EXCEPT WHERE SLEEVES ARE SHOWN.

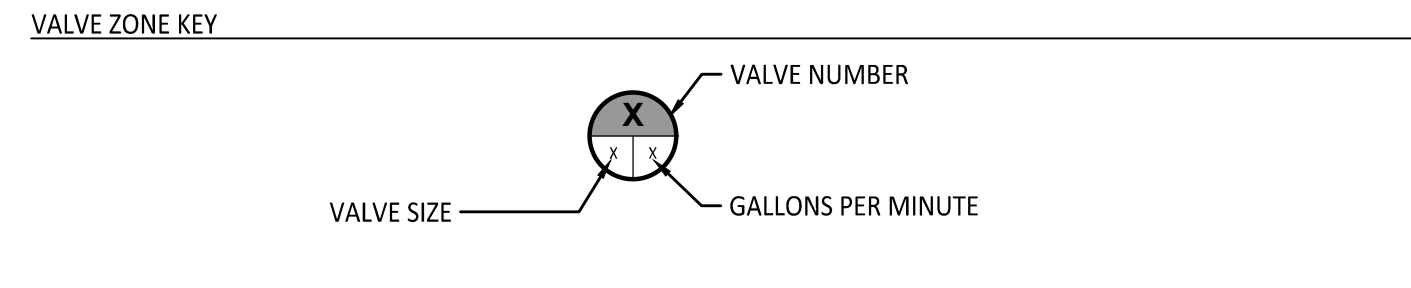
**IRRIGATION NOTES**

- CONTRACTOR SHALL INSPECT SITE AND VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.
- IRRIGATION PLANS ARE SCHEMATIC REPRESENTATIONS ONLY. PLACE LINES IN COMMON TRENCH WHENEVER POSSIBLE. FIELD ADJUST LINES TO AVOID CONFLICT WITH UTILITIES.
- IRRIGATION LATERAL AND MAINLINE PIPE SHOW OUTSIDE OF PLANTING AREAS FOR CLARIFICATION ONLY. PLACE LATERAL AND MAINLINE PIPE IN PLANTER AREAS UNLESS IRRIGATION SLEEVES ARE SHOWN.
- COORDINATE IRRIGATION WITH PLANTING PLAN AND SITE IMPROVEMENTS AND USE TRIANGULAR SPACING FOR HEAD TO HEAD COVERAGE. COORDINATE IRRIGATION HEAD LAYOUT WITH NEW PLANT MATERIALS. LOCATE SPRAY HEADS 30" FROM BASE OF TREE. DO NOT ALTER HEAD LOCATION, PIPE LAYOUT, OR VALVE LOCATION WITHOUT WRITTEN APPROVAL FROM CONSTRUCTION MANAGER. NOTIFY OWNER'S REPRESENTATIVE IF DISCREPANCIES OCCUR BETWEEN PLANS AND FIELD CONDITIONS.
- ALL COMPONENTS OF IRRIGATION SYSTEM SHALL BE INSTALLED AND PROPERLY ADJUSTED TO PROVIDE ADEQUATE COVERAGE AND MINIMIZATION OF OVERSPRAY ONTO WALKS, BUILDINGS, PARKING AREAS, ETC.
- ALL PIPE SIZES INDICATED ARE MINIMUMS. CONTRACTOR MAY NOT DECREASE PIPE SIZE. LARGER PIPE SIZES MAY BE USED AT NO ADDITIONAL COST TO OWNER.
- INSTALL ALL IRRIGATION PIPE AND CONTROL WIRES IN MINIMUM 4" PVC SLEEVE BELOW ALL PAVED SURFACES UNLESS OTHERWISE INDICATED ON PLANS. INSTALL SLEEVES PRIOR TO PLACEMENT OF PAVEMENTS AND PAVEMENT SUB-BASE.
- COORDINATE IRRIGATION POINTS OF CONNECTION AND LOCATION OF AUTOMATIC CONTROL VALVES WITH PROJECT MANAGER. COORDINATE ALL WORK WITH OTHER TRADES, I.E. ELECTRICAL, MASONRY, ETC.
- CONTRACTOR TO PROGRAM AUTOMATIC CONTROLLER TO ALLOW FOR EQUIVALENT OF 1" OF WATER PER WEEK, OR PER SITE AND PLANTING NEEDS FOR BEST PLANT HEALTH.
- ALL PIPES SHALL BE TRENCHED. PROVIDE POSITIVE DRAINAGE OF MAINLINE. PLACE MANUAL DRAIN AT LOW POINTS IN MAINLINE. IDENTIFY LOCATIONS ON AS-BUILTS.
- USE 45° ELLS INSTEAD OF 90° ELLS ON ALL MAINLINES 2-1/2" AND LARGER. INSTALL CONCRETE THRUST BLOCKS AT ALL MAINLINE CHANGES IN DIRECTION. POUR MINIMUM OF 1 CUBIC FOOT OF CONCRETE ON UNDISTURBED SOIL. WRAP PIPE IN PLASTIC WRAP PRIOR TO COVERING WITH CONCRETE.
- CONTRACTOR TO INSTALL CONTROLLER AND ACCESSORIES AS REQUIRED. CONTRACTOR TO FURNISH CONTROL WIRES FROM VALVES TO CONTROLLER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING 110 VOLT SERVICE FROM BUILDING AND CONNECTION TO CONTROLLER SERVICE.
- IRRIGATION SYSTEMS SHALL BE TWO (2) WIRE DECODER CONTROL SYSTEMS UNLESS MULTI-WIRE SYSTEM IS SPECIFIED. CONTRACTOR TO PROVIDE DECODERS FOR EACH REMOTE CONTROL VALVE.
- ALL SPRINKLER BODIES TO BE 6" POP-UP IN LAWN AREAS AND 12-INCH POP-UP IN SHRUB, GROUNDCOVER AND STORM WATER PLANTER AREAS.



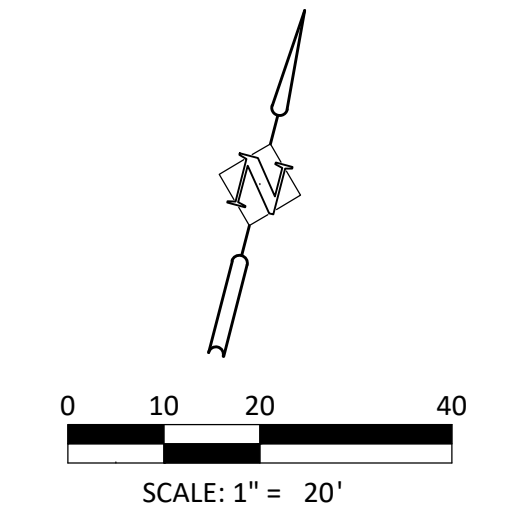
**IRRIGATION LEGEND**

EQUIPMENT	
SYMBOL	DESCRIPTION
	BACKFLOW PREVENTER - FEBCO MODEL 850, 1 1/2" OR APPROVED EQ.
	BALL VALVE - NIBCO T-560 OR APPROVED EQUAL
	REMOTE CONTROL VALVE - HUNTER ICV OR APPVD EQ, SIZE AS SHOWN REMOTE CONTROL VALVE
	QUICK COUPLER - HUNTER HQ3 OR APPROVED EQUAL
	CONTROLLER - HUNTER HCC. TWO WIRE SYSTEM. RAIN CLIK RAIN SENSOR. # STATIONS. LOCATION TO BE APPROVED BY OWNER. INSTALL IN HUNTER SS PEDESTAL.
PIPE	
	MAINLINE - 2" SCH. 40 PVC
	SLEEVING - 4" SLEEVE FOR PIPES < 2"
	LATERAL LINE - .75", CLASS 200 PVC
	LATERAL LINE - 1.0", 1.25" & 1.5" CLASS 200 PVC
	LATERAL LINE - SIZE AS INDICATED, CLASS 200 PVC
	DRIPLINE - HUNTER HDL SUB SURFACE DRIPLINE



**HEAD SCHEDULE**

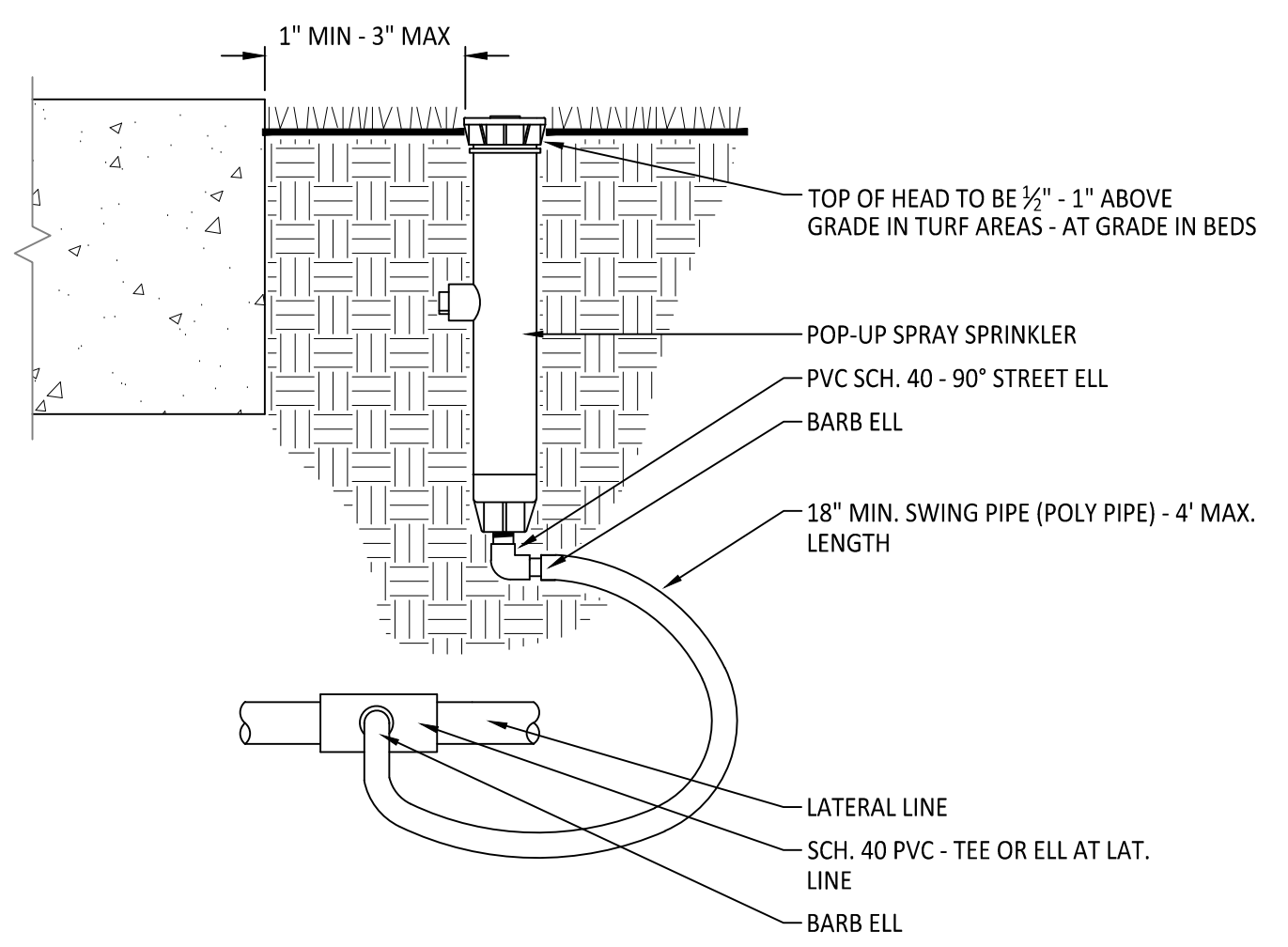
SYMBOL	DESCRIPTION	PSI	RADIUS	GPM
HUNTER PRS30 HEADS W/ PRO-SPRAY NOZZLES				
	PROS-PRS30-5 (F, H & Q)	30	5'	.47, .23, .12
	PROS-PRS30-8 (F, H & Q)	30	8'	.97, .47, .24
	PROS-PRS30-10 (F, H & Q)	30	10'	1.59, .88, .42
	PROS-PRS30-12 (F, H & Q)	30	12'	2.70, 1.30, .67
	PROS-PRS30-15 (F, H & Q)	30	15'	3.75, 1.86, .97
	PROS-PRS30-STRIP (SS, RCS & LCS)	30	5'X30', 5'X15'	1.30, .65
	HUNTER ROOT WATERING SYSTEM	40	NA	.25
HUNTER MPR40 HEADS W/ MP ROTATOR NOZZLES				
	MP55530, MPLCS515 & MPRCS515	40	5'X30', 5'X15'	.44, .22
	MP1000 (360, 180, 90)	40	8'-15'	.75, .37, .19
	MP2000 (360, 180, 90)	40	13'-21'	1.47, .74, .40
	MP3000 (360, 180, 90)	40	22'-30'	3.64, 1.82, .86



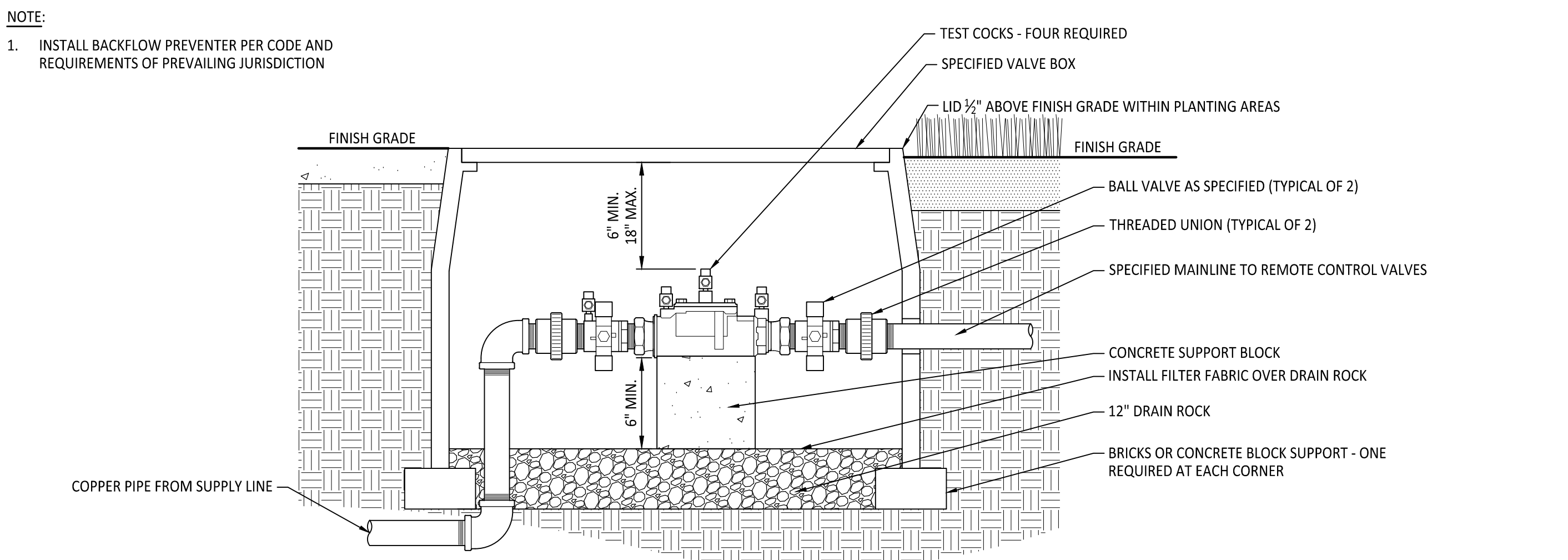
**REVISIONS**

No.	Description	Date

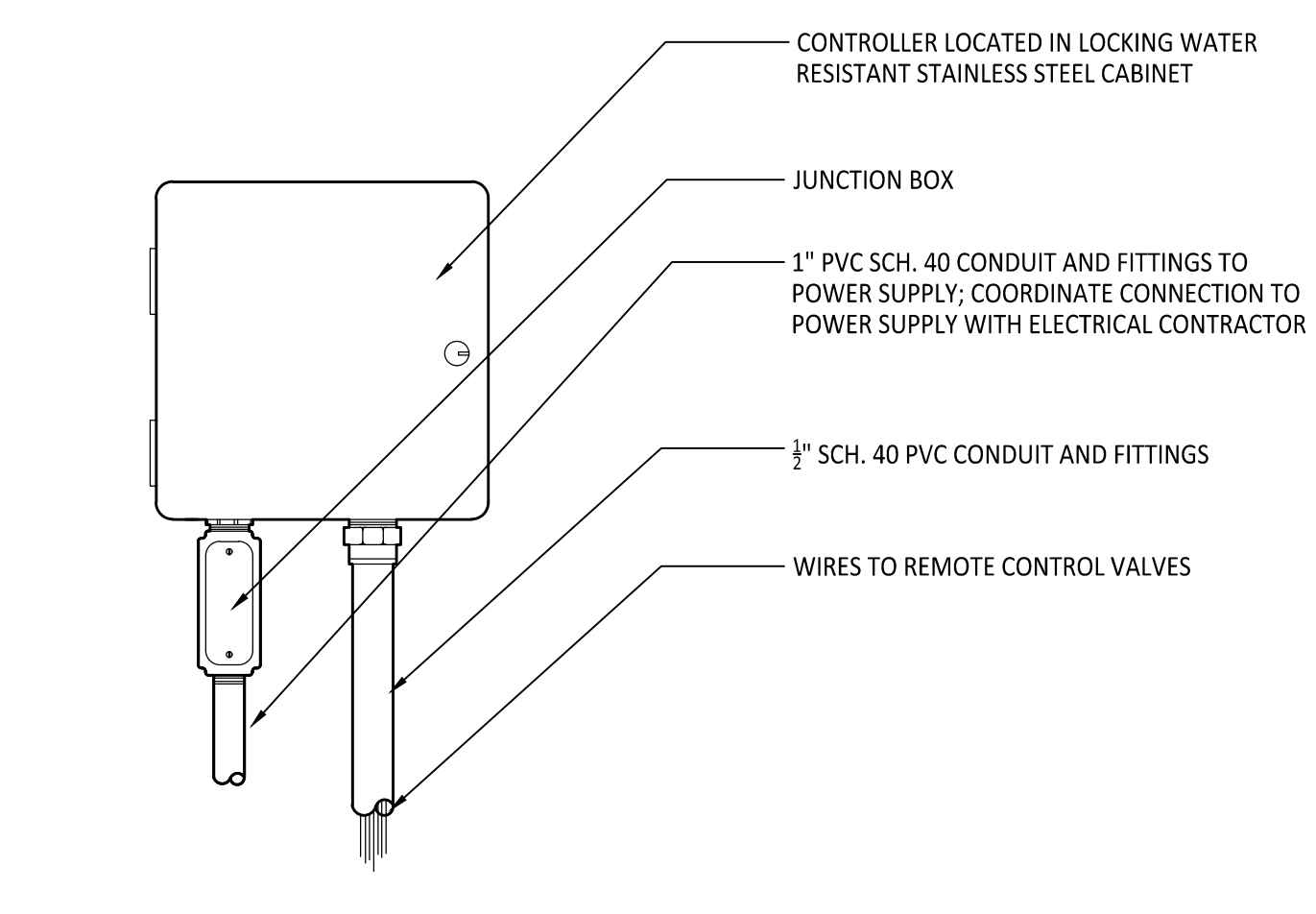
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 CHECKED BY: HHP  
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 DATE: 10/04/2024  
 ISSUED FOR: PRELIMINARY  
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 IRRIGATION PLAN  
 SHEET NO.



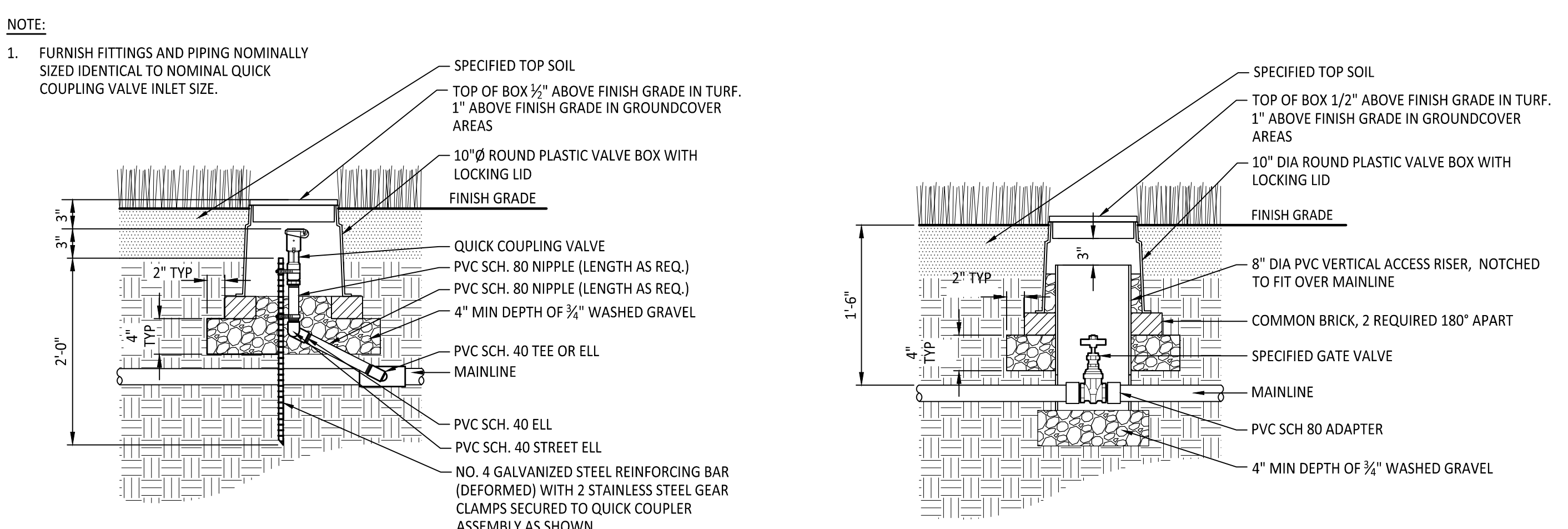
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12" POP-UP SPRAY SPRINKLER  
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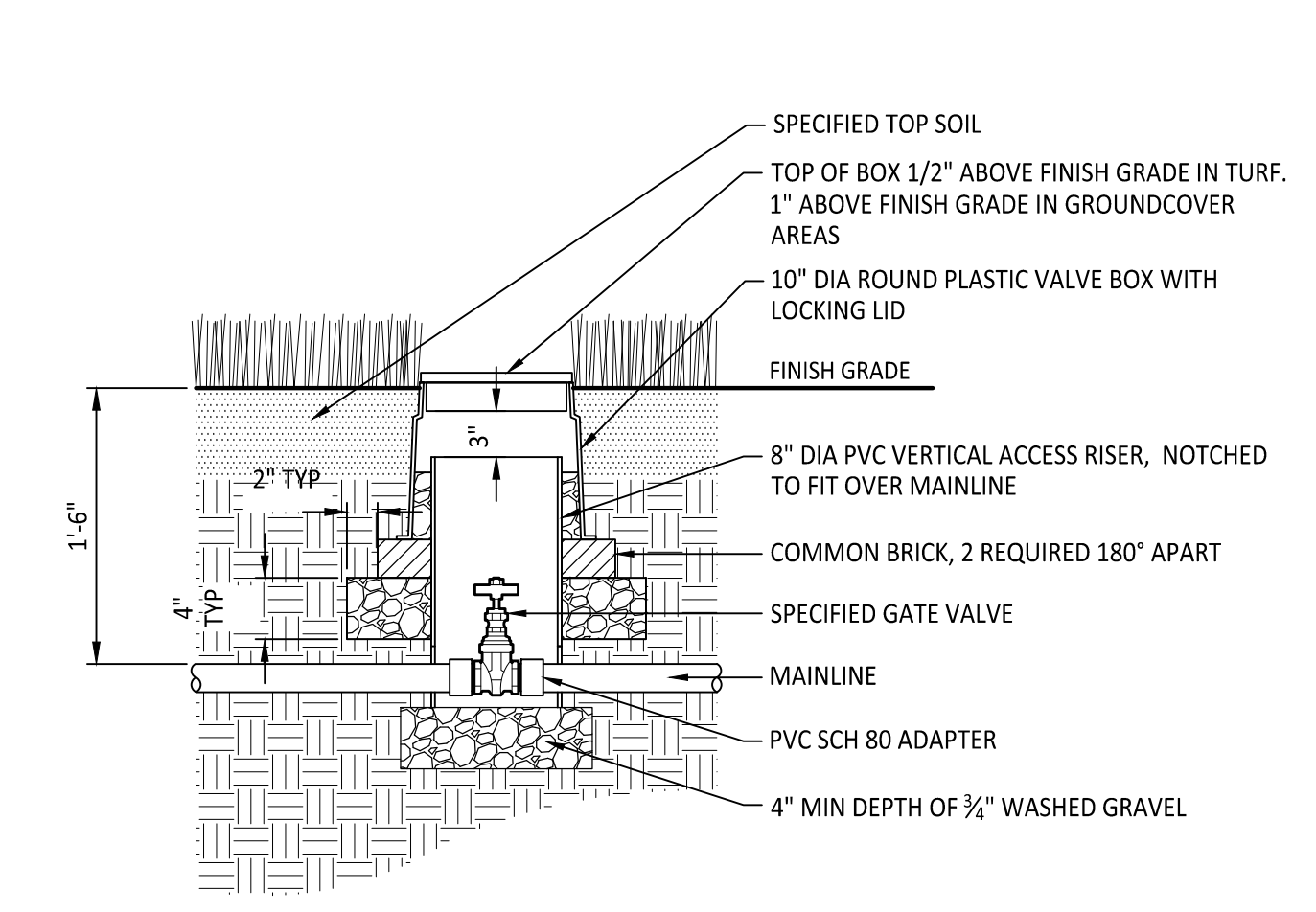
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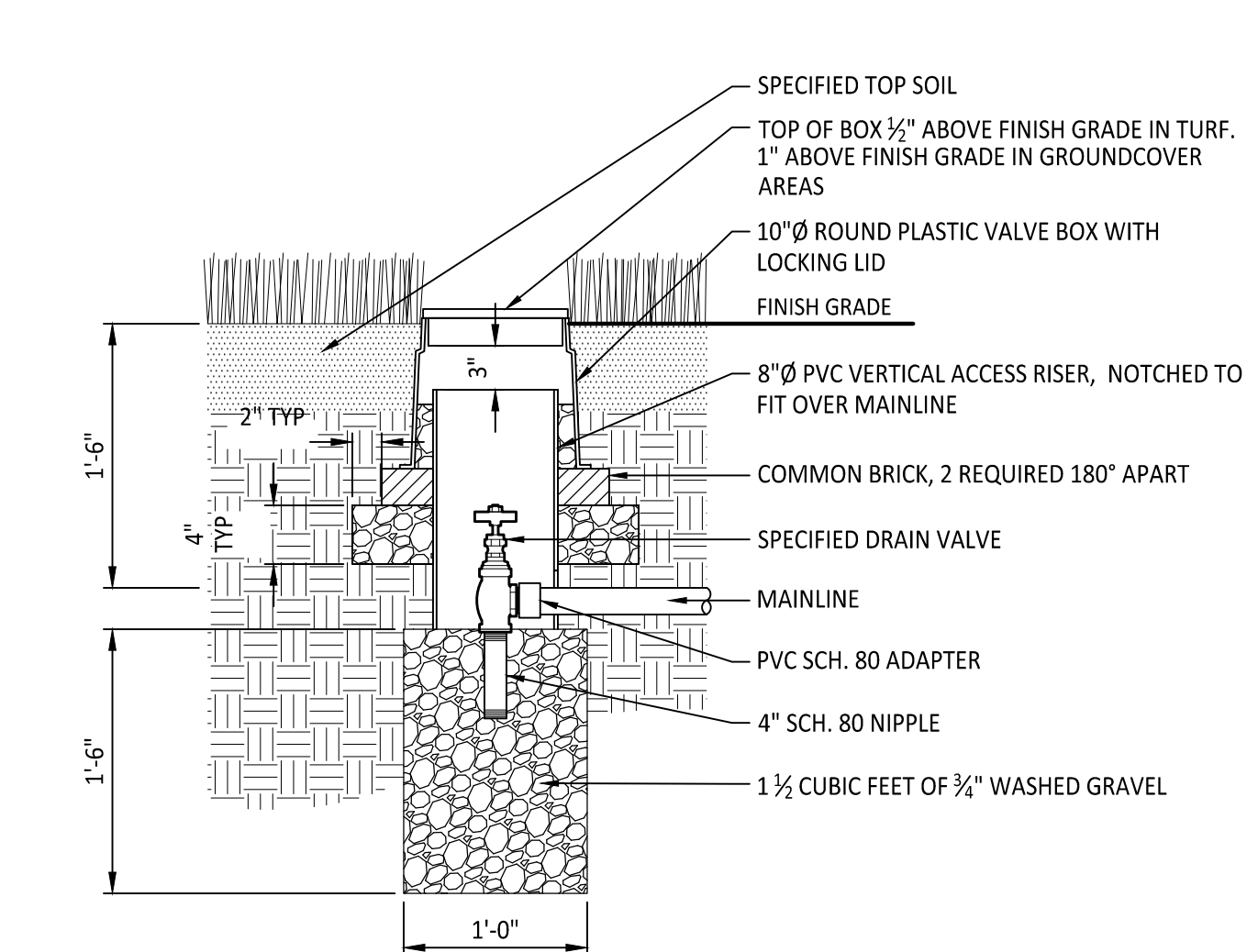
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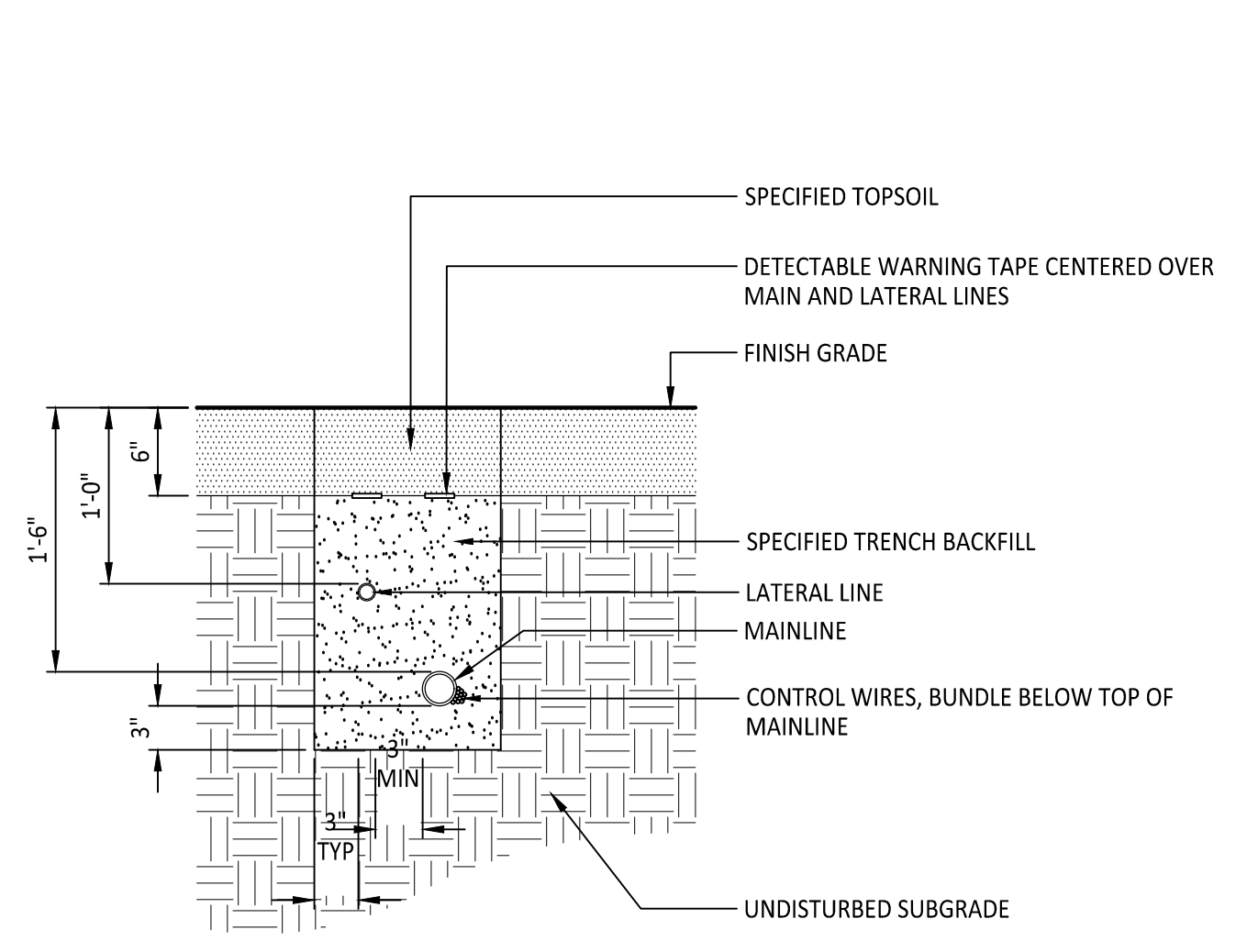
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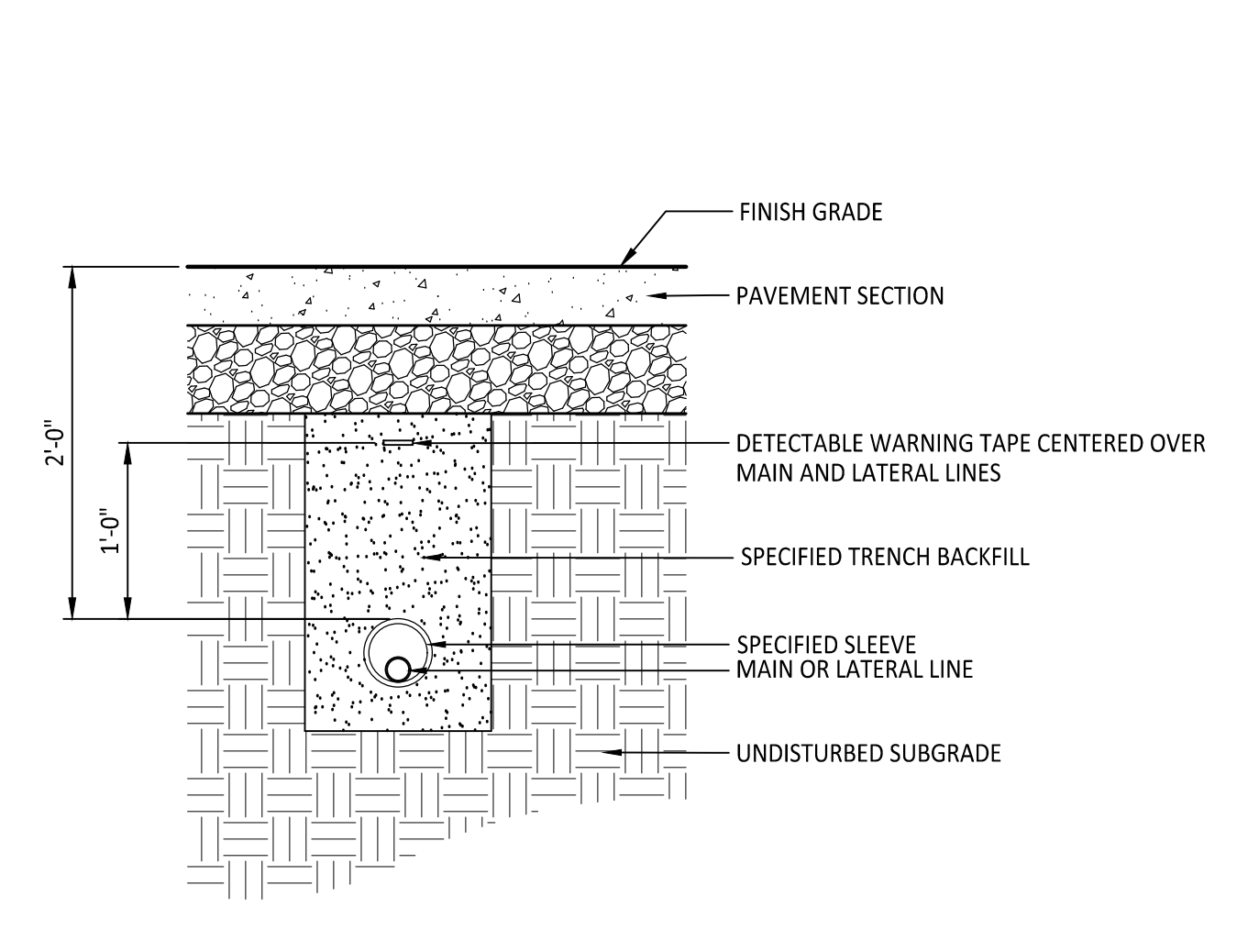
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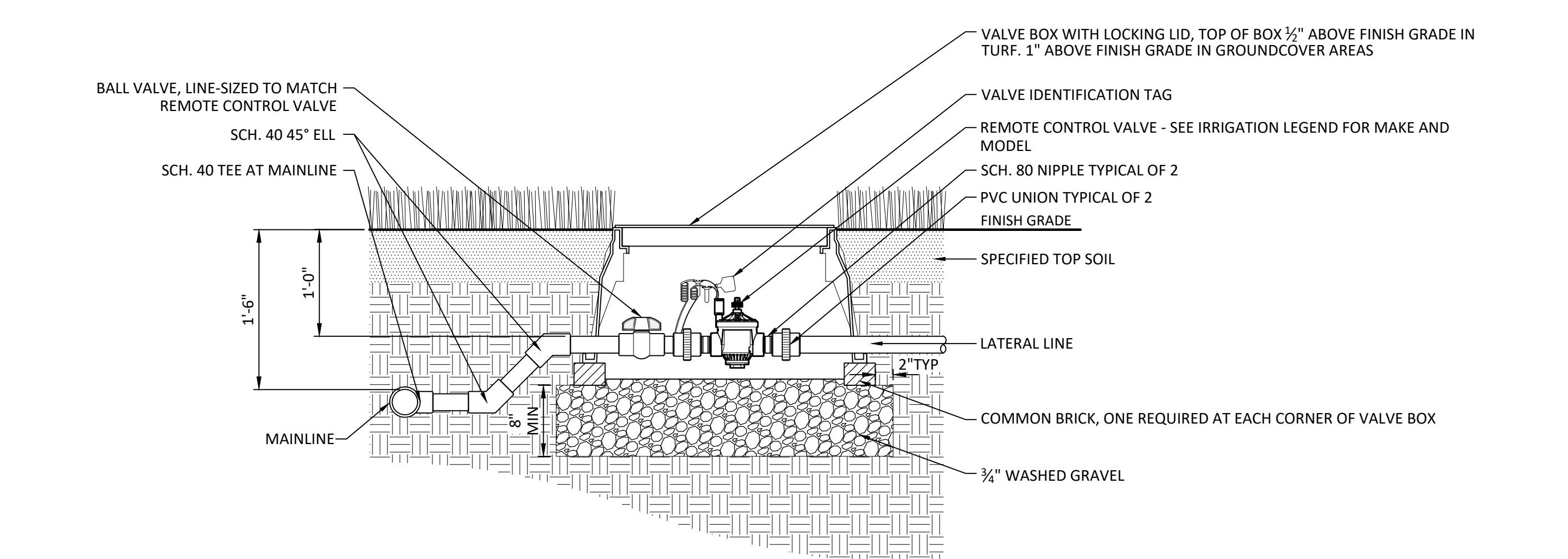
9 Section  
MANUAL DRAIN VALVE  
NOT TO SCALE



5 Section  
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NOT TO SCALE



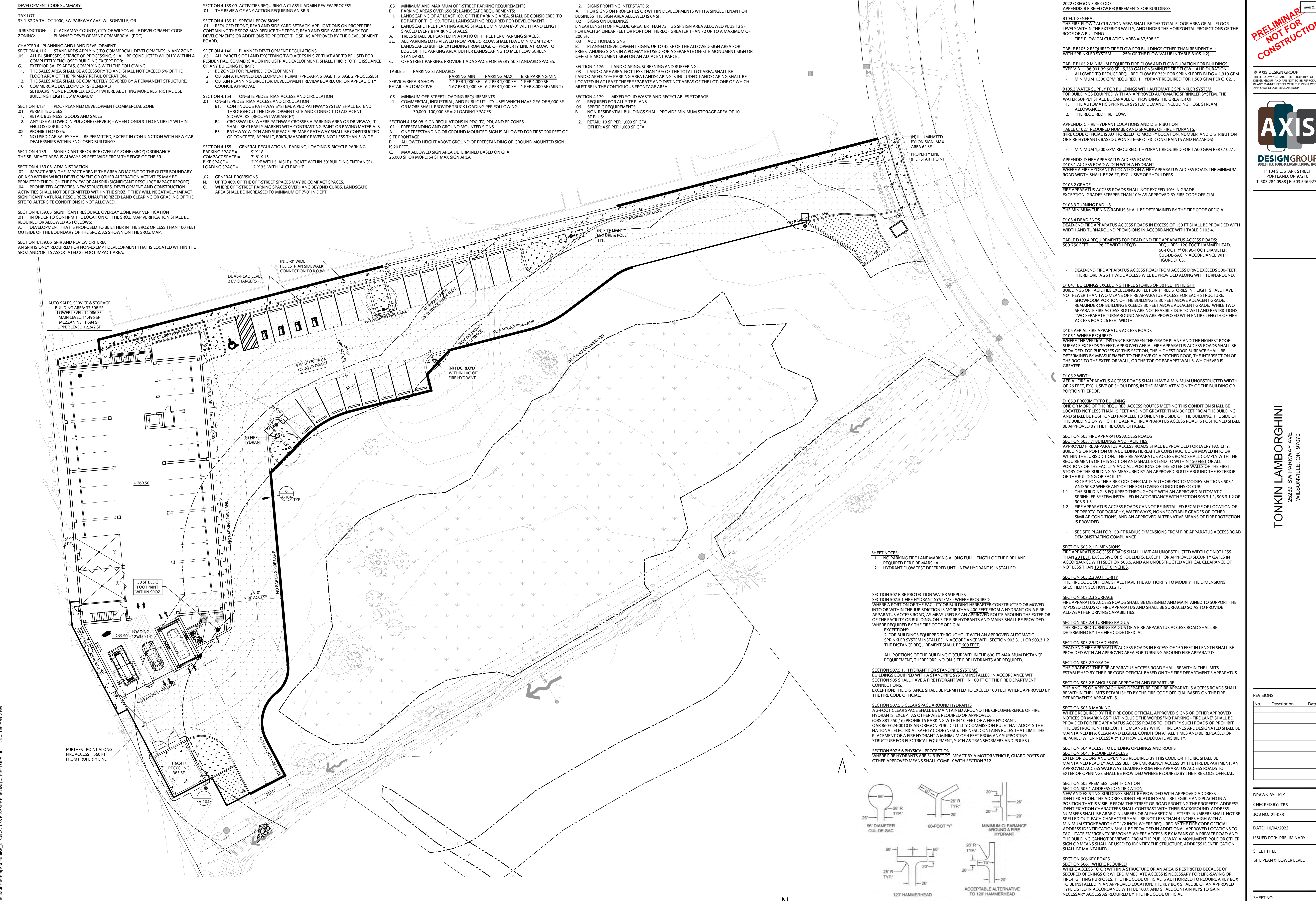
4 Section  
SLEEVING  
NOT TO SCALE



6 Section  
REMOTE CONTROL VALVE  
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REVISIONS		
No.	Description	Date

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CHECKED BY: HHPR  
JOB NO: 22-033  
DATE: 10/04/2024  
ISSUED FOR: PRELIMINARY  
SHEET TITLE  
IRRIGATION DETAILS  
SHEET NO.



**DEVELOPMENT CODE SUMMARY**

TAX LOT:  
35-1-32DA TA LOT 1000, SW PARKWAY AVE, WILSONVILLE, OR

JURISDICTION: CLACKAMAS COUNTY, CITY OF WILSONVILLE DEVELOPMENT CODE

ZONING: PLANNED DEVELOPMENT COMMERCIAL (PDC)

CHAPTER 4 - PLANNING AND LAND DEVELOPMENT

SECTION 4.116 STANDARDS APPLYING TO COMMERCIAL DEVELOPMENTS IN ANY ZONE

05 ALL BUSINESSES, SERVICE OR PROCESSING, SHALL BE CONDUCTED WHOLLY WITHIN A COMPLETELY ENCLOSED BUILDING EXCEPT FOR:

- EXTERIOR SALES AREAS, COMPLYING WITH THE FOLLOWING:
  - THE SALES AREA SHALL BE ACCESSORY TO AND SHALL NOT EXCEED 5% OF THE FLOOR AREA OF THE PRIMARY RETAIL OPERATION.
  - THE SALES AREA SHALL BE COMPLETELY COVERED BY A PERMANENT STRUCTURE.
  - COMMERCIAL DEVELOPMENTS (GENERAL)
  - SETBACKS: NONE REQUIRED, EXCEPT WHERE ABUTTING MORE RESTRICTIVE USE BUILDING HEIGHT: 35' MAXIMUM.

SECTION 4.133 PDC - PLANNED DEVELOPMENT COMMERCIAL ZONE

01 PERMITTED USES:

- RETAIL BUSINESS, GOODS AND SALES
- ANY USE ALLOWED IN PDI ZONE (SERVICE) - WHEN CONDUCTED ENTIRELY WITHIN ENCLOSED BUILDING.

02 PROHIBITED USES:

- NO USED CAR SALES SHALL BE PERMITTED, EXCEPT IN CONJUNCTION WITH NEW CAR DEALERSHIPS WITHIN ENCLOSED BUILDINGS.

SECTION 4.139 SIGNIFICANT RESOURCE OVERLAY ZONE (SROZ) ORDINANCE

THE SR IMPACT AREA IS ALWAYS 25 FEET WIDE FROM THE EDGE OF THE SR.

SECTION 4.139.03 ADMINISTRATION

02 IMPACT AREA. THE IMPACT AREA IS THE AREA ADJACENT TO THE OUTER BOUNDARY OF A SR WITHIN WHICH DEVELOPMENT OR OTHER ALTERATION ACTIVITIES MAY BE PERMITTED THROUGH THE REVIEW OF AN SRIR (SIGNIFICANT RESOURCE IMPACT REPORT)

04 PROHIBITED ACTIVITIES. NEW STRUCTURES, DEVELOPMENT AND CONSTRUCTION ACTIVITIES SHALL NOT BE PERMITTED WITHIN THE SROZ IF THEY WILL NEGATIVELY IMPACT SIGNIFICANT NATURAL RESOURCES. UNAUTHORIZED LAND CLEARING OR GRADING OF THE SITE TO ALTER SITE CONDITIONS IS NOT ALLOWED.

SECTION 4.139.05 SIGNIFICANT RESOURCE OVERLAY ZONE MAP VERIFICATION

01 IN ORDER TO CONFIRM THE LOCATION OF THE SROZ, MAP VERIFICATION SHALL BE REQUIRED OR ALLOWED AS FOLLOWS:

- DEVELOPMENT THAT IS PROPOSED TO BE EITHER IN THE SROZ OR LESS THAN 100 FEET OUTSIDE OF THE BOUNDARY OF THE SROZ, AS SHOWN ON THE SROZ MAP.

SECTION 4.139.06 SRIR AND REVIEW CRITERIA

AN SRIR IS ONLY REQUIRED FOR NON-EXEMPT DEVELOPMENT THAT IS LOCATED WITHIN THE SROZ AND/OR ITS ASSOCIATED 25 FOOT IMPACT AREA.

SECTION 4.139.09 ACTIVITIES REQUIRING A CLASS II ADMIN REVIEW PROCESS

01 THE REVIEW OF ANY ACTION REQUIRING AN SRIR

SECTION 4.139.11 SPECIAL PROVISIONS

01 REDUCED FRONT, REAR AND SIDE YARD SETBACK. APPLICATIONS ON PROPERTIES CONTAINING THE SROZ MAY REDUCE THE FRONT, REAR AND SIDE YARD SETBACK FOR DEVELOPMENTS OR ADDITIONS TO PROTECT THE SR, AS APPROVED BY THE DEVELOPMENT BOARD.

SECTION 4.140 PLANNED DEVELOPMENT REGULATIONS

05 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:

- BE ZONED FOR PLANNED DEVELOPMENT
- OBTAIN A PLANNED DEVELOPMENT PERMIT (PRE-APP, STAGE 1, STAGE 2 PROCESSES)
- OBTAIN PLANNING DIRECTOR, DEVELOPMENT REVIEW BOARD, OR, ON APPEAL, CITY COUNCIL APPROVAL

SECTION 4.154 ON-SITE PEDESTRIAN ACCESS AND CIRCULATION

01 ON-SITE PEDESTRIAN ACCESS AND CIRCULATION

01 CONTINUOUS PATHWAY SYSTEM. A PED PATHWAY SYSTEM SHALL EXTEND THROUGHOUT THE DEVELOPMENT SITE AND CONNECT TO ADJACENT SIDEWALKS. (REQUEST VARIANCE?)

04 CROSSWALKS. WHERE PATHWAY CROSSES A PARKING AREA OR DRIVEWAY, IT SHALL BE CLEARLY MARKED WITH CONTRASTING PAINT OR PAVING MATERIALS.

B5. PATHWAY WIDTH AND SURFACE. PRIMARY PATHWAY SHALL BE CONSTRUCTED OF CONCRETE, ASPHALT, BRICK/MASONRY PAVERS, NOT LESS THAN 5' WIDE.

SECTION 4.155 GENERAL REGULATIONS - PARKING, LOADING & BICYCLE PARKING

PARKING SPACE = 9' X 18'

COMPACT SPACE = 7' 6" X 15'

BIKE SPACE = 2' X 6' WITH 5' AISLE (LOCATE WITHIN 30' BUILDING ENTRANCE)

LOADING SPACE = 12' X 35' WITH 14' CLEAR HT

02 GENERAL PROVISIONS

N. UP TO 40% OF THE OFF-STREET SPACES MAY BE COMPACT SPACES.

O. WHERE OFF-STREET PARKING SPACES OVERHANG BEYOND CURBS, LANDSCAPE AREA SHALL BE INCREASED TO MINIMUM OF 7'-0" IN DEPTH.

MINIMUM AND MAXIMUM OFF-STREET PARKING REQUIREMENTS

PARKING AREAS OVER 650 SF: LANDSCAPE REQUIREMENTS

- LANDSCAPING OF AT LEAST 10% OF THE PARKING AREA SHALL BE CONSIDERED TO BE PART OF THE 15% TOTAL LANDSCAPING REQUIRED FOR DEVELOPMENT.
- LANDSCAPE TREE PLANTING AREAS SHALL BE MINIMUM 8'-0" WIDTH AND LENGTH SPACED EVERY 8 PARKING SPACES.
- TREES SHALL BE PLANTED IN A RATIO OF 1 TREE PER 8 PARKING SPACES.
- ALL PARKING LOTS VIEWED FROM PUBLIC R.O.W. SHALL HAVE MINIMUM 12'-0" LANDSCAPED BUFFER EXTENDING FROM EDGE OF PROPERTY LINE AT R.O.W. TO EDGE OF THE PARKING AREA. BUFFER LANDSCAPING TO MEET LOW SCREEN STANDARD.
- OFF-STREET PARKING, PROVIDE 1 ADA SPACE FOR EVERY 50 STANDARD SPACES.

TABLE 5 PARKING STANDARDS

SERVICE/REPAIR SHOPS	PARKING MIN	PARKING MAX	BIKE PARKING MIN
RETAIL - AUTOMOTIVE	4.1 PER 1,000 SF	6.2 PER 1,000 SF	1 PER 4,000 SF
	1.67 PER 1,000 SF	6.2 PER 1,000 SF	1 PER 8,000 SF (MIN 2)

05 MINIMUM OFF-STREET LOADING REQUIREMENTS

- COMMERCIAL, INDUSTRIAL, AND PUBLIC UTILITY USES WHICH HAVE GFA OF 5,000 SF OR MORE SHALL PROVIDE TRUCK LOADING PER FOLLOWING:
  - ALLOWED HEIGHT ABOVE GROUND OF FREESTANDING OR GROUND MOUNTED SIGN IS 20 FEET.
  - MAX ALLOWED SIGN AREA DETERMINED BASED ON GFA.

SECTION 4.156.08 SIGN REGULATIONS IN PDC, TC, PDI, AND PF ZONES

01 FREESTANDING AND GROUND MOUNTED SIGNS

- ONE FREESTANDING OR GROUND MOUNTED SIGN IS ALLOWED FOR FIRST 200 FEET OF SITE FRONTAGE.
- ALLOWED HEIGHT ABOVE GROUND OF FREESTANDING OR GROUND MOUNTED SIGN IS 20 FEET.
- MAX ALLOWED SIGN AREA DETERMINED BASED ON GFA.
- 26,000 SF OR MORE: 64 SF MAX SIGN AREA

2. SIGNS FRONTING INTERSTATE 5:

- FOR SIGNS ON PROPERTIES OR WITHIN DEVELOPMENTS WITH A SINGLE TENANT OR BUSINESS THE SIGN AREA ALLOWED IS 64 SF.
- SIGNS ON BUILDINGS
- LINEAR LENGTH OF FACADE: GREATER THAN 75 = 36 SF SIGN AREA ALLOWED PLUS 12 SF FOR EACH 24 LINEAR FEET OR PORTION THEREOF GREATER THAN 72 UP TO A MAXIMUM OF 200 SF.
- ADDITIONAL SIGNS
- PLANNED DEVELOPMENT SIGNS: UP TO 32 SF OF THE ALLOWED SIGN AREA FOR FREESTANDING SIGNS IN A PD MAY BE USED FOR A SEPARATE ON-SITE MONUMENT SIGN OR OFF-SITE MONUMENT SIGN ON AN ADJACENT PARCEL.

SECTION 4.176 LANDSCAPING, SCREENING AND BUFFERING

03 LANDSCAPE AREA. NOT LESS THAN 15% OF THE TOTAL LOT AREA, SHALL BE LANDSCAPED. 10% PARKING AREA LANDSCAPING IS INCLUDED. 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.

SECTION 4.179 MIXED SOLID WASTE AND RECYCLABLES STORAGE

01 REQUIRED FOR ALL SITE PLANS.

06 SPECIFIC REQUIREMENTS

- NON-RESIDENTIAL BUILDINGS SHALL PROVIDE MINIMUM STORAGE AREA OF 10 SF PLUS:
- RETAIL: 10 SF PER 1,000 SF GFA
- OTHER: 4 SF PER 1,000 SF GFA

2022 OREGON FIRE CODE

APPENDIX B FIRE-FLOW REQUIREMENTS FOR BUILDINGS

B104.1 GENERAL

THE FIRE-FLOW CALCULATION AREA SHALL BE THE TOTAL FLOOR AREA OF ALL FLOOR LEVELS WITHIN THE EXTERIOR WALLS, AND UNDER THE HORIZONTAL PROJECTIONS OF THE ROOF OF A BUILDING.

FIRE-FLOW CALCULATION AREA = 37,508 SF

TABLE B105.2 REQUIRED FIRE FLOW FOR BUILDINGS OTHER THAN RESIDENTIAL WITH SPRINKLER SYSTEM

25% OF THE FLOW VALUE IN TABLE B105.1(a)

TABLE B105.2 MINIMUM REQUIRED FIRE-FLOW AND FLOW DURATION FOR BUILDINGS

TYPE V-B 36,001-39,500 SF 5-250 GALLONS/MINUTE FIRE FLOW 4 HR DURATION

- ALLOWED TO REDUCE REQUIRED FLOW BY 75% FOR SPRINKLERED BLDG = 1,310 GPM
- MINIMUM 1,500 GPM REQUIRED. 1 HYDRANT REQUIRED FOR 1,500 GPM PER C102.1.

B105.3 WATER SUPPLY FOR BUILDINGS WITH AUTOMATIC SPRINKLER SYSTEM

FOR BUILDINGS EQUIPPED WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM, THE WATER SUPPLY SHALL BE CAPABLE OF PROVIDING THE GREATER OF:

- THE AUTOMATIC SPRINKLER SYSTEM DEMAND, INCLUDING HOSE STREAM ALLOWANCE.
- THE REQUIRED FIRE FLOW.

APPENDIX C FIRE HYDRANT LOCATIONS AND DISTRIBUTION

TABLE C102.1 REQUIRED NUMBER AND SPACING OF FIRE HYDRANTS

FIRE CODE OFFICIAL IS AUTHORIZED TO MODIFY LOCATION, NUMBER, AND DISTRIBUTION OF FIRE HYDRANTS BASED UPON SITE-SPECIFIC CONSTRAINTS AND HAZARDS!

- MINIMUM 1,500 GPM REQUIRED. 1 HYDRANT REQUIRED FOR 1,500 GPM PER C102.1.

APPENDIX D FIRE APPARATUS ACCESS ROADS

D103.1 ACCESS ROAD WIDTH WITH HYDRANT

WHERE A FIRE HYDRANT IS LOCATED ON A FIRE APPARATUS ACCESS ROAD, THE MINIMUM ROAD WIDTH SHALL BE 26 FT, EXCLUSIVE OF SHOULDERS.

D103.2 GRADE

FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 10% IN GRADE. EXCEPTION: GRADES STEEPER THAN 10% AS APPROVED BY FIRE CODE OFFICIAL.

D103.3 TURNING RADIUS

THE MINIMUM TURNING RADIUS SHALL BE DETERMINED BY THE FIRE CODE OFFICIAL.

D103.4 DEAD ENDS

DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FT SHALL BE PROVIDED WITH WIDTH AND TURNAROUND PROVISIONS IN ACCORDANCE WITH TABLE D103.4.

TABLE D103.4 REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS

REQUIRED 120' FOOT HAMMERHEAD, 500-750 FEET	26 FT WIDTH REQ'D	REQUIRED 60-FOOT "Y" OR 96-FOOT DIAMETER CUL-DE-SAC IN ACCORDANCE WITH FIGURE D103.1
-	-	-

D104.1 BUILDINGS EXCEEDING THREE STORIES OR 30 FEET IN HEIGHT

BUILDINGS OR FACILITIES EXCEEDING 30 FEET OR THREE STORIES IN HEIGHT SHALL HAVE NOT FEWER THAN TWO MEANS OF FIRE APPARATUS ACCESS FOR EACH STRUCTURE

SHOWROOM PORTION OF THE BUILDING IS 30 FEET ABOVE ADJACENT GRADE. REMAINDER OF BUILDING EXCEEDS 30 FEET ABOVE ADJACENT GRADE. WHILE TWO SEPARATE FIRE ACCESS ROUTES ARE NOT FEASIBLE DUE TO WETLAND RESTRICTIONS, TWO SEPARATE TURNAROUND AREAS ARE PROPOSED WITH ENTIRE LENGTH OF FIRE ACCESS ROAD 26 FEET WIDTH.

D105 AERIAL FIRE APPARATUS ACCESS ROADS

D105.1 WHERE REQUIRED

WHERE THE VERTICAL DISTANCE BETWEEN THE GRADE PLANE AND THE HIGHEST ROOF SURFACE EXCEEDS 30 FEET, APPROVED AERIAL FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED. FOR PURPOSES OF THIS SECTION, THE HIGHEST ROOF SURFACE SHALL BE DETERMINED BY MEASUREMENT TO THE EAVE OF A PITCHED ROOF, THE INTERSECTION OF THE ROOF TO THE EXTERIOR WALL, OR THE TOP OF PARAPET WALLS, WHICHEVER IS GREATER.

D105.2 WIDTH

AERIAL FIRE APPARATUS ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 26 FEET, EXCLUSIVE OF SHOULDERS, IN THE IMMEDIATE VICINITY OF THE BUILDING OR PORTION THEREOF.

D105.3 PROXIMITY TO BUILDING

ONE OR MORE OF THE REQUIRED ACCESS ROUTES MEETING THIS CONDITION SHALL BE LOCATED NOT LESS THAN 15 FEET AND NOT GREATER THAN 30 FEET FROM THE BUILDING, AND SHALL BE POSITIONED PARALLEL TO ONE ENTIRE SIDE OF THE BUILDING. THE SIDE OF THE BUILDING ON WHICH THE AERIAL FIRE APPARATUS ACCESS ROAD IS POSITIONED SHALL BE APPROVED BY THE FIRE CODE OFFICIAL.

SECTION 503 FIRE APPARATUS ACCESS ROADS

SECTION 503.1 BUILDINGS AND FACILITIES

APPROVED FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED FOR EVERY FACILITY, BUILDING OR PORTION OF A BUILDING HEREAFTER CONSTRUCTED OR MOVED INTO OR WITHIN THE JURISDICTION. THE FIRE APPARATUS ACCESS ROAD SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION AND SHALL EXTEND TO WITHIN 150 FEET OF ALL PORTIONS OF THE FACILITY AND ALL PORTIONS OF THE EXTERIOR WALLS OF THE FIRST STORY OF THE BUILDING AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE BUILDING OR FACILITY.

EXCEPTIONS: THE FIRE CODE OFFICIAL IS AUTHORIZED TO MODIFY SECTIONS 503.1 AND 503.2 WHERE ANY OF THE FOLLOWING CONDITIONS OCCUR:

- THE BUILDING IS EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1, 903.3.1.2 OR 903.3.1.3.
- FIRE APPARATUS ACCESS ROADS CANNOT BE INSTALLED BECAUSE OF LOCATION OF PROPERTY, TOPOGRAPHY, WATERWAYS, NONNEGOTIABLE GRADES OR OTHER SIMILAR CONDITIONS, AND AN APPROVED ALTERNATIVE MEANS OF FIRE PROTECTION IS PROVIDED.
- SEE SITE PLAN FOR 150-FT RADIUS DIMENSIONS FOR FIRE APPARATUS ACCESS ROAD DEMONSTRATING COMPLIANCE.

SECTION 503.2.1 DIMENSIONS

FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 26 FEET, EXCLUSIVE OF SHOULDERS, EXCEPT FOR APPROVED SECURITY GATES IN ACCORDANCE WITH SECTION 503.6, AND AN UNOBSTRUCTED VERTICAL CLEARANCE OF NOT LESS THAN 13 FEET 6 INCHES.

SECTION 503.2.2 AUTHORITY

THE FIRE CODE OFFICIAL SHALL HAVE THE AUTHORITY TO MODIFY THE DIMENSIONS SPECIFIED IN SECTION 503.2.1.

SECTION 503.2.3 SURFACE

FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND SHALL BE SURFACED SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.

SECTION 503.2.4 TURNING RADIUS

THE REQUIRED TURNING RADIUS OF A FIRE APPARATUS ACCESS ROAD SHALL BE DETERMINED BY THE FIRE CODE OFFICIAL.

SECTION 503.2.5 DEAD ENDS

DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH AN APPROVED AREA FOR TURNING AROUND FIRE APPARATUS.

SECTION 503.2.7 GRADE

THE GRADE OF THE FIRE APPARATUS ACCESS ROAD SHALL BE WITHIN THE LIMITS ESTABLISHED BY THE FIRE CODE OFFICIAL BASED ON THE FIRE DEPARTMENT'S APPARATUS.

SECTION 503.2.8 ANGLES OF APPROACH AND DEPARTURE

THE ANGLES OF APPROACH AND DEPARTURE FOR FIRE APPARATUS ACCESS ROADS SHALL BE WITHIN THE LIMITS ESTABLISHED BY THE FIRE CODE OFFICIAL BASED ON THE FIRE DEPARTMENT'S APPARATUS.

SECTION 503.3 MARKING

WHERE REQUIRED BY THE FIRE CODE OFFICIAL, APPROVED SIGNS OR OTHER APPROVED NOTICES OR MARKINGS THAT INCLUDE THE WORDS "NO PARKING - FIRE LANE" SHALL BE PROVIDED FOR FIRE APPARATUS ACCESS ROADS TO IDENTIFY SUCH ROADS OR PROHIBIT THE OBSTRUCTION THEREOF. THE MEANS BY WHICH FIRE LANES ARE DESIGNATED SHALL BE MAINTAINED IN A CLEAR AND LEGIBLE CONDITION AT ALL TIMES AND BE REPLACED OR REPAIRED WHEN NECESSARY TO PROVIDE ADEQUATE VISIBILITY.

SECTION 504 ACCESS TO BUILDING OPENINGS AND ROOFS

SECTION 504.1 REQUIRED ACCESS

EXTERIOR DOORS AND OPENINGS REQUIRED BY THIS CODE OR THE IBC SHALL BE MAINTAINED READILY ACCESSIBLE FOR EMERGENCY ACCESS BY THE FIRE DEPARTMENT. AN APPROVED ACCESS WALKWAY LEADING FROM FIRE APPARATUS ACCESS ROADS TO EXTERIOR OPENINGS SHALL BE PROVIDED WHERE REQUIRED BY THE FIRE CODE OFFICIAL.

SECTION 505 PREMISES IDENTIFICATION

SECTION 505.1 ADDRESS IDENTIFICATION

NEW AND EXISTING BUILDINGS SHALL BE PROVIDED WITH APPROVED ADDRESS IDENTIFICATION. THE ADDRESS IDENTIFICATION SHALL BE LEGIBLE AND PLACED IN A POSITION THAT IS VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. ADDRESS IDENTIFICATION CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND. ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. NUMBERS SHALL NOT BE SPILLED OUT. EACH CHARACTER SHALL BE NOT LESS THAN 1/2 INCHES HIGH WITH A MINIMUM STROKE WIDTH OF 1/2 INCH. WHERE REQUIRED BY THE FIRE CODE OFFICIAL, ADDRESS IDENTIFICATION SHALL BE PROVIDED IN ADDITIONAL APPROVED LOCATIONS TO FACILITATE EMERGENCY RESPONSE. WHERE ACCESS IS BY MEANS OF A PRIVATE ROAD AND THE BUILDING CANNOT BE VIEWED FROM THE PUBLIC WAY, A MONUMENT, POLE OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. ADDRESS IDENTIFICATION SHALL BE MAINTAINED.

SECTION 506 KEY BOXES

SECTION 506.1 WHERE REQUIRED

WHERE ACCESS TO OR WITHIN A STRUCTURE OR AN AREA IS RESTRICTED BECAUSE OF SECURED OPENINGS OR WHERE IMMEDIATE ACCESS IS NECESSARY FOR LIFE-SAVING OR FIRE-FIGHTING PURPOSES, THE FIRE CODE OFFICIAL IS AUTHORIZED TO REQUIRE A KEY BOX TO BE INSTALLED IN AN APPROVED LOCATION. THE KEY BOX SHALL BE OF AN APPROVED TYPE LISTED IN ACCORDANCE WITH UL 1037, AND SHALL CONTAIN KEYS TO GAIN NECESSARY ACCESS AS REQUIRED BY THE FIRE CODE OFFICIAL.

**SHEET NOTES:**

- NO PARKING FIRE LANE MARKING ALONG FULL LENGTH OF THE FIRE LANE REQUIRED PER FIRE MARSHAL.
- HYDRANT FLOW TEST DEFERRED UNTIL NEW HYDRANT IS INSTALLED.

**SECTION 507 FIRE PROTECTION WATER SUPPLIES**

**SECTION 507.5.1 FIRE HYDRANT SYSTEMS - WHERE REQUIRED**

WHERE A PORTION OF THE FACILITY OR BUILDING HEREAFTER CONSTRUCTED OR MOVED INTO OR WITHIN THE JURISDICTION IS MORE THAN 400 FEET FROM A HYDRANT ON A FIRE APPARATUS ACCESS ROAD, AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE FACILITY OR BUILDING, ON-SITE FIRE HYDRANTS AND MAINS SHALL BE PROVIDED WHERE REQUIRED BY THE FIRE CODE OFFICIAL.

EXCEPTIONS:

- FOR BUILDINGS EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 THE DISTANCE REQUIREMENT SHALL BE 600 FEET.
- ALL PORTIONS OF THE BUILDING OCCUR WITHIN THE 600-FT MAXIMUM DISTANCE REQUIREMENT, THEREFORE, NO ON-SITE FIRE HYDRANTS ARE REQUIRED.

**SECTION 507.5.1.1 HYDRANT FOR STANDPIPE SYSTEMS**

BUILDINGS EQUIPPED WITH A STANDPIPE SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 905 SHALL HAVE A FIRE HYDRANT WITHIN 100 FT OF THE FIRE DEPARTMENT CONNECTIONS.

EXCEPTION: THE DISTANCE SHALL BE PERMITTED TO EXCEED 100 FEET WHERE APPROVED BY THE FIRE CODE OFFICIAL.

**SECTION 507.5.5 CLEAR SPACE AROUND HYDRANTS**

A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS, EXCEPT AS OTHERWISE REQUIRED OR APPROVED.

(ORS 881.550(16) PROHIBITS PARKING WITHIN 10 FEET OF A FIRE HYDRANT. OAR 860-024-0010 IS AN OREGON PUBLIC UTILITY COMMISSION RULE THAT ADOPTS THE NATIONAL ELECTRICAL SAFETY CODE (NEC). THE NEC CONTAINS RULES THAT LIMIT THE PLACEMENT OF A FIRE HYDRANT A MINIMUM OF 4 FEET FROM ANY SUPPORTING STRUCTURE FOR ELECTRICAL EQUIPMENT, SUCH AS TRANSFORMERS AND POLES.)

**SECTION 507.5.6 PHYSICAL PROTECTION**

WHERE FIRE HYDRANTS ARE SUBJECT TO IMPACT BY A MOTOR VEHICLE, GUARD POSTS OR OTHER APPROVED MEANS SHALL COMPLY WITH SECTION 312.

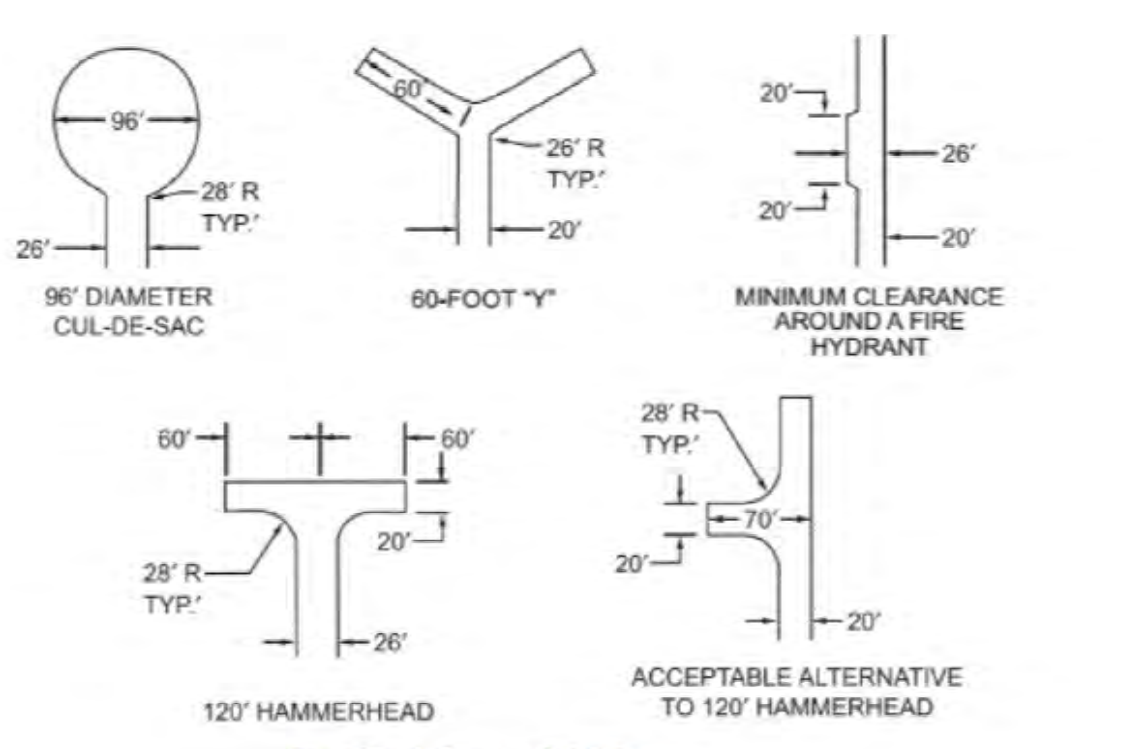


FIGURE D103.1 DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND

PRELIMINARY NOT FOR CONSTRUCTION

AXIS DESIGN GROUP  
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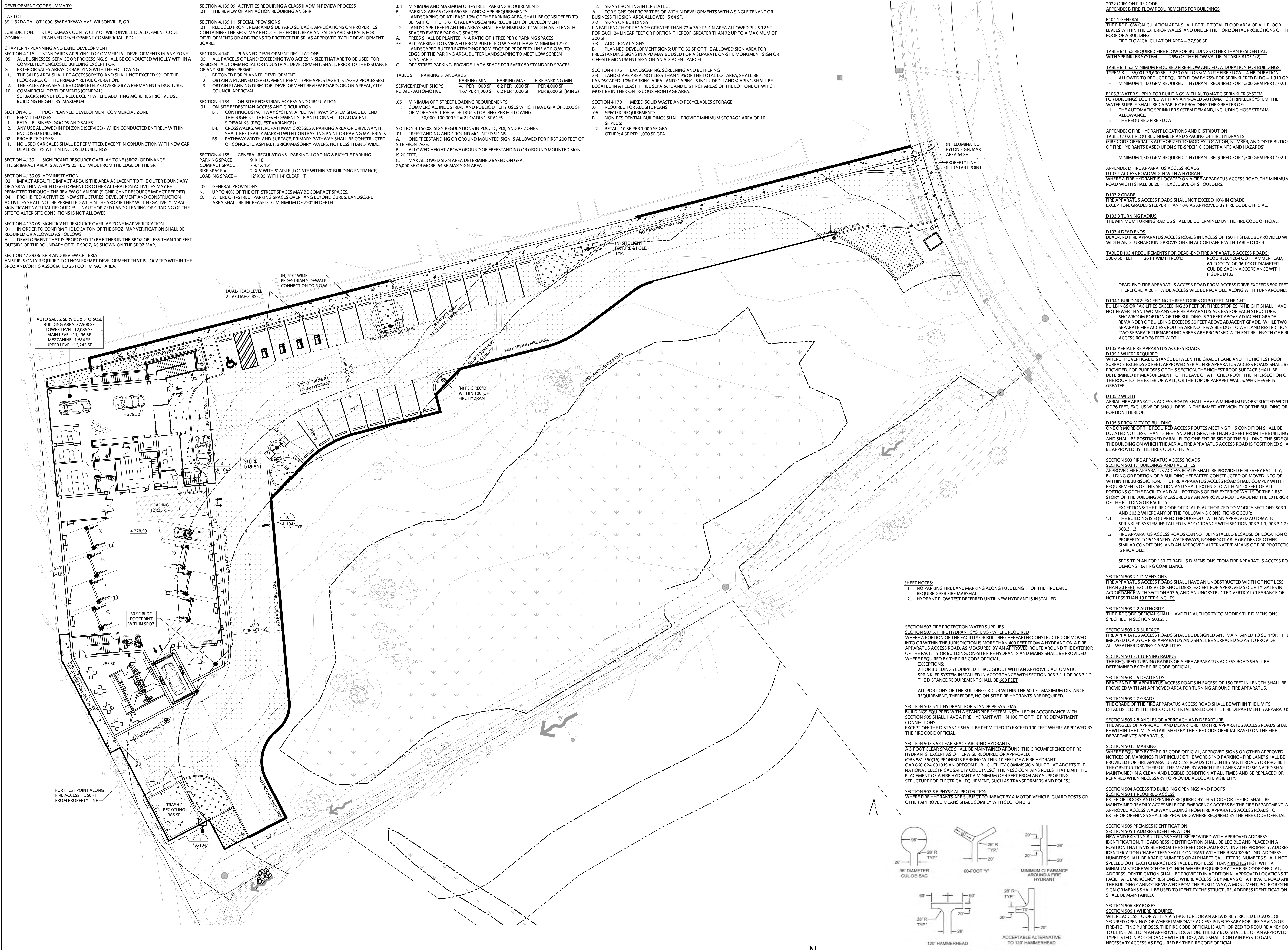
TONKIN LAMBORGHINI  
25239 SW PARKWAY AVE  
WILSONVILLE, OR 97170

REVISIONS

No.	Description	Date

DRAWN BY: KJK  
CHECKED BY: TRB  
JOB NO: 22-033  
DATE: 10/04/2023  
ISSUED FOR: PRELIMINARY  
SHEET TITLE  
SITE PLAN @ LOWER LEVEL  
SHEET NO.





**DEVELOPMENT CODE SUMMARY:**  
 TAX LOT:  
 35-1-32DA TA LOT 1000, SW PARKWAY AVE, WILSONVILLE, OR  
 JURISDICTION: CLACKAMAS COUNTY, CITY OF WILSONVILLE DEVELOPMENT CODE  
 ZONING: PLANNED DEVELOPMENT COMMERCIAL (PDC)  
 CHAPTER 4 - PLANNING AND LAND DEVELOPMENT  
 SECTION 4.116 STANDARDS APPLYING TO COMMERCIAL DEVELOPMENTS IN ANY ZONE  
 .05 ALL BUSINESSES, SERVICE OR PROCESSING, SHALL BE CONDUCTED WHOLLY WITHIN A COMPLETELY ENCLOSED BUILDING EXCEPT FOR:  
 G. EXTERIOR SALES AREAS, COMPLYING WITH THE FOLLOWING:  
 1. THE SALES AREA SHALL BE ACCESSORY TO AND SHALL NOT EXCEED 5% OF THE FLOOR AREA OF THE PRIMARY RETAIL OPERATION.  
 2. THE SALES AREA SHALL BE COMPLETELY COVERED BY A PERMANENT STRUCTURE.  
 10. COMMERCIAL DEVELOPMENTS (GENERAL)  
 SETBACKS: NONE REQUIRED, EXCEPT WHERE ABUTTING MORE RESTRICTIVE USE BUILDING HEIGHT: 35' MAXIMUM  
 SECTION 4.133 PDC - PLANNED DEVELOPMENT COMMERCIAL ZONE  
 .01 PERMITTED USES:  
 1. RETAIL BUSINESS, GOODS AND SALES  
 2. ANY USE ALLOWED IN PDI ZONE (SERVICE) - WHEN CONDUCTED ENTIRELY WITHIN ENCLOSED BUILDING.  
 .02 PROHIBITED USES:  
 1. NO USED CAR SALES SHALL BE PERMITTED, EXCEPT IN CONJUNCTION WITH NEW CAR DEALERSHIPS WITHIN ENCLOSED BUILDINGS.  
 SECTION 4.139 SIGNIFICANT RESOURCE OVERLAY ZONE (SROZ) ORDINANCE  
 THE SR IMPACT AREA IS ALWAYS 25 FEET WIDE FROM THE EDGE OF THE SR.  
 SECTION 4.139.03 ADMINISTRATION  
 .02 IMPACT AREA: THE IMPACT AREA IS THE AREA ADJACENT TO THE OUTER BOUNDARY OF A SR WITHIN WHICH DEVELOPMENT OR OTHER ALTERATION ACTIVITIES MAY BE PERMITTED THROUGH THE REVIEW OF AN SRIR (SIGNIFICANT RESOURCE IMPACT REPORT)  
 .04 PROHIBITED ACTIVITIES: NEW STRUCTURES, DEVELOPMENT AND CONSTRUCTION ACTIVITIES SHALL NOT BE PERMITTED WITHIN THE SROZ IF THEY WILL NEGATIVELY IMPACT SIGNIFICANT NATURAL RESOURCES. UNAUTHORIZED LAND CLEARING OR GRADING OF THE SITE TO ALTER SITE CONDITIONS IS NOT ALLOWED.  
 SECTION 4.139.05 SIGNIFICANT RESOURCE OVERLAY ZONE MAP VERIFICATION  
 .01 IN ORDER TO CONFIRM THE LOCATION OF THE SROZ, MAP VERIFICATION SHALL BE REQUIRED OR ALLOWED AS FOLLOWS:  
 A. DEVELOPMENT THAT IS PROPOSED TO BE EITHER IN THE SROZ OR LESS THAN 100 FEET OUTSIDE OF THE BOUNDARY OF THE SROZ, AS SHOWN ON THE SROZ MAP.  
 SECTION 4.139.06 SRIR AND REVIEW CRITERIA  
 AN SRIR IS ONLY REQUIRED FOR NON-EXEMPT DEVELOPMENT THAT IS LOCATED WITHIN THE SROZ AND/OR ITS ASSOCIATED 25 FOOT IMPACT AREA.

SECTION 4.139.09 ACTIVITIES REQUIRING A CLASS II ADMIN REVIEW PROCESS  
 .01 THE REVIEW OF ANY ACTION REQUIRING AN SRIR  
 SECTION 4.139.11 SPECIAL PROVISIONS  
 .01 REDUCED FRONT, REAR AND SIDE YARD SETBACK, APPLICATIONS ON PROPERTIES CONTAINING THE SROZ MAY REDUCE THE FRONT, REAR AND SIDE YARD SETBACK FOR DEVELOPMENTS OR ADDITIONS TO PROTECT THE SR, AS APPROVED BY THE DEVELOPMENT BOARD.  
 SECTION 4.140 PLANNED DEVELOPMENT REGULATIONS  
 .05 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 (PRE-APP, STAGE 1, STAGE 2 PROCESSES)  
 3. OBTAIN PLANNING DIRECTOR, DEVELOPMENT REVIEW BOARD, OR, ON APPEAL, CITY COUNCIL APPROVAL  
 SECTION 4.154 ON-SITE PEDESTRIAN ACCESS AND CIRCULATION  
 .01 ON-SITE PEDESTRIAN ACCESS AND CIRCULATION  
 B1. CONTINUOUS PATHWAY SYSTEM: A PED PATHWAY SYSTEM SHALL EXTEND THROUGHOUT THE DEVELOPMENT SITE AND CONNECT TO ADJACENT SIDEWALKS. (REQUEST VARIANCE?)  
 B4. CROSSWALKS: WHERE PATHWAY CROSSES A PARKING AREA OR DRIVEWAY, IT SHALL BE CLEARLY MARKED WITH CONTRASTING PAINT OR PAVING MATERIALS.  
 B5. PATHWAY WIDTH AND SURFACE: PRIMARY PATHWAY SHALL BE CONSTRUCTED OF CONCRETE, ASPHALT, BRICK/MASONRY PAVERS, NOT LESS THAN 5' WIDE.  
 SECTION 4.155 GENERAL REGULATIONS - PARKING, LOADING & BICYCLE PARKING  
 PARKING SPACE = 9' X 18'  
 COMPACT SPACE = 7' 6" X 15'  
 BIKE SPACE = 2' X 6' WITH 5' AISLE (LOCATE WITHIN 30' BUILDING ENTRANCE)  
 LOADING SPACE = 12' X 35' WITH 14' CLEAR HT  
 .02 GENERAL PROVISIONS  
 N. UP TO 40% OF THE OFF-STREET SPACES MAY BE COMPACT SPACES.  
 O. WHERE OFF-STREET PARKING SPACES OVERHANG BEYOND CURBS, LANDSCAPE AREA SHALL BE INCREASED TO MINIMUM OF 7'-0" IN DEPTH.

MINIMUM AND MAXIMUM OFF-STREET PARKING REQUIREMENTS  
 PARKING AREAS OVER 650 SF: LANDSCAPE REQUIREMENTS  
 1. LANDSCAPING OF AT LEAST 10% OF THE PARKING AREA SHALL BE CONSIDERED TO BE PART OF THE 15% TOTAL LANDSCAPING REQUIRED FOR DEVELOPMENT.  
 2. LANDSCAPE TREE PLANTING AREAS SHALL BE MINIMUM 8'-0" WIDTH AND LENGTH SPACED EVERY 8 PARKING SPACES.  
 3. TREES SHALL BE PLANTED IN A RATIO OF 1 TREE PER 8 PARKING SPACES.  
 4. ALL PARKING LOTS VIEWED FROM PUBLIC R.O.W. SHALL HAVE MINIMUM 12'-0" LANDSCAPED BUFFER EXTENDING FROM EDGE OF PROPERTY LINE AT R.O.W. TO EDGE OF THE PARKING AREA. BUFFER LANDSCAPING TO MEET LOW SCREEN STANDARD.  
 5. OFF-STREET PARKING, PROVIDE 1 ADA SPACE FOR EVERY 50 STANDARD SPACES.  
 TABLE 5 PARKING STANDARDS  

	PARKING MIN	PARKING MAX	BIKE PARKING MIN
SERVICE REPAIR SHOPS	4.1 PER 1,000 SF	6.2 PER 1,000 SF	1 PER 4,000 SF
RETAIL - AUTOMOTIVE	1.67 PER 1,000 SF	6.2 PER 1,000 SF	1 PER 8,000 SF (MIN 2)

 .05 MINIMUM OFF-STREET LOADING REQUIREMENTS  
 1. COMMERCIAL, INDUSTRIAL, AND PUBLIC UTILITY USES WHICH HAVE GFA OF 5,000 SF OR MORE SHALL PROVIDE TRUCK LOADING PER FOLLOWING:  
 30,000 - 100,000 SF = 2 LOADING SPACES  
 SECTION 4.156.08 SIGN REGULATIONS IN PDC, TC, PD, AND PF ZONES  
 .01 FREESTANDING AND GROUND MOUNTED SIGNS  
 A. ONE FREESTANDING OR GROUND MOUNTED SIGN IS ALLOWED FOR FIRST 200 FEET OF SITE FRONTAGE.  
 B. ALLOWED HEIGHT ABOVE GROUND OF FREESTANDING OR GROUND MOUNTED SIGN IS 20 FEET.  
 C. MAX ALLOWED SIGN AREA DETERMINED BASED ON GFA.  
 26,000 SF OR MORE: 64 SF MAX SIGN AREA

2. SIGNS FRONTING INTERSTATES 5:  
 A. FOR SIGNS ON PROPERTIES OR WITHIN DEVELOPMENTS WITH A SINGLE TENANT OR BUSINESS THE SIGN AREA ALLOWED IS 64 SF.  
 .02 SIGNS ON BUILDINGS  
 LINEAR LENGTH OF FACADE: GREATER THAN 72 = 36 SF SIGN AREA ALLOWED PLUS 12 SF FOR EACH 24 LINEAR FEET OR PORTION THEREOF GREATER THAN 72 UP TO A MAXIMUM OF 200 SF.  
 .03 ADDITIONAL SIGNS  
 B. PLANNED DEVELOPMENT SIGNS: UP TO 32 SF OF THE ALLOWED SIGN AREA FOR FREESTANDING SIGNS IN A PD MAY BE USED FOR A SEPARATE ON-SITE MONUMENT SIGN OR OFF-SITE MONUMENT SIGN ON AN ADJACENT PARCEL.  
 SECTION 4.176 LANDSCAPING, SCREENING AND BUFFERING  
 .03 LANDSCAPE AREA: NOT LESS THAN 15% OF THE TOTAL LOT AREA, SHALL BE LANDSCAPED. 10% PARKING AREA LANDSCAPING IS INCLUDED. 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.  
 SECTION 4.179 MIXED SOLID WASTE AND RECYCLABLES STORAGE  
 .01 REQUIRED FOR ALL SITE PLANS.  
 .06 SPECIFIC REQUIREMENTS  
 B. NON-RESIDENTIAL BUILDINGS SHALL PROVIDE MINIMUM STORAGE AREA OF 10 SF PLUS:  
 2. RETAIL: 10 SF PER 1,000 SF GFA  
 OTHER: 4 SF PER 1,000 SF GFA

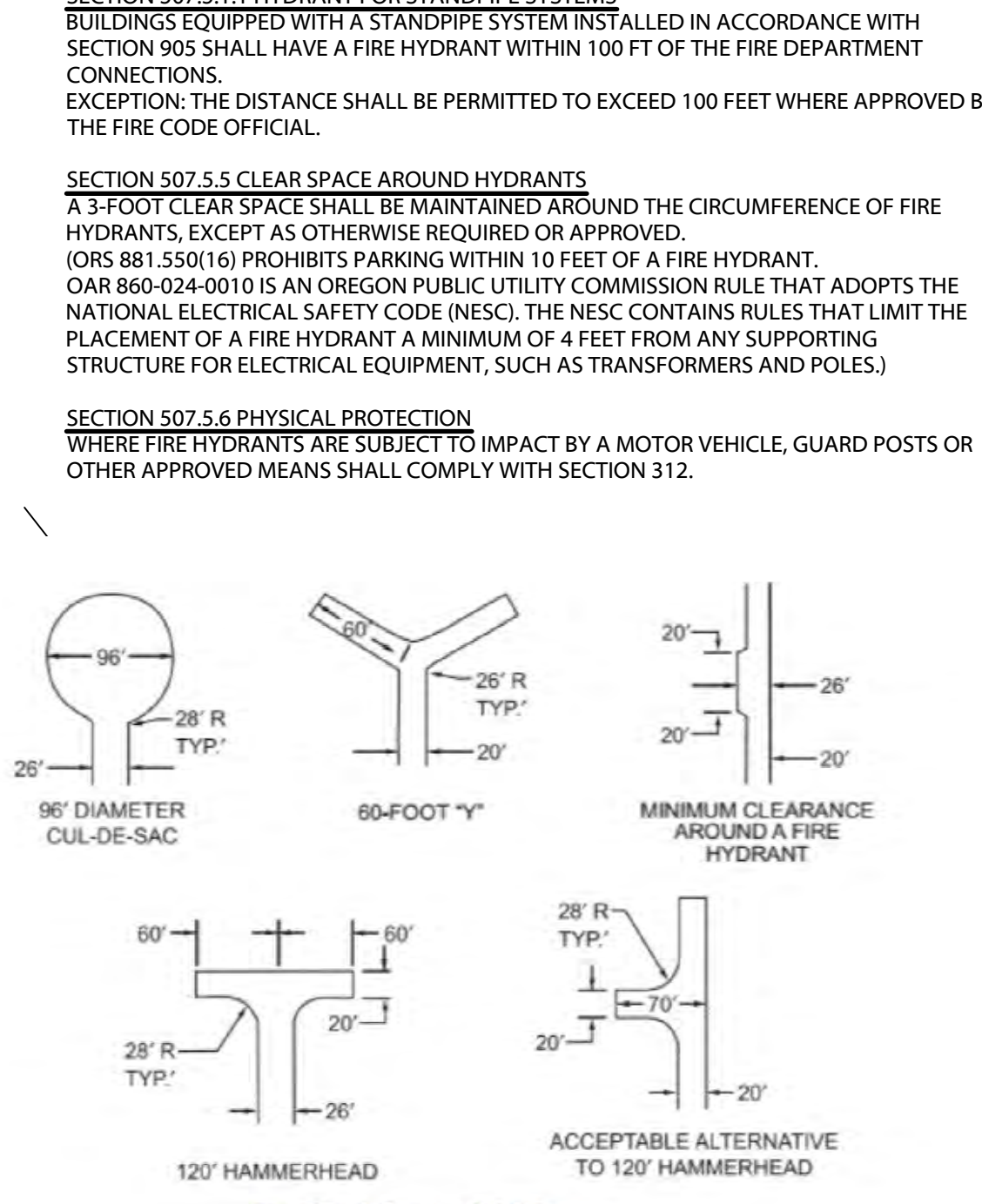
2022 OREGON FIRE CODE  
 APPENDIX B FIRE-FLOW REQUIREMENTS FOR BUILDINGS  
 B104.1 GENERAL  
 THE FIRE-FLOW CALCULATION AREA SHALL BE THE TOTAL FLOOR AREA OF ALL FLOOR LEVELS WITHIN THE EXTERIOR WALLS, AND UNDER THE HORIZONTAL PROJECTIONS OF THE ROOF OF A BUILDING.  
 FIRE-FLOW CALCULATION AREA = 37,508 SF  
 TABLE B105.2 REQUIRED FIRE FLOW FOR BUILDINGS OTHER THAN RESIDENTIAL WITH SPRINKLER SYSTEM 25% OF THE FLOW VALUE IN TABLE B105.1(2)  
 TABLE B105.2 MINIMUM REQUIRED FIRE-FLOW AND FLOW DURATION FOR BUILDINGS TYPE VB 36,001-39,500 SF 5-250 GALLONS/MINUTE FIRE FLOW 4 HR DURATION  
 - ALLOWED TO REDUCE REQUIRED FLOW BY 75% FOR SPRINKLERED BLDG = 1,310 GPM  
 - MINIMUM 1,500 GPM REQUIRED, 1 HYDRANT REQUIRED FOR 1,500 GPM PER C102.1.  
 B105.3 WATER SUPPLY FOR BUILDINGS WITH AUTOMATIC SPRINKLER SYSTEM  
 FOR BUILDINGS EQUIPPED WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM, THE WATER SUPPLY SHALL BE CAPABLE OF PROVIDING THE GREATER OF:  
 1. THE AUTOMATIC SPRINKLER SYSTEM DEMAND, INCLUDING HOSE STREAM ALLOWANCE.  
 2. THE REQUIRED FIRE FLOW.  
 APPENDIX C FIRE HYDRANT LOCATIONS AND DISTRIBUTION  
 TABLE C103.1 REQUIRED NUMBER AND SPACING OF FIRE HYDRANTS.  
 FIRE CODE OFFICIAL IS AUTHORIZED TO MODIFY LOCATION, NUMBER, AND DISTRIBUTION OF FIRE HYDRANTS BASED UPON SITE-SPECIFIC CONSTRAINTS AND HAZARDS!  
 - MINIMUM 1,500 GPM REQUIRED, 1 HYDRANT REQUIRED FOR 1,500 GPM PER C102.1.  
 APPENDIX D FIRE APPARATUS ACCESS ROADS  
 D103.1 ACCESS ROAD WIDTH WITH HYDRANT  
 WHERE A FIRE HYDRANT IS LOCATED ON A FIRE APPARATUS ACCESS ROAD, THE MINIMUM ROAD WIDTH SHALL BE 26 FT, EXCLUSIVE OF SHOULDERS.  
 D103.2 GRADE  
 FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 10% IN GRADE.  
 EXCEPTION: GRADES STEEPER THAN 10% AS APPROVED BY FIRE CODE OFFICIAL.  
 D103.3 TURNING RADIUS  
 THE MINIMUM TURNING RADIUS SHALL BE DETERMINED BY THE FIRE CODE OFFICIAL.  
 D103.4 DEAD ENDS  
 DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FT SHALL BE PROVIDED WITH WIDTH AND TURNAROUND PROVISIONS IN ACCORDANCE WITH TABLE D103.4.  
 TABLE D103.4 REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS  

500-750 FEET	26 FT WIDTH REQ'D	REQUIRED 120° TURNAROUND, 60-FOOT "Y" OR 96-FOOT DIAMETER CUL-DE-SAC IN ACCORDANCE WITH FIGURE D103.1
-	-	-

 - DEAD-END FIRE APPARATUS ACCESS ROAD FROM ACCESS DRIVE EXCEEDS 500-FEET, THEREFORE, A 26 FT WIDE ACCESS WILL BE PROVIDED ALONG WITH TURNAROUND.  
 D104.1 BUILDINGS EXCEEDING THREE STORIES OR 30 FEET IN HEIGHT  
 BUILDINGS OR FACILITIES EXCEEDING 30 FEET OR THREE STORIES IN HEIGHT SHALL HAVE NOT FEWER THAN TWO MEANS OF FIRE APPARATUS ACCESS FOR EACH STRUCTURE.  
 SHOWROOM PORTION OF THE BUILDING IS 30 FEET ABOVE ADJACENT GRADE.  
 REMAINDER OF BUILDING EXCEEDS 30 FEET ABOVE ADJACENT GRADE, WHILE TWO SEPARATE FIRE ACCESS ROUTES ARE NOT FEASIBLE DUE TO WETLAND RESTRICTIONS, TWO SEPARATE TURNAROUND AREAS ARE PROPOSED WITH ENTIRE LENGTH OF FIRE ACCESS ROAD 26 FEET WIDTH.  
 D105 AERIAL FIRE APPARATUS ACCESS ROADS  
 D105.1 WHERE REQUIRED  
 WHERE THE VERTICAL DISTANCE BETWEEN THE GRADE PLANE AND THE HIGHEST ROOF SURFACE EXCEEDS 30 FEET, APPROVED AERIAL FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED. FOR PURPOSES OF THIS SECTION, THE HIGHEST ROOF SURFACE SHALL BE DETERMINED BY MEASUREMENT TO THE EAVE OF A PITCHED ROOF, THE INTERSECTION OF THE ROOF TO THE EXTERIOR WALL, OR THE TOP OF PARAPET WALLS, WHICHEVER IS GREATER.  
 D105.2 WIDTH  
 AERIAL FIRE APPARATUS ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 26 FEET, EXCLUSIVE OF SHOULDERS, IN THE IMMEDIATE VICINITY OF THE BUILDING OR PORTION THEREOF.  
 D105.3 PROXIMITY TO BUILDING  
 ONE OR MORE OF THE REQUIRED ACCESS ROUTES MEETING THIS CONDITION SHALL BE LOCATED NOT LESS THAN 15 FEET AND NOT GREATER THAN 30 FEET FROM THE BUILDING, AND SHALL BE POSITIONED PARALLEL TO ONE ENTIRE SIDE OF THE BUILDING. THE SIDE OF THE BUILDING ON WHICH THE AERIAL FIRE APPARATUS ACCESS ROAD IS POSITIONED SHALL BE APPROVED BY THE FIRE CODE OFFICIAL.  
 SECTION 503 FIRE APPARATUS ACCESS ROADS  
 SECTION 503.1 BUILDINGS AND FACILITIES  
 APPROVED FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED FOR EVERY FACILITY, BUILDING OR PORTION OF A BUILDING HEREFTER CONSTRUCTED OR MOVED INTO OR WITHIN THE JURISDICTION. THE FIRE APPARATUS ACCESS ROAD SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION AND SHALL EXTEND TO WITHIN 150 FEET OF ALL PORTIONS OF THE FACILITY AND ALL PORTIONS OF THE EXTERIOR WALLS OF THE FIRST STORY OF THE BUILDING AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE BUILDING OR FACILITY.  
 EXCEPTIONS: THE FIRE CODE OFFICIAL IS AUTHORIZED TO MODIFY SECTIONS 503.1 AND 503.2 WHERE ANY OF THE FOLLOWING CONDITIONS OCCUR:  
 1.1 THE BUILDING IS EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1, 903.3.1.2 OR 903.3.1.3.  
 1.2 FIRE APPARATUS ACCESS ROADS CANNOT BE INSTALLED BECAUSE OF LOCATION OF PROPERTY, TOPOGRAPHY, WATERWAYS, NONNEGOTIABLE GRADES OR OTHER SIMILAR CONDITIONS, AND AN APPROVED ALTERNATIVE MEANS OF FIRE PROTECTION IS PROVIDED.  
 - SEE SITE PLAN FOR 150-FT RADIUS DIMENSIONS FROM FIRE APPARATUS ACCESS ROAD DEMONSTRATING COMPLIANCE.  
 SECTION 503.2.1 DIMENSIONS  
 FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET, EXCLUSIVE OF SHOULDERS, EXCEPT FOR APPROVED SECURITY GATES IN ACCORDANCE WITH SECTION 503.6, AND AN UNOBSTRUCTED VERTICAL CLEARANCE OF NOT LESS THAN 13 FEET 6 INCHES.  
 SECTION 503.2.2 AUTHORITY  
 THE FIRE CODE OFFICIAL SHALL HAVE THE AUTHORITY TO MODIFY THE DIMENSIONS SPECIFIED IN SECTION 503.2.1.  
 SECTION 503.2.3 SURFACE  
 FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND SHALL BE SURFACED SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.  
 SECTION 503.2.4 TURNING RADIUS  
 THE REQUIRED TURNING RADIUS OF A FIRE APPARATUS ACCESS ROAD SHALL BE DETERMINED BY THE FIRE CODE OFFICIAL.  
 SECTION 503.2.5 DEAD ENDS  
 DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH AN APPROVED AREA FOR TURNING AROUND FIRE APPARATUS.  
 SECTION 503.2.7 GRADE  
 THE GRADE OF THE FIRE APPARATUS ACCESS ROAD SHALL BE WITHIN THE LIMITS ESTABLISHED BY THE FIRE CODE OFFICIAL BASED ON THE FIRE DEPARTMENT'S APPARATUS.  
 SECTION 503.2.8 ANGLES OF APPROACH AND DEPARTURE  
 THE ANGLES OF APPROACH AND DEPARTURE FOR FIRE APPARATUS ACCESS ROADS SHALL BE WITHIN THE LIMITS ESTABLISHED BY THE FIRE CODE OFFICIAL BASED ON THE FIRE DEPARTMENT'S APPARATUS.  
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 WHERE REQUIRED BY THE FIRE CODE OFFICIAL, APPROVED SIGNS OR OTHER APPROVED NOTICES OR MARKINGS THAT INCLUDE THE WORDS "NO PARKING - FIRE LANE" SHALL BE PROVIDED FOR FIRE APPARATUS ACCESS ROADS TO IDENTIFY SUCH ROADS OR PROHIBIT THE OBSTRUCTION THEREOF. THE MEANS BY WHICH FIRE LANES ARE DESIGNATED SHALL BE MAINTAINED IN A CLEAR AND LEGIBLE CONDITION AT ALL TIMES AND BE REPLACED OR REPAIRED WHEN NECESSARY TO PROVIDE ADEQUATE VISIBILITY.  
 SECTION 504 ACCESS TO BUILDING OPENINGS AND ROOFS  
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 EXTERIOR DOORS AND OPENINGS REQUIRED BY THIS CODE OR THE IBC SHALL BE MAINTAINED READILY ACCESSIBLE FOR EMERGENCY ACCESS BY THE FIRE DEPARTMENT. AN APPROVED ACCESS WALKWAY LEADING FROM FIRE APPARATUS ACCESS ROADS TO EXTERIOR OPENINGS SHALL BE PROVIDED WHERE REQUIRED BY THE FIRE CODE OFFICIAL.  
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 SECTION 506.1 WHERE REQUIRED  
 WHERE ACCESS TO OR WITHIN A STRUCTURE OR AN AREA IS RESTRICTED BECAUSE OF SECURED OPENINGS OR WHERE IMMEDIATE ACCESS IS NECESSARY FOR LIFE-SAVING OR FIRE-FIGHTING PURPOSES, THE FIRE CODE OFFICIAL IS AUTHORIZED TO REQUIRE A KEY BOX TO BE INSTALLED IN AN APPROVED LOCATION. THE KEY BOX SHALL BE OF AN APPROVED TYPE LISTED IN ACCORDANCE WITH UL 1037, AND SHALL CONTAIN KEYS TO GAIN NECESSARY ACCESS AS REQUIRED BY THE FIRE CODE OFFICIAL.

**SHEET NOTES:**  
 1. NO PARKING FIRE LANE MARKING ALONG FULL LENGTH OF THE FIRE LANE REQUIRED PER FIRE MARSHAL  
 2. HYDRANT FLOW TEST DEFERRED UNTIL NEW HYDRANT IS INSTALLED.

SECTION 507 FIRE PROTECTION WATER SUPPLIES  
 SECTION 507.5 FIRE HYDRANT SYSTEMS - WHERE REQUIRED  
 WHERE A PORTION OF THE FACILITY OR BUILDING HEREFTER CONSTRUCTED OR MOVED INTO OR WITHIN THE JURISDICTION IS MORE THAN 400 FEET FROM A HYDRANT ON A FIRE APPARATUS ACCESS ROAD, AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE FACILITY OR BUILDING, ON-SITE FIRE HYDRANTS AND MAINS SHALL BE PROVIDED WHERE REQUIRED BY THE FIRE CODE OFFICIAL.  
 EXCEPTIONS:  
 2. FOR BUILDINGS EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 THE DISTANCE REQUIREMENT SHALL BE 600 FEET.  
 - ALL PORTIONS OF THE BUILDING OCCUR WITHIN THE 600-FT MAXIMUM DISTANCE REQUIREMENT, THEREFORE, NO ON-SITE FIRE HYDRANTS ARE REQUIRED.  
 SECTION 507.5.1.1 HYDRANT FOR STANDPIPE SYSTEMS  
 BUILDINGS EQUIPPED WITH A STANDPIPE SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 905 SHALL HAVE A FIRE HYDRANT WITHIN 100 FT OF THE FIRE DEPARTMENT CONNECTIONS.  
 EXCEPTION: THE DISTANCE SHALL BE PERMITTED TO EXCEED 100 FEET WHERE APPROVED BY THE FIRE CODE OFFICIAL.  
 SECTION 507.5.5 CLEAR SPACE AROUND HYDRANTS  
 A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS, EXCEPT AS OTHERWISE REQUIRED OR APPROVED.  
 (ORS 881.550(16) PROHIBITS PARKING WITHIN 10 FEET OF A FIRE HYDRANT.  
 OAR 860-024-0010 IS AN OREGON PUBLIC UTILITY COMMISSION RULE THAT ADOPTS THE NATIONAL ELECTRICAL SAFETY CODE (NEC). THE NEC CONTAINS RULES THAT LIMIT THE PLACEMENT OF A FIRE HYDRANT A MINIMUM OF 4 FEET FROM ANY SUPPORTING STRUCTURE FOR ELECTRICAL EQUIPMENT, SUCH AS TRANSFORMERS AND POLES.)  
 SECTION 507.5.6 PHYSICAL PROTECTION  
 WHERE FIRE HYDRANTS ARE SUBJECT TO IMPACT BY A MOTOR VEHICLE, GUARD POSTS OR OTHER APPROVED MEANS SHALL COMPLY WITH SECTION 312.



For SI: 1 foot = 304.8 mm.

FIGURE D103.1 DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND

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 AXIS DESIGN GROUP  
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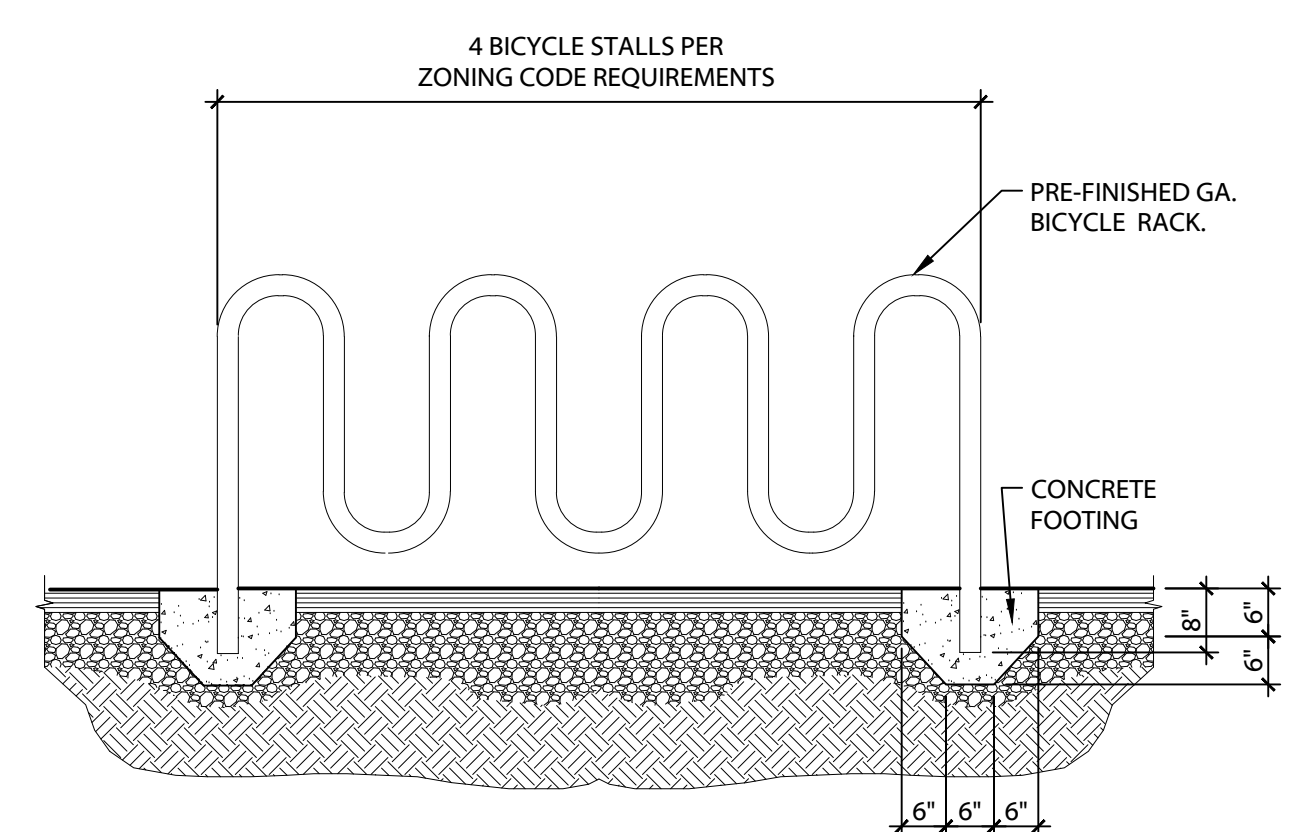
TONKIN LAMBORGHINI  
 25239 SW PARKWAY AVE  
 WILSONVILLE, OR 97170

REVISIONS

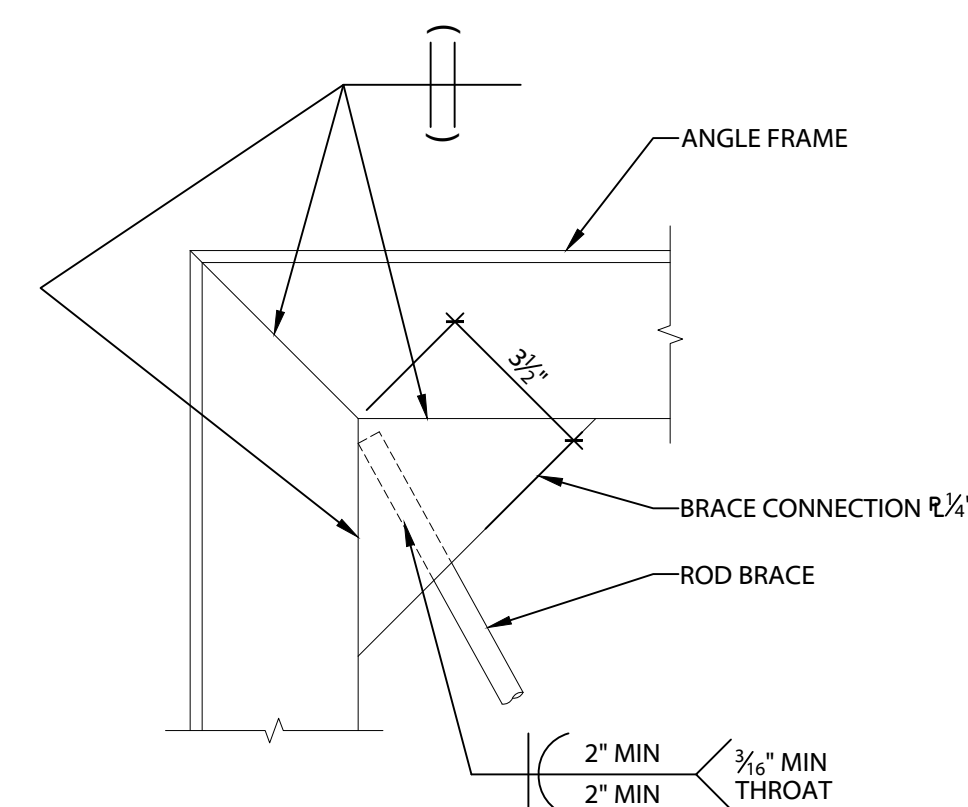
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 CHECKED BY: TRB  
 JOB NO: 22-033  
 DATE: 10/04/2023  
 ISSUED FOR: PRELIMINARY  
 SHEET TITLE  
 SITE PLAN @ MAIN LEVEL  
 SHEET NO.

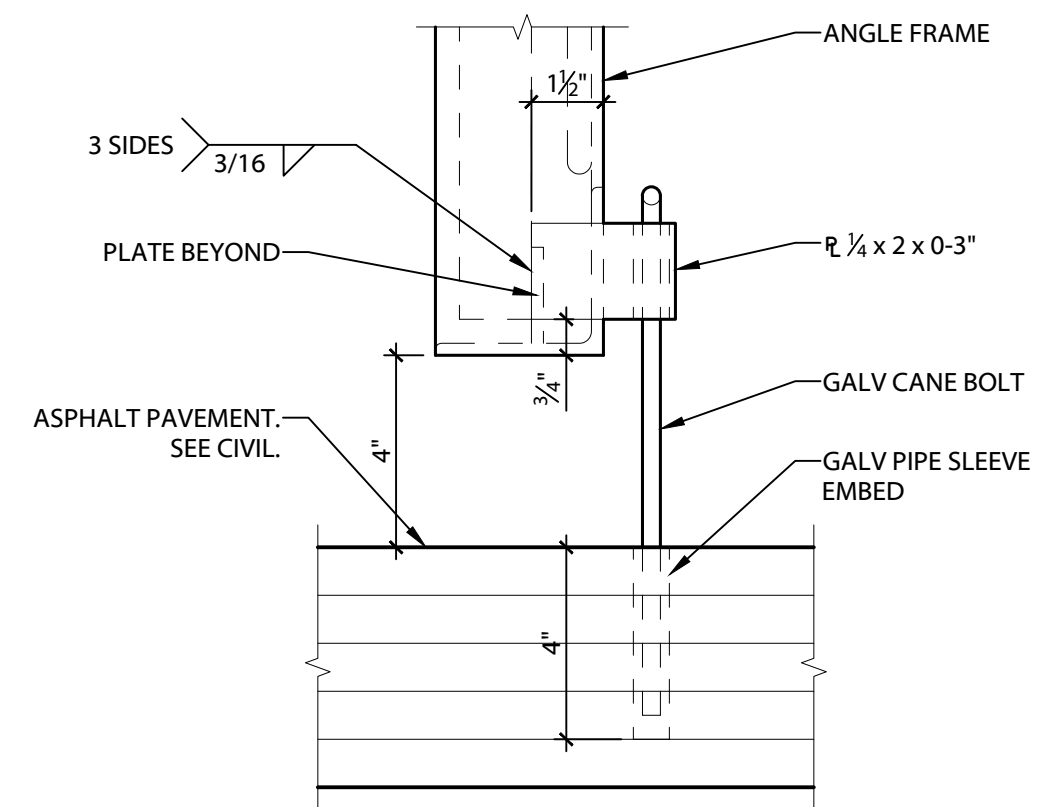




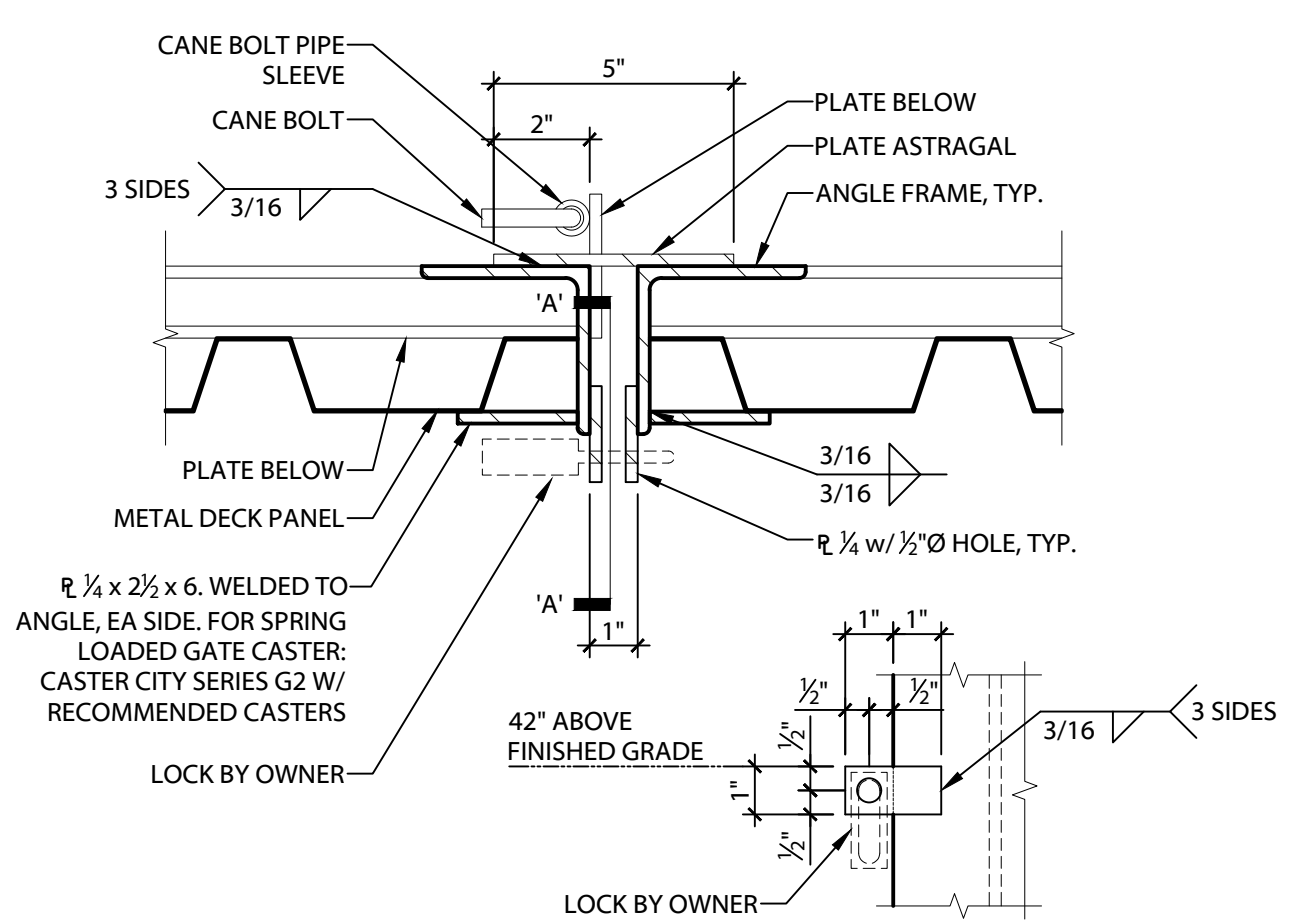
13 BIKE RACK - ELEVATION  
SCALE: 1/2" = 1'-0"



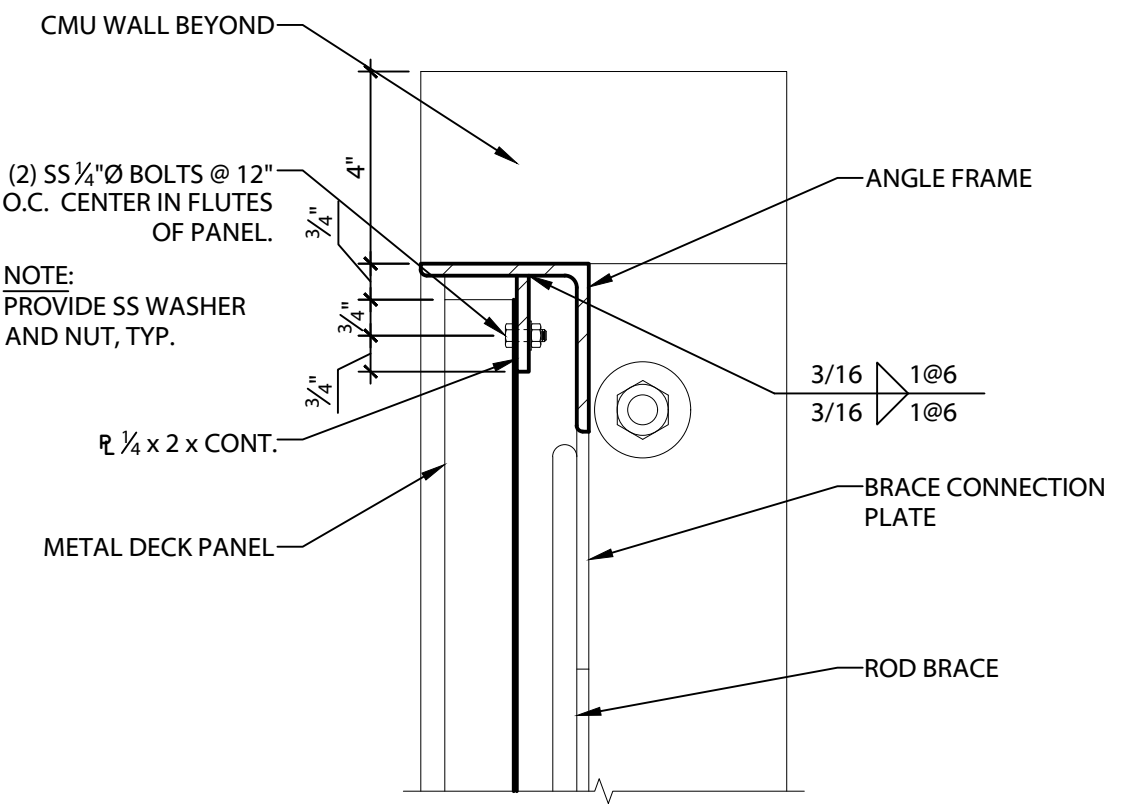
12 BRACE AT GATE FRAME  
SCALE: 3" = 1'-0"



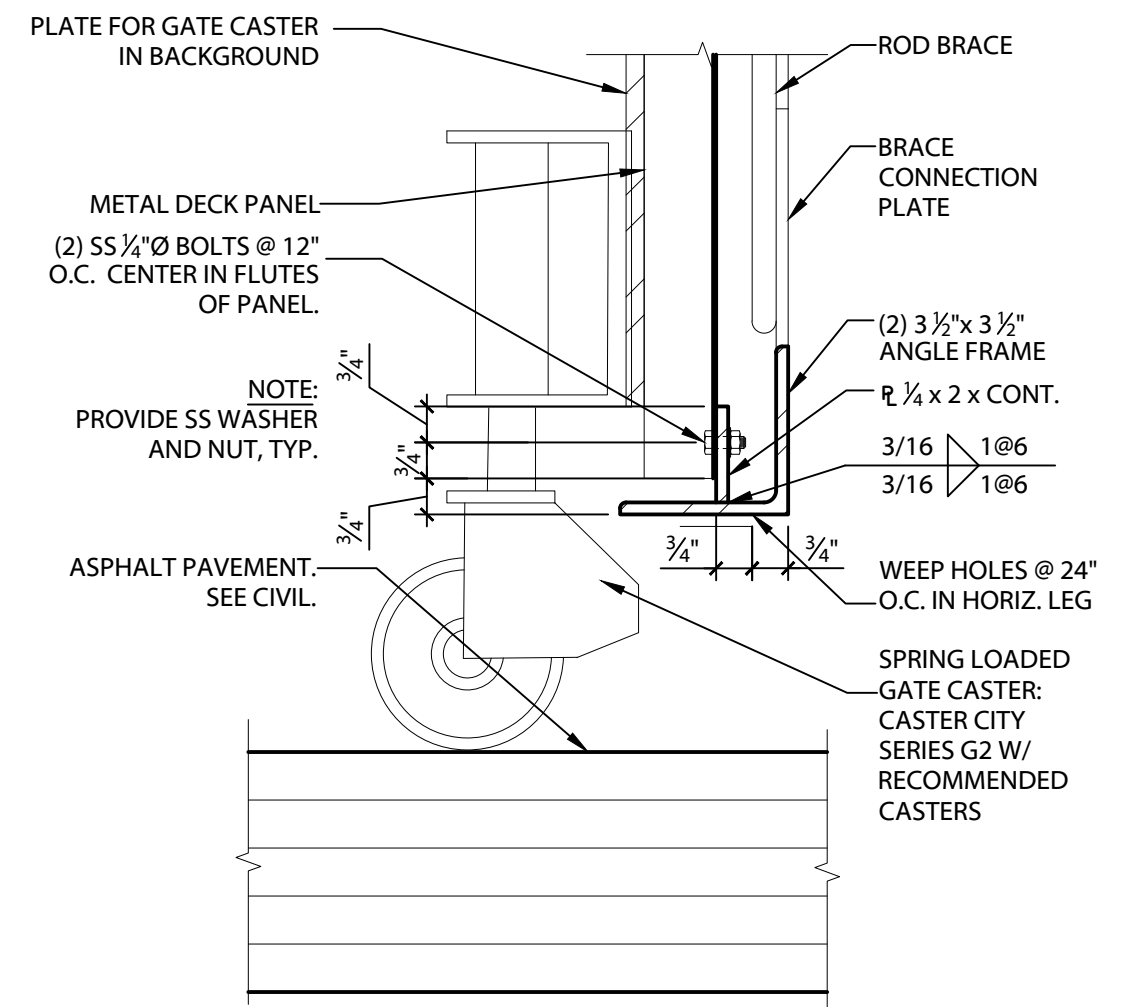
11 ELEVATION AT CANE BOLT  
SCALE: 3" = 1'-0"



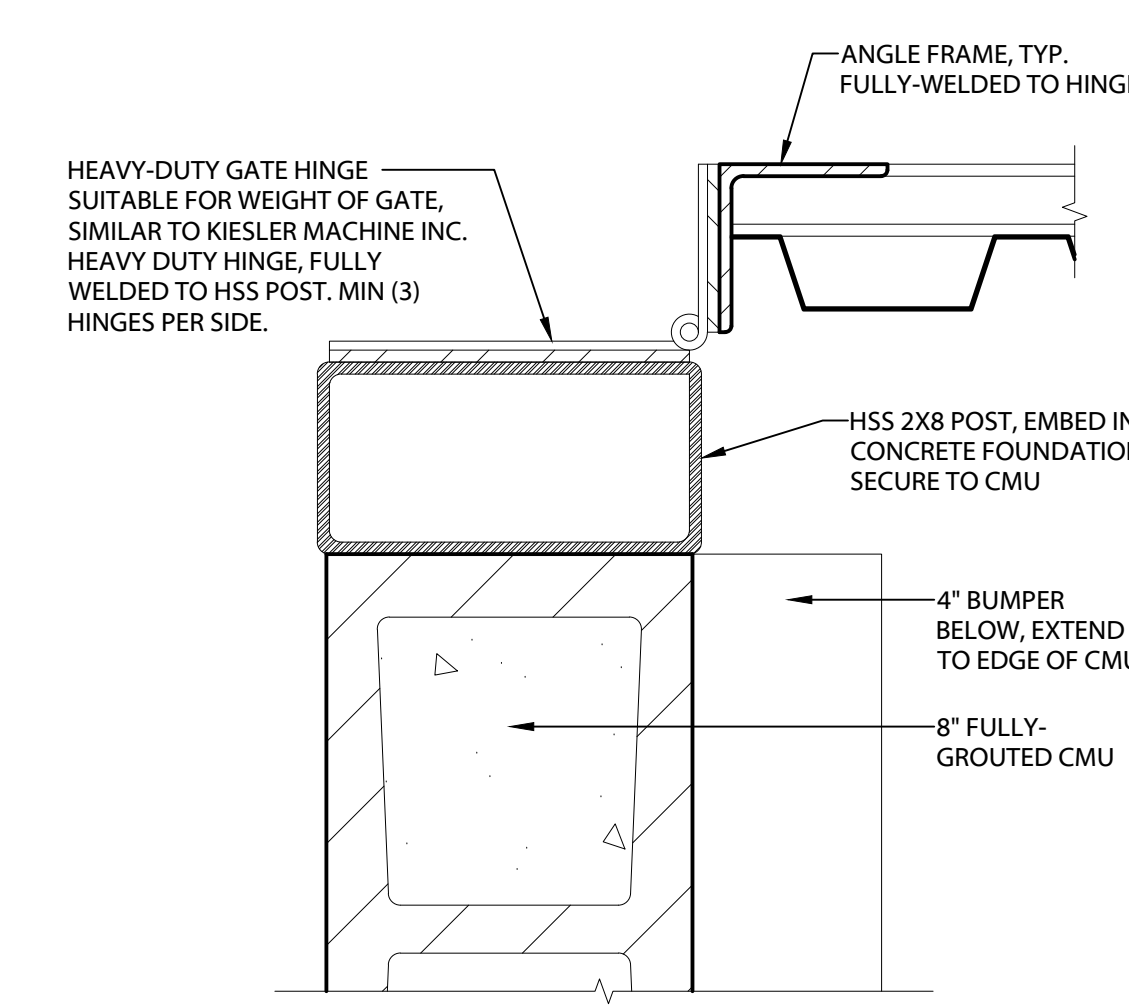
10 GATE LATCH  
SCALE: 3" = 1'-0"



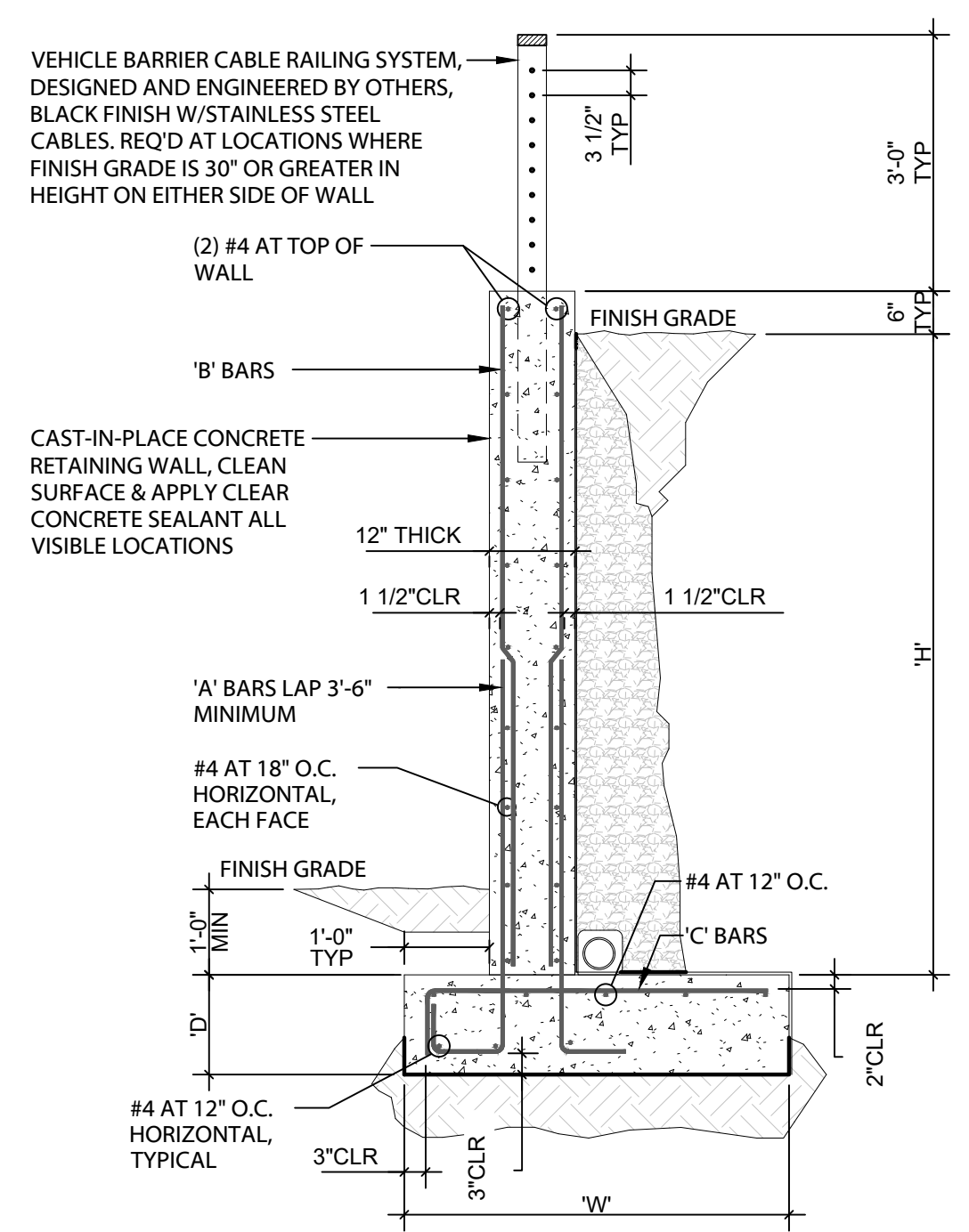
9 TOP OF GATE  
SCALE: 3" = 1'-0"



8 BOTTOM OF GATE  
SCALE: 3" = 1'-0"



7 GATE HINGE / JAMB  
SCALE: 3" = 1'-0"



CANTILEVERED RETAINING WALL SCHEDULE

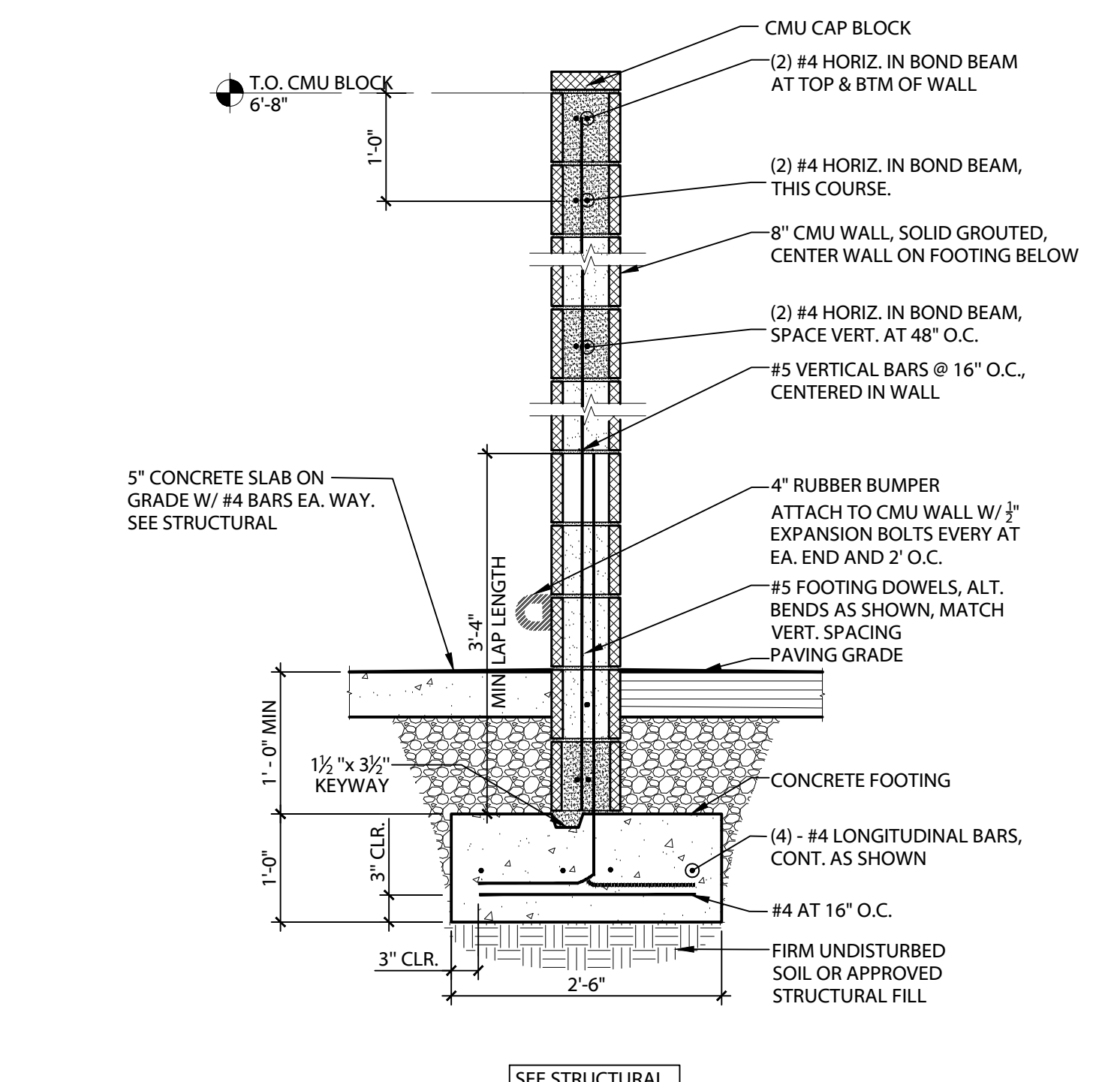
RETAINED SOIL HEIGHT 'H'	FOOTING DEPTH 'D'	FOOTING WIDTH 'W'	'A' BARS	'B' BARS	'C' BARS
≤ 4'-0"	15"	4'-0"	#5 AT 18" O.C. EACH FACE	#4 AT 18" O.C. EACH FACE	#5 AT 12" O.C.
≤ 9'-0"	15"	7'-0"	#5 AT 10" O.C. EACH FACE	#4 AT 10" O.C. EACH FACE	#5 AT 10" O.C.

- NOTES:
- STEP RETAINING WALL IN 2'-0" INCREMENT MAXIMUM. PROVIDE 4'-0" MINIMUM LENGTH OF WALL FOR 2'-0" STEP, 2'-0" MINIMUM OF WALL FOR 1'-0" STEP.
  - REFERENCE GEOTECHNICAL REPORT FOR MOISTURE BARRIER, BACKFILL, SUBGRADE PREPARATION, AND FOUNDATION DRAIN REQUIREMENTS.

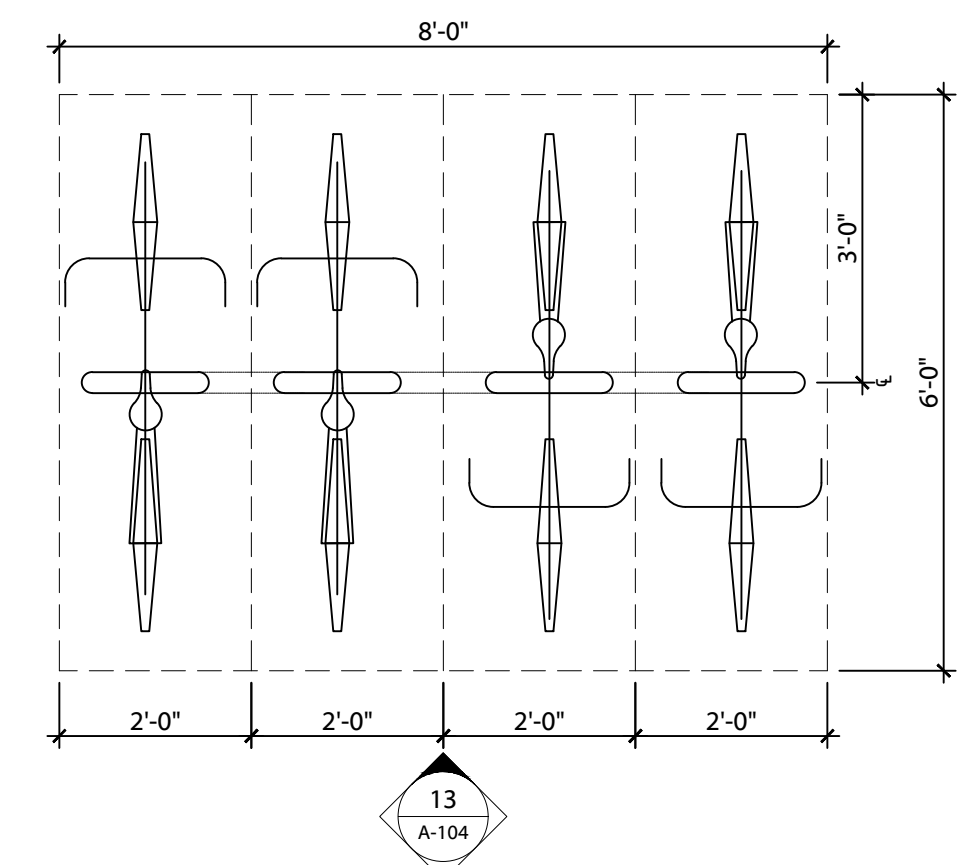
6 SITE RETAINING WALL SECTION  
SCALE: 1/2" = 1'-0"

TRASH ENCLOSURE SHEET NOTES:

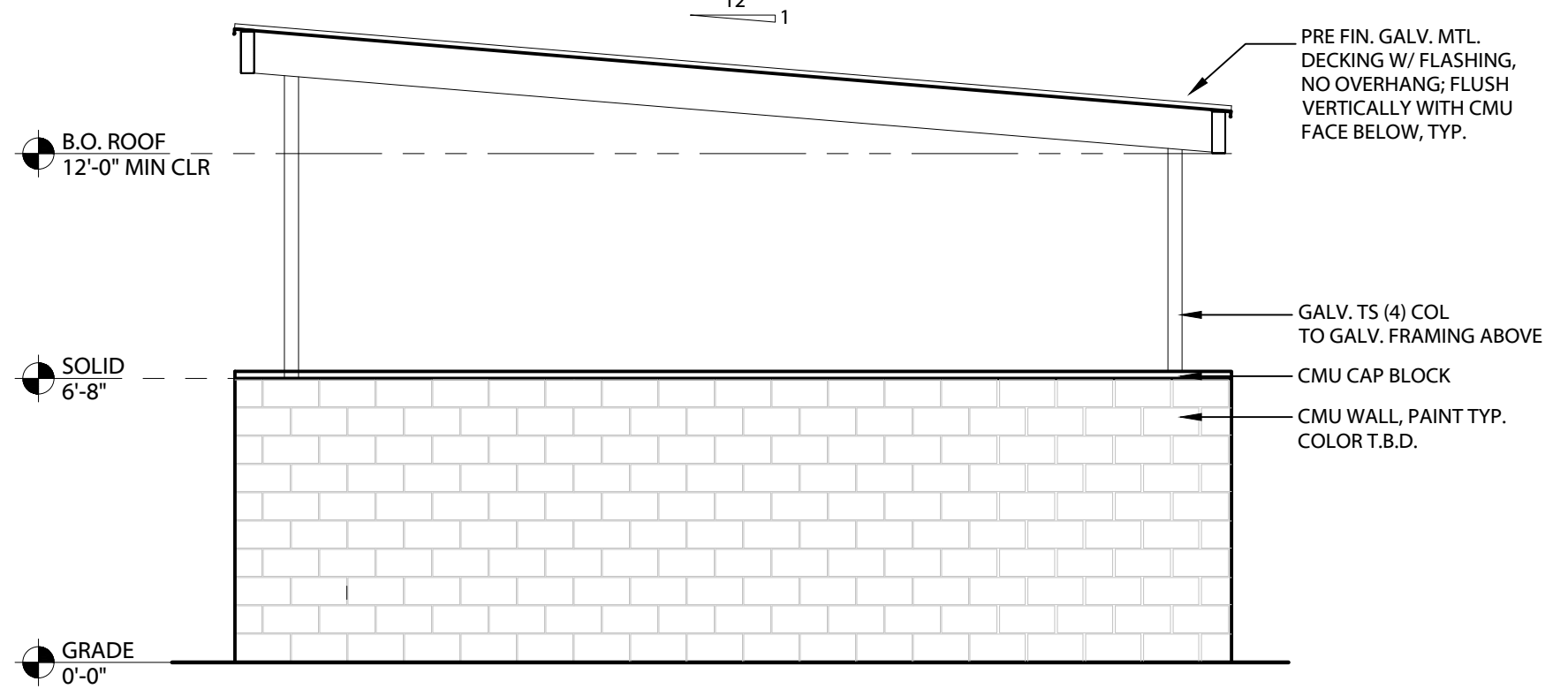
- SEE ELEVATIONS FOR FINISHES
  - ALL STEEL FOR GATES SHALL BE GALVANIZED, PAINTED UNLESS OTHERWISE INDICATED AS STAINLESS STEEL (SS).
  - ALL DIMENSIONS ARE TO FACE OF CONCRETE, FACE OF CMU OR GRIDLINE, UNLESS OTHERWISE NOTED. CMU DIMENSIONS ARE NOMINAL DIMENSIONS, TYPICAL.
- NOTES: (SEE STRUCTURAL)
- ALL CONCRETE SHALL BE NORMAL WEIGHT AND DEVELOP A MINIMUM 28 DAY LABORATORY CURED COMPRESSIVE CYLINDER STRENGTH OF 3,000 PSI.
  - ALL REINFORCING SHALL BE ASTM A615, GRADE 60.
  - PLACE 2" x 2" x 2" BARS AT ALL CORNERS, WALL INTERSECTIONS, AND FOUNDATIONS EQUAL IN SIZE AND SPACING TO HORIZONTAL REINFORCEMENT.
  - REINFORCING SPLICES SHALL BE 44 DIA. (24" MIN.) LAPS.
  - ALL CONCRETE MASONRY UNITS SHALL COMPLY WITH ASTM C90. ASSEMBLIES SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH, F<sub>m</sub> = 1,500 PSI.
  - ALL MASONRY SHALL BE SPECIAL INSPECTED PER OSCC / IBC SECTION 1705.4
  - PROVIDE (2) #5 VERT. (1) AT EACH OPENING, AT ALL OPENINGS, NOT REQ'D AT CORNERS.



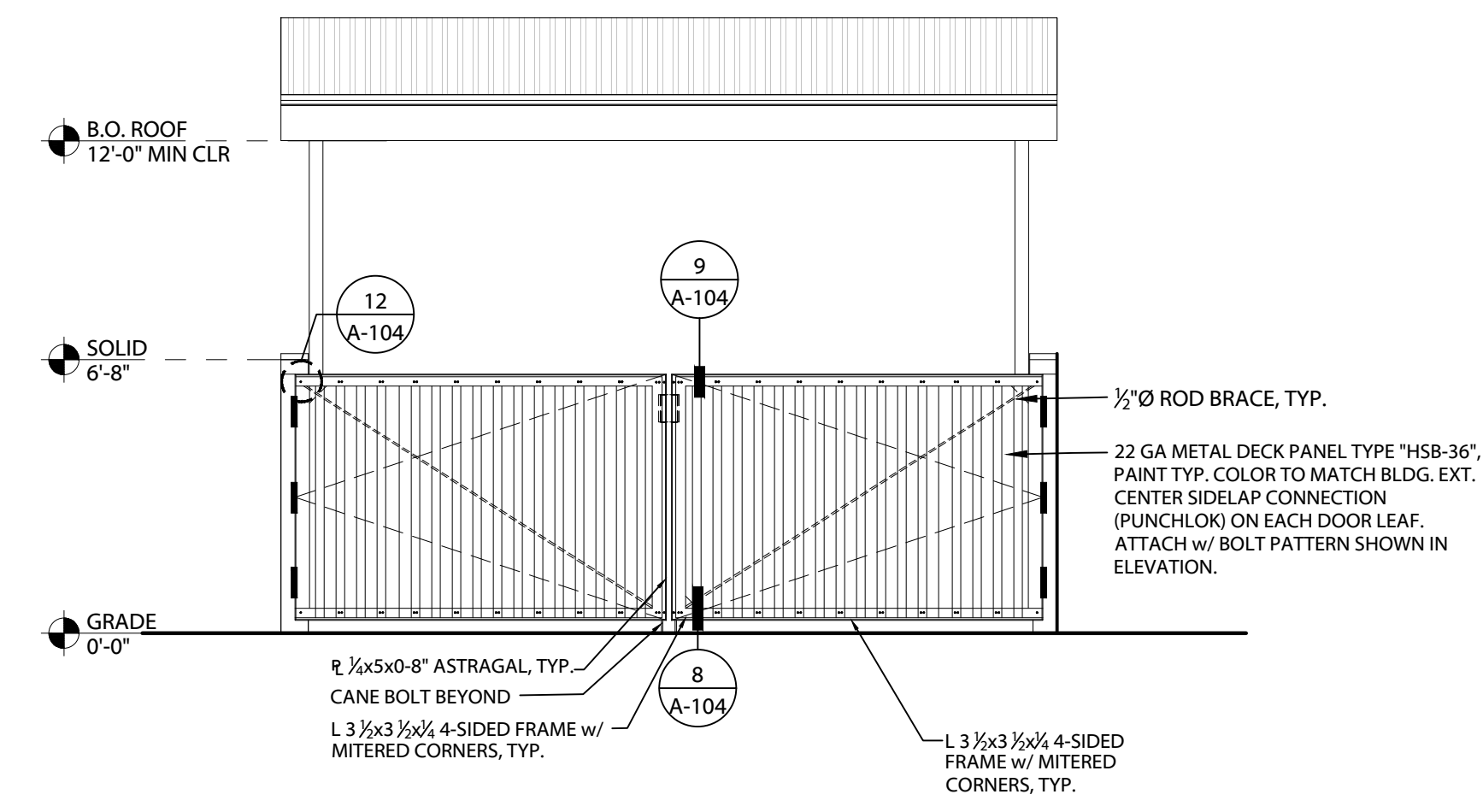
5 CMU WALL SECTION  
SCALE: 3/4" = 1'-0"



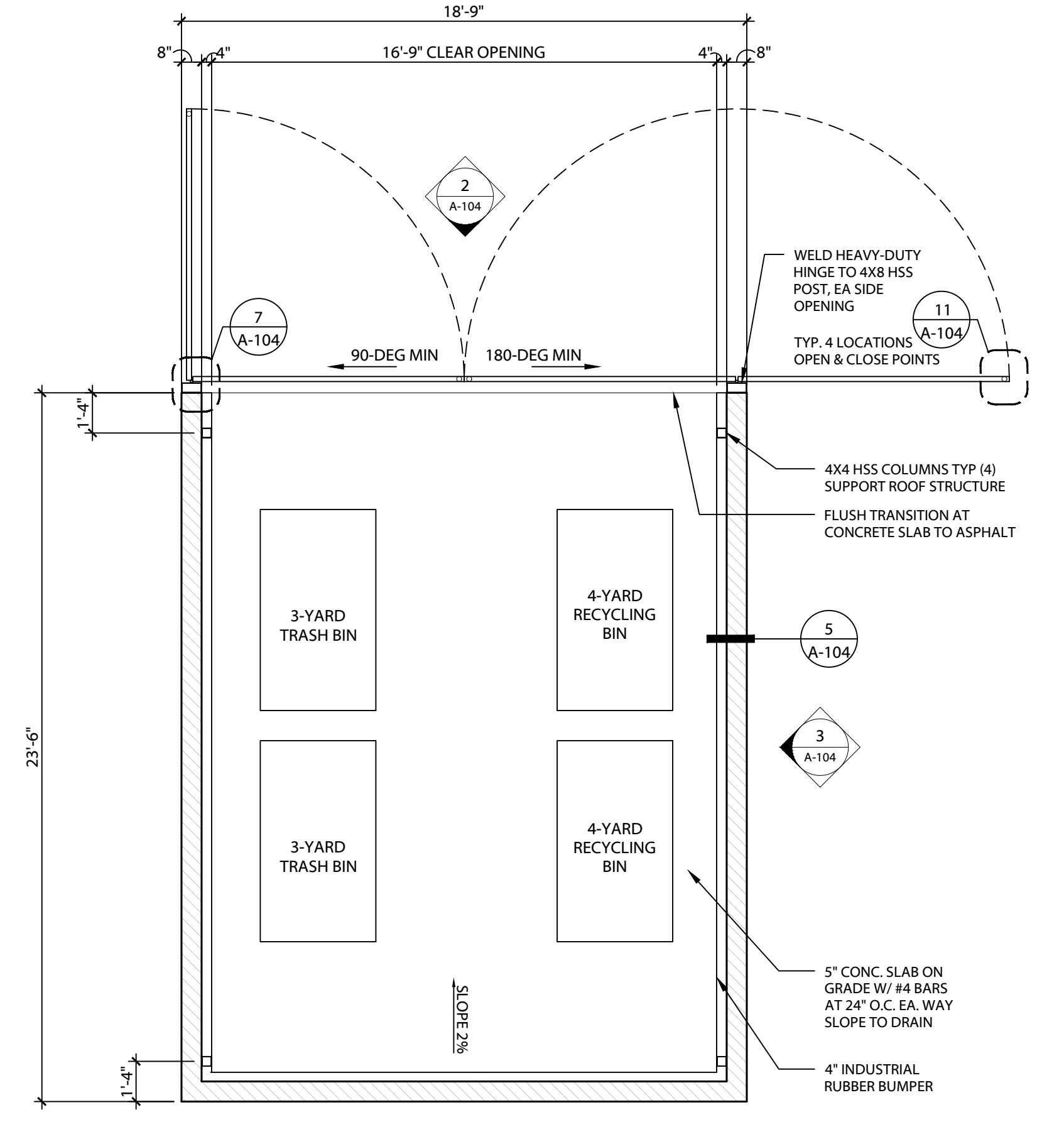
4 BIKE RACK - PLAN  
SCALE: 1/2" = 1'-0"



3 GARBAGE & RECYCLING ENCLOSURE REAR ELEVATION  
SCALE: 1/4" = 1'-0"



2 GARBAGE & RECYCLING ENCLOSURE FRONT ELEVATION  
SCALE: 1/4" = 1'-0"



1 TRASH & RECYCLING ENCLOSURE PLAN  
SCALE: 3/4" = 1'-0"

REVISIONS

No.	Description	Date

DRAWN BY: AAE  
CHECKED BY: KJK  
JOB NO: 22-033  
DATE: 10/04/2023  
ISSUED FOR: PRELIMINARY  
SHEET TITLE  
SITE DETAILS  
SHEET NO.

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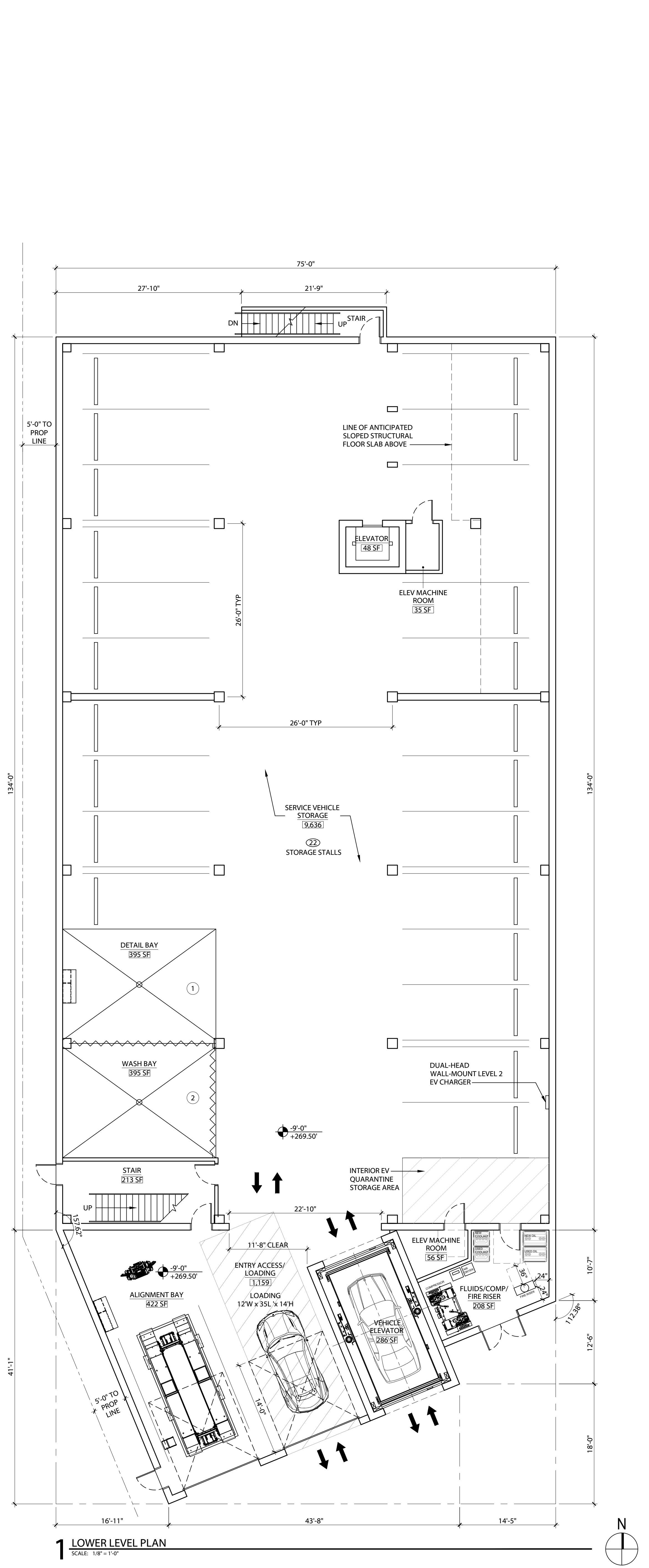
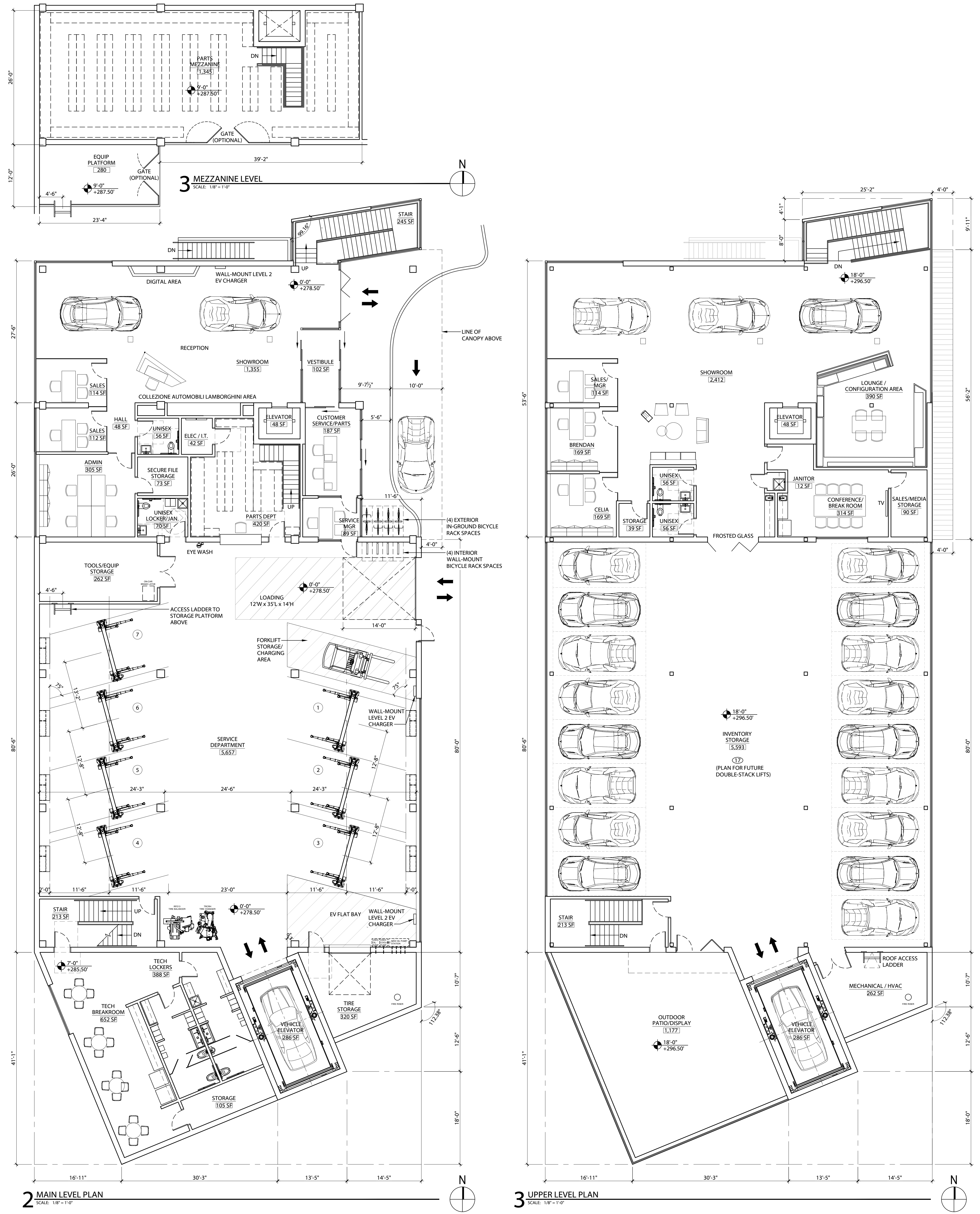
**AXIS**  
DESIGN GROUP  
ARCHITECTURE & ENGINEERING, INC.  
11104 S.E. STARK STREET  
PORTLAND, OR 97216  
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**TONKIN LAMBORGHINI**  
25239 SW PARKWAY AVE  
WILSONVILLE, OR 97070

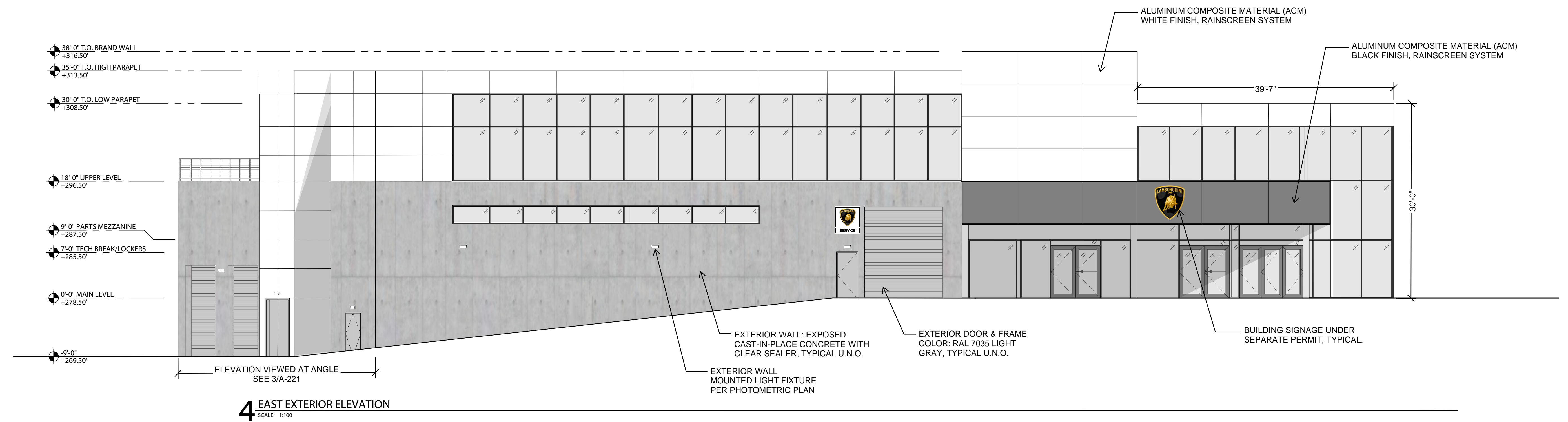
REVISIONS		
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CHECKED BY: TRB  
JOB NO: 22-033  
DATE: 10/04/2023  
ISSUED FOR: PRELIMINARY  
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FLOOR PLANS  
SHEET NO.

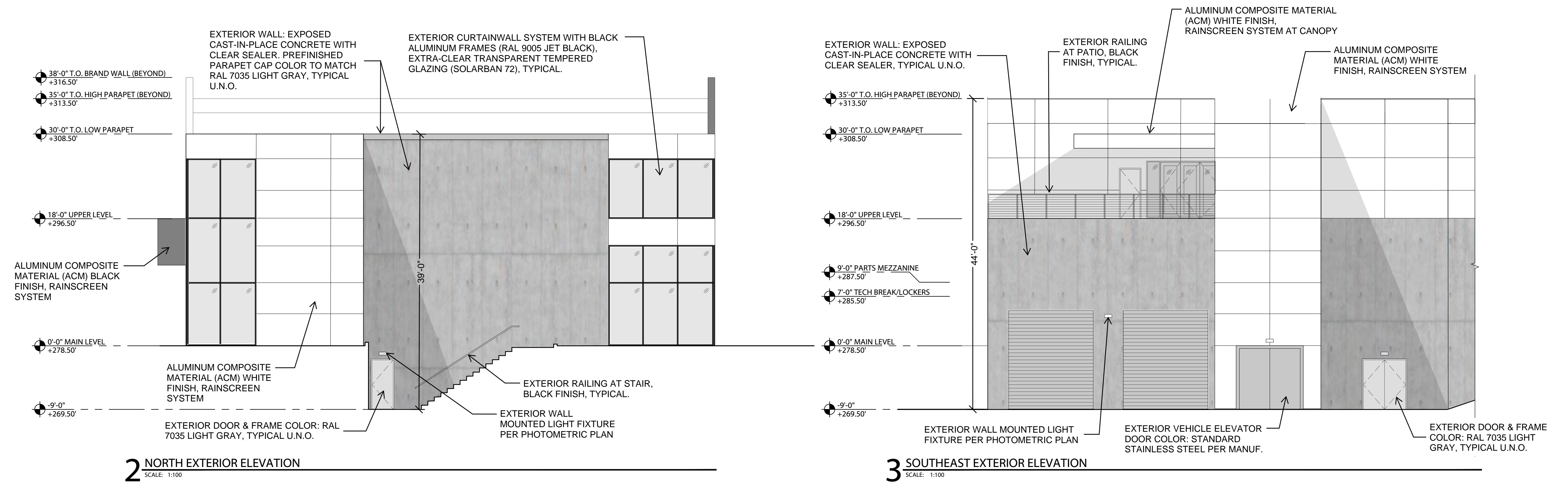
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S:\Projects\2023\Projects\22-033\_Tonkin\_Lambo\1\_FloorPlans\1\_Lambo\1\_FloorPlans.dwg © Plot Date: Jun 11 24 © Time: 4:55 PM

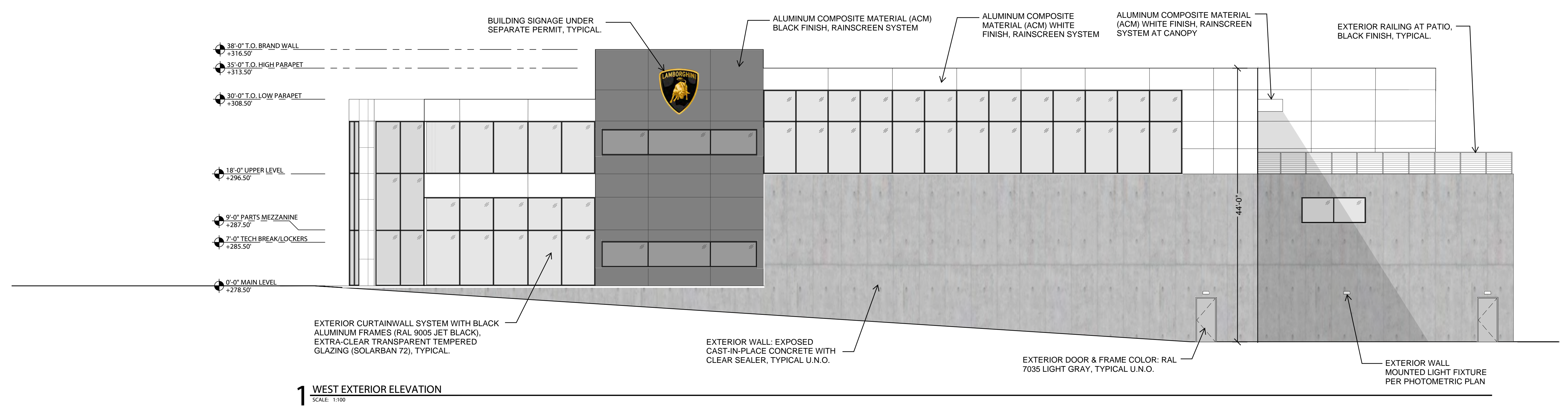


**4 EAST EXTERIOR ELEVATION**  
 SCALE: 1/320



**2 NORTH EXTERIOR ELEVATION**  
 SCALE: 1/300

**3 SOUTHEAST EXTERIOR ELEVATION**  
 SCALE: 1/300



**1 WEST EXTERIOR ELEVATION**  
 SCALE: 1/300

REVISIONS

No.	Description	Date

DRAWN BY: KJK  
 CHECKED BY: TRB  
 JOB NO: 22-033  
 DATE: 10/04/2023  
 ISSUED FOR: PRELIMINARY  
 SHEET TITLE  
 EXTERIOR ELEVATIONS  
 SHEET NO.



IMAGE SHOWN IS AN ARTIFICIALLY-GENERATED RENDERING AND MAY NOT REPRESENT ACTUAL CONSTRUCTION

# TONKIN LAMBORGHINI

WILSONVILLE, OR

JULY 10, 2024



IMAGE SHOWN IS AN ARTIFICIALLY-GENERATED RENDERING AND MAY NOT REPRESENT ACTUAL CONSTRUCTION

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JULY 10, 2024





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# TONKIN LAMBORGHINI | WILSONVILLE, OR

JULY 10, 2024



IMAGE SHOWN IS AN ARTIFICIALLY-GENERATED RENDERING AND MAY NOT REPRESENT ACTUAL CONSTRUCTION

# TONKIN LAMBORGHINI

WILSONVILLE, OR

JULY 10, 2024

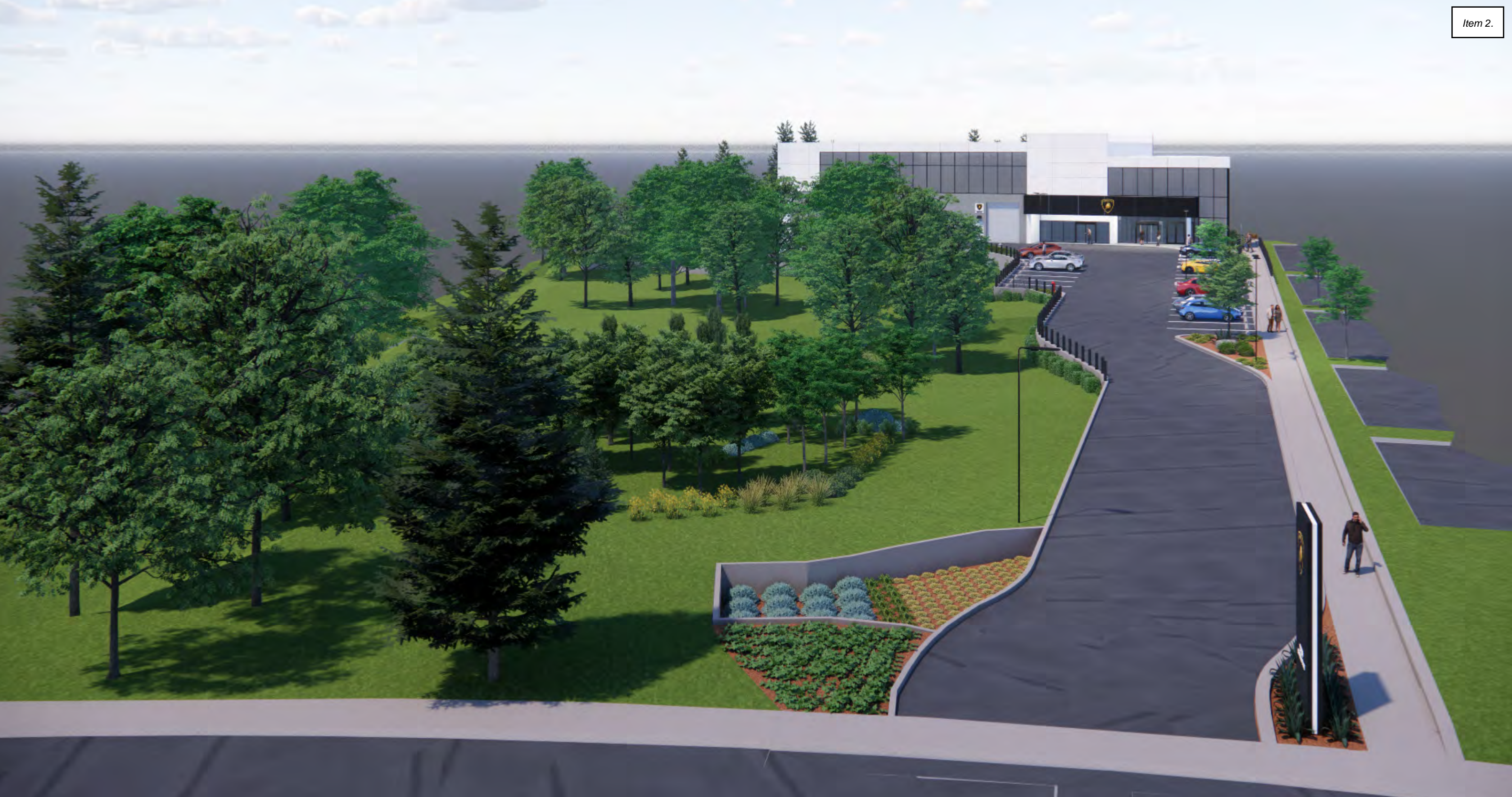


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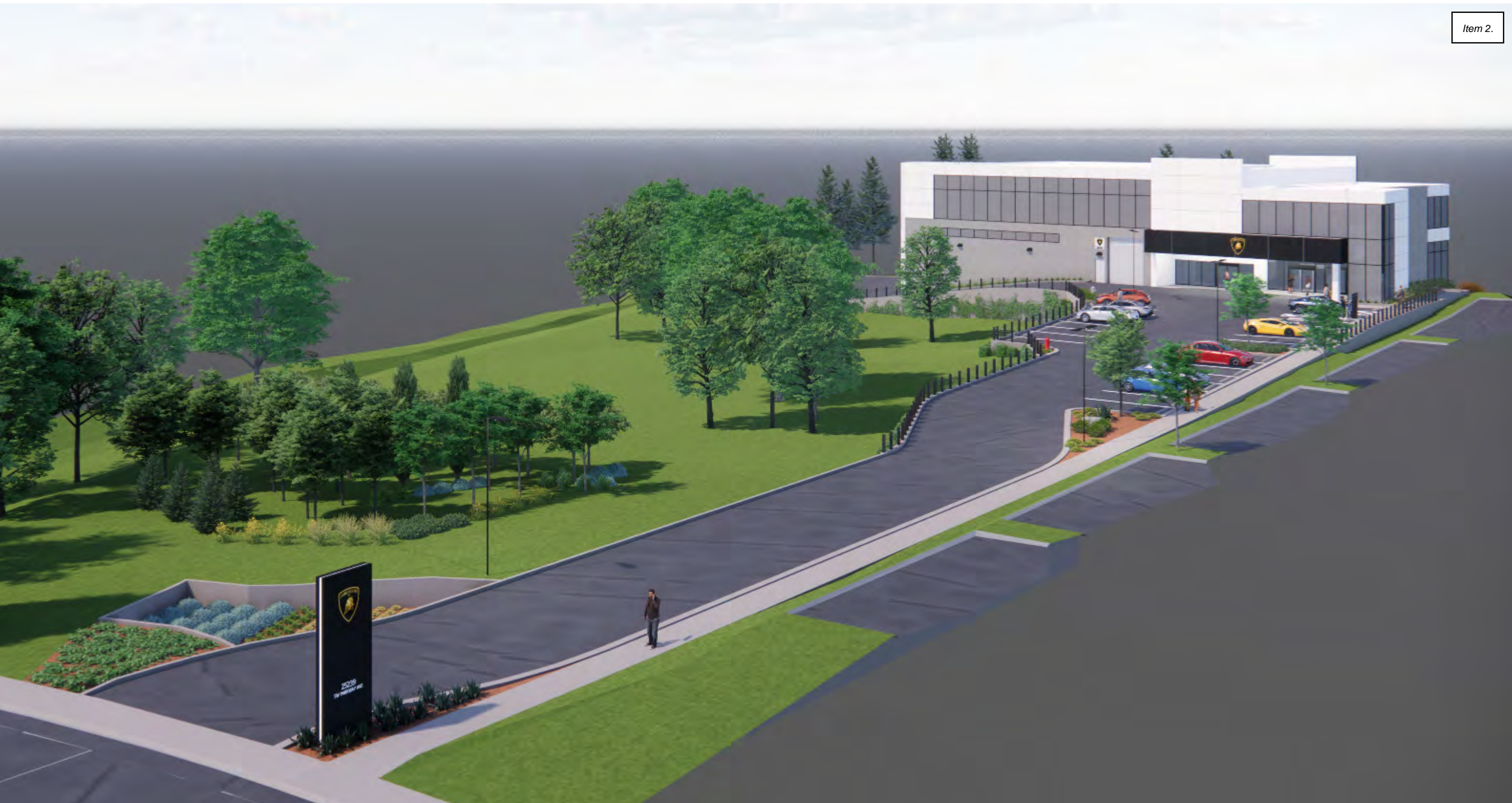


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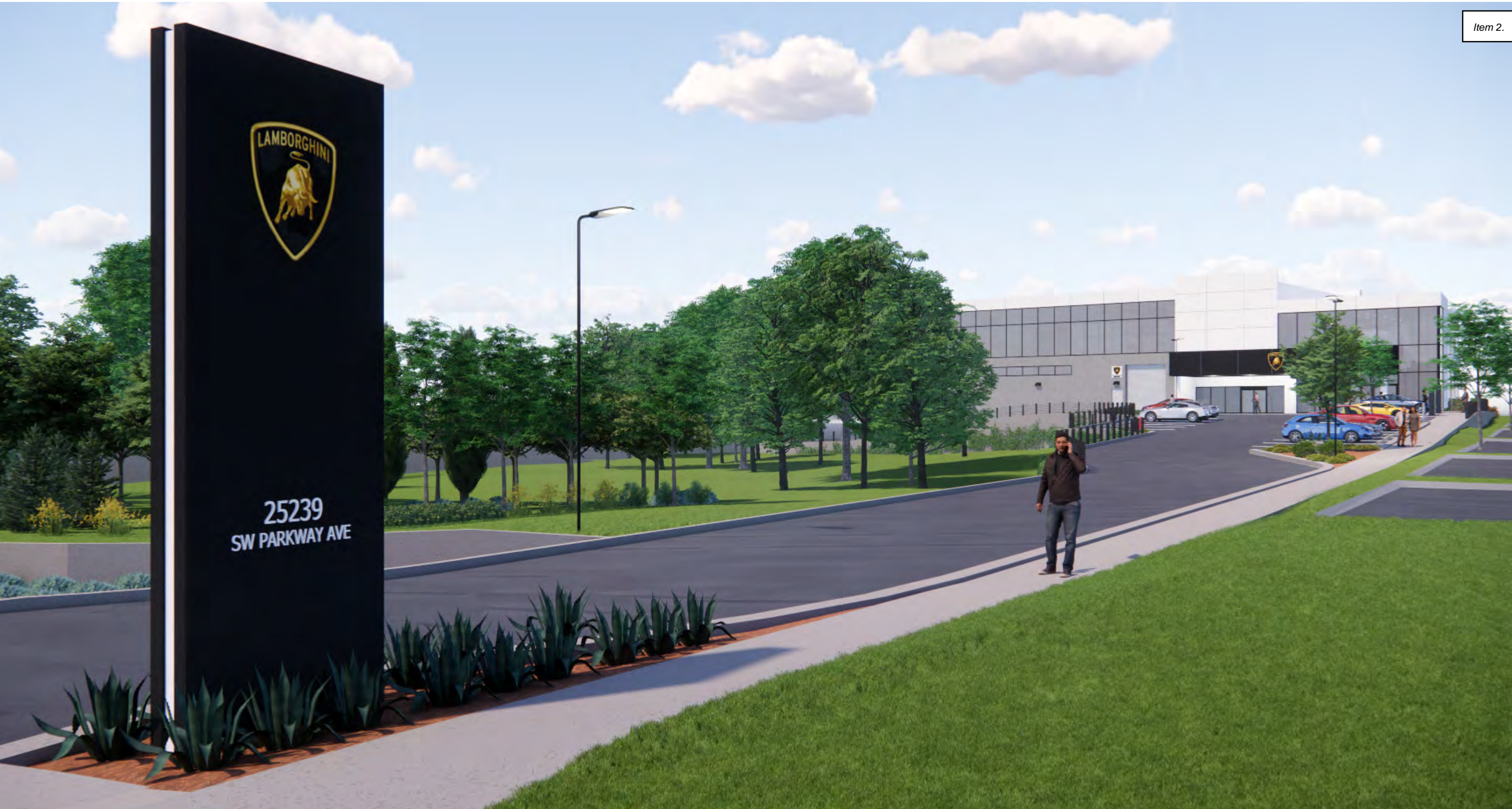


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WILSONVILLE, OR

JULY 10, 2024



IMAGE SHOWN IS AN ARTIFICIALLY-GENERATED RENDERING AND MAY NOT REPRESENT ACTUAL CONSTRUCTION

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JULY 10, 2024



IMAGE SHOWN IS AN ARTIFICIALLY-GENERATED RENDERING AND MAY NOT REPRESENT ACTUAL CONSTRUCTION

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JULY 10, 2024



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JULY 10, 2024



IMAGE SHOWN IS AN ARTIFICIALLY-GENERATED RENDERING AND MAY NOT REPRESENT ACTUAL CONSTRUCTION

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JULY 10, 2024



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JULY 10, 2024

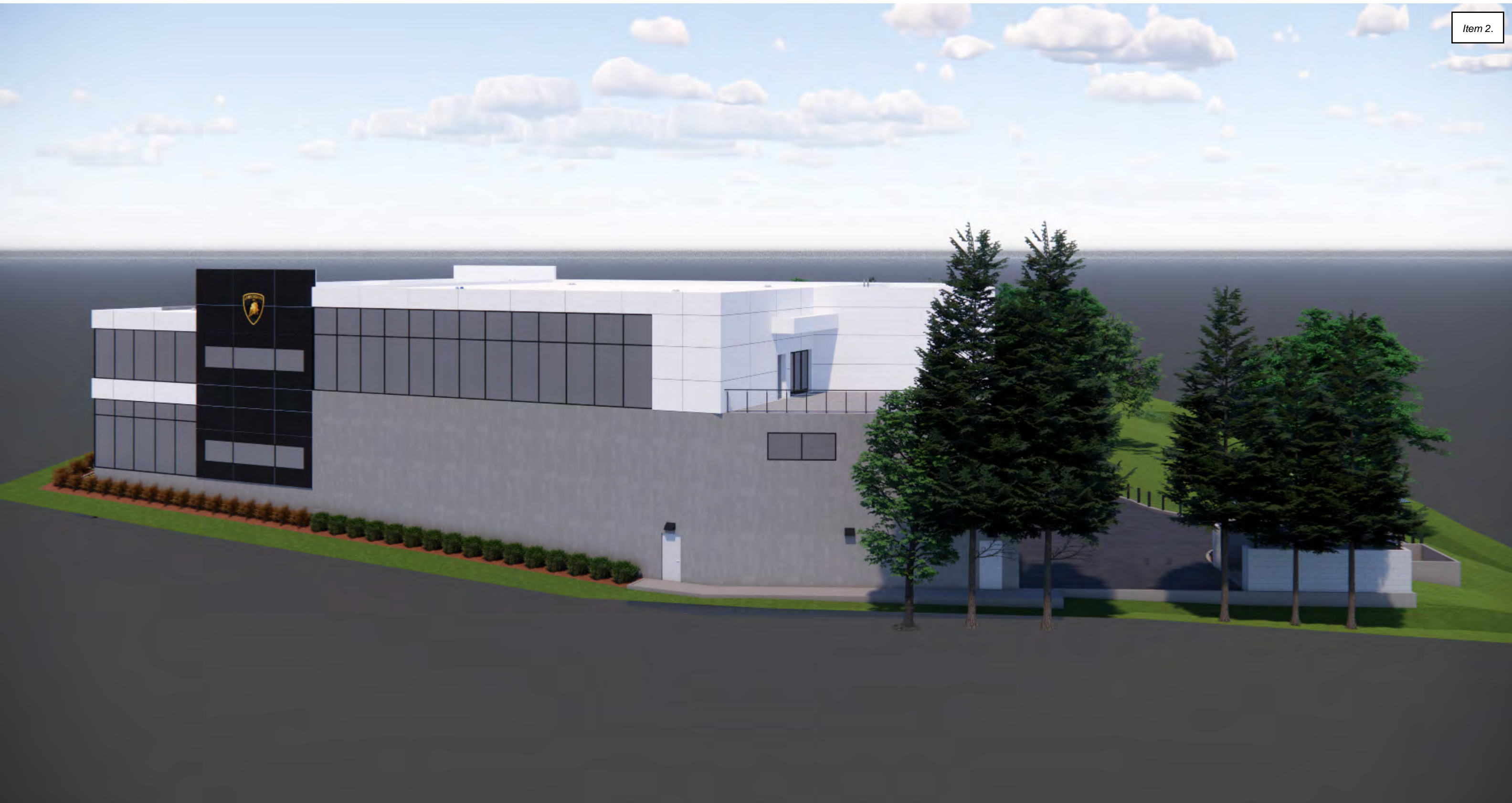


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# TONKIN LAMBORGHINI

WILSONVILLE, OR

JULY 10, 2024





IMAGE SHOWN IS AN ARTIFICIALLY-GENERATED RENDERING AND MAY NOT REPRESENT ACTUAL CONSTRUCTION

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WILSONVILLE, OR

JULY 10, 2024



IMAGE SHOWN IS AN ARTIFICIALLY-GENERATED RENDERING AND MAY NOT REPRESENT ACTUAL CONSTRUCTION

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IMAGE SHOWN IS AN ARTIFICIALLY-GENERATED RENDERING AND MAY NOT REPRESENT ACTUAL CONSTRUCTION

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JULY 10, 2024

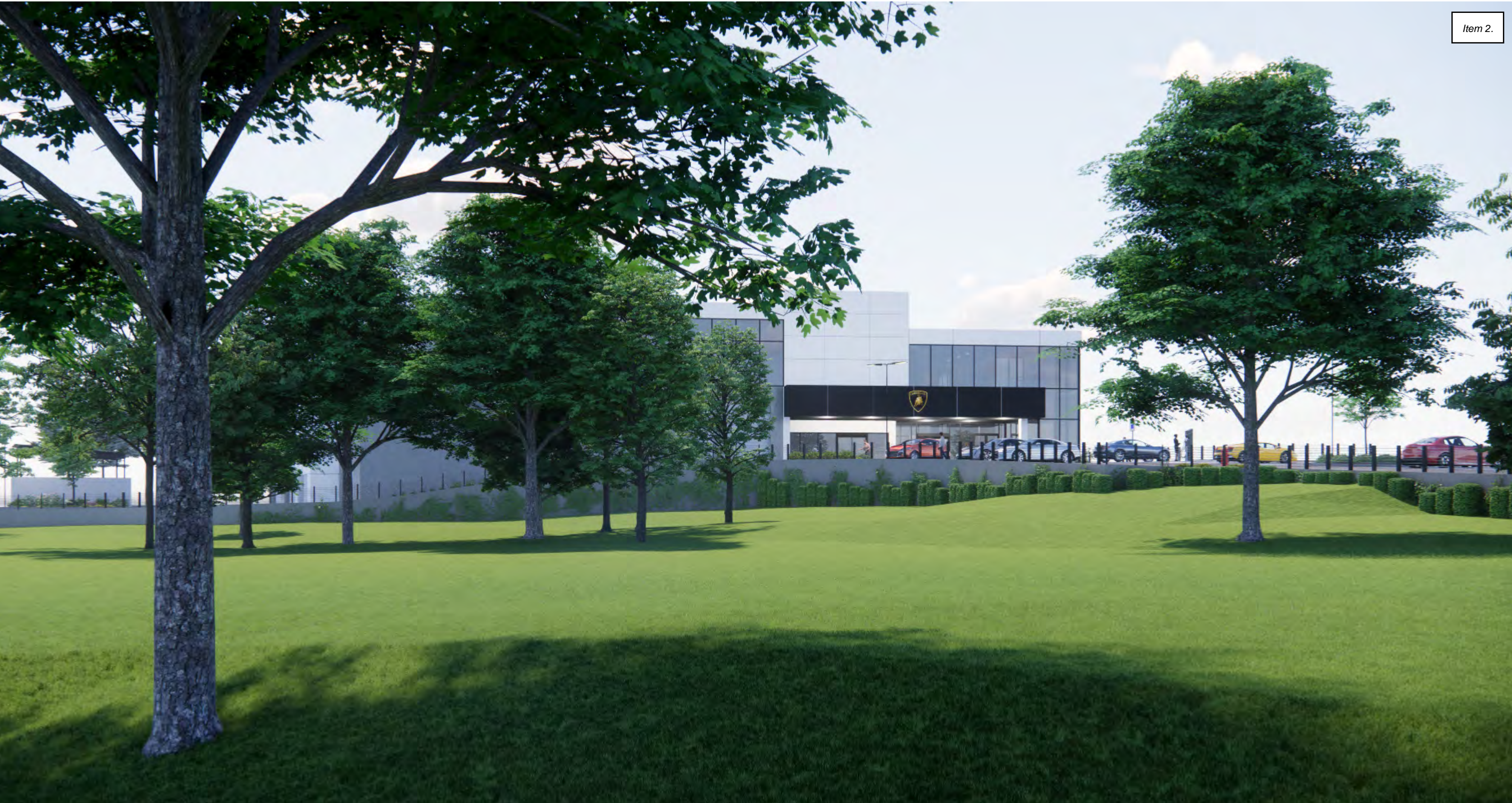


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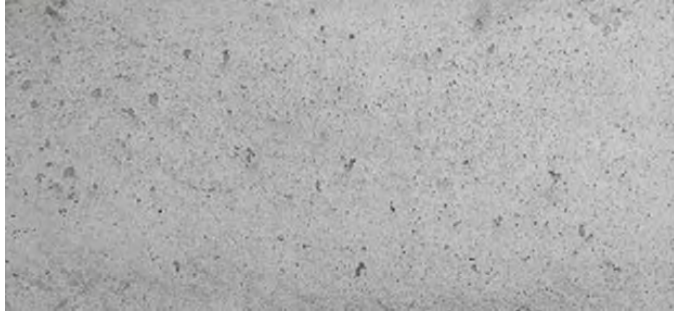
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WILSONVILLE, OR

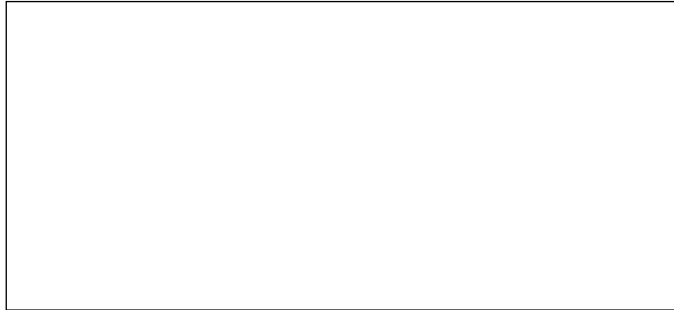
JULY 10, 2024

DIGITAL EXTERIOR FINISH BOARD  
Lamborghini

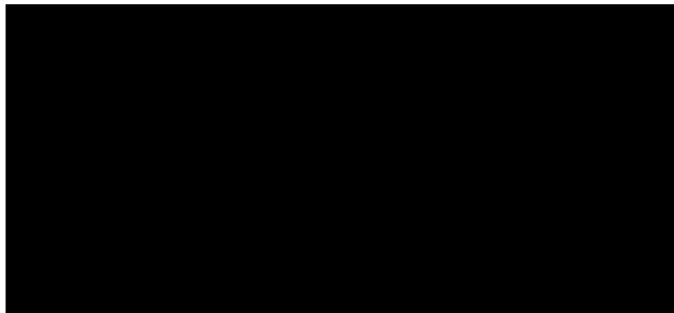
Item 2.



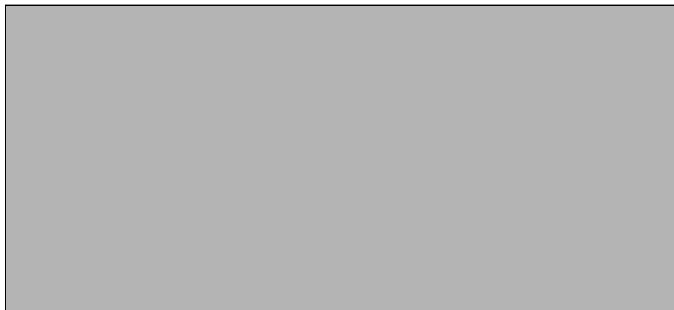
CAST-IN-PLACE CONCRETE  
WITH CLEAR SEALER



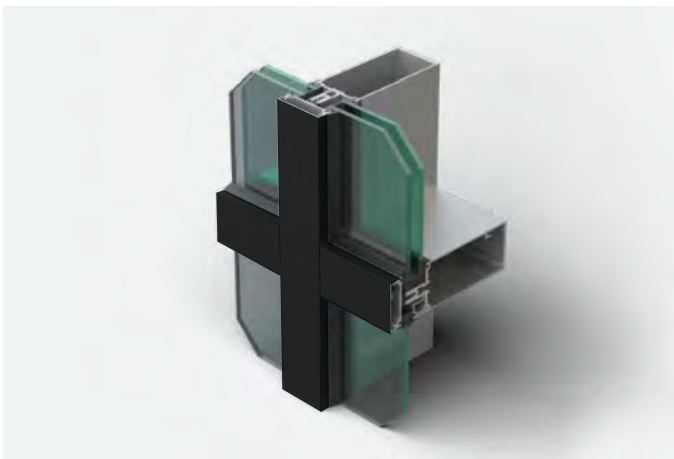
ALPOLIC RAINSCREEN SYSTEM  
ALUMINUM COMPOSITE MATERIAL (ACM)  
WHITE FINISH



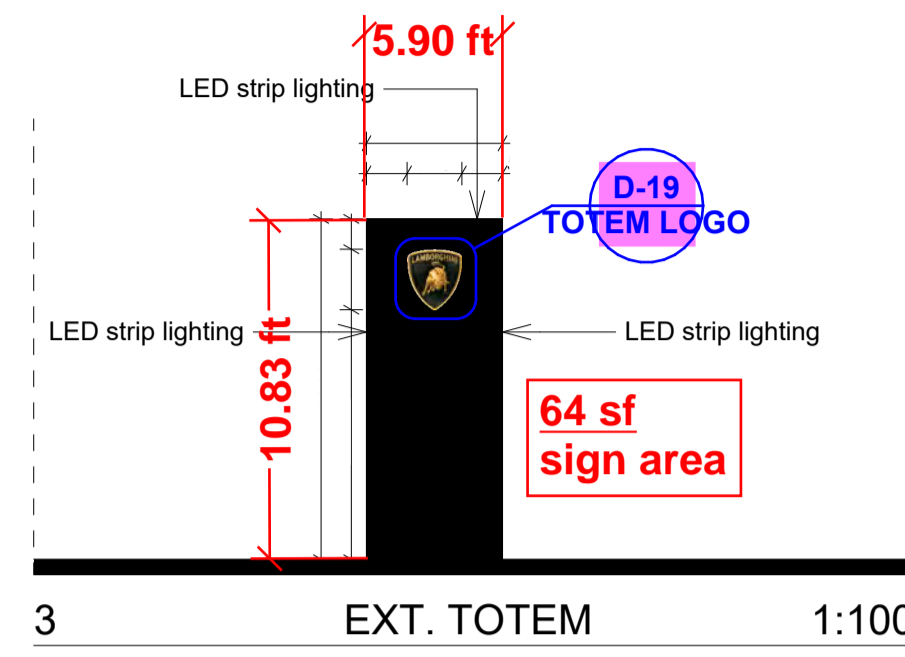
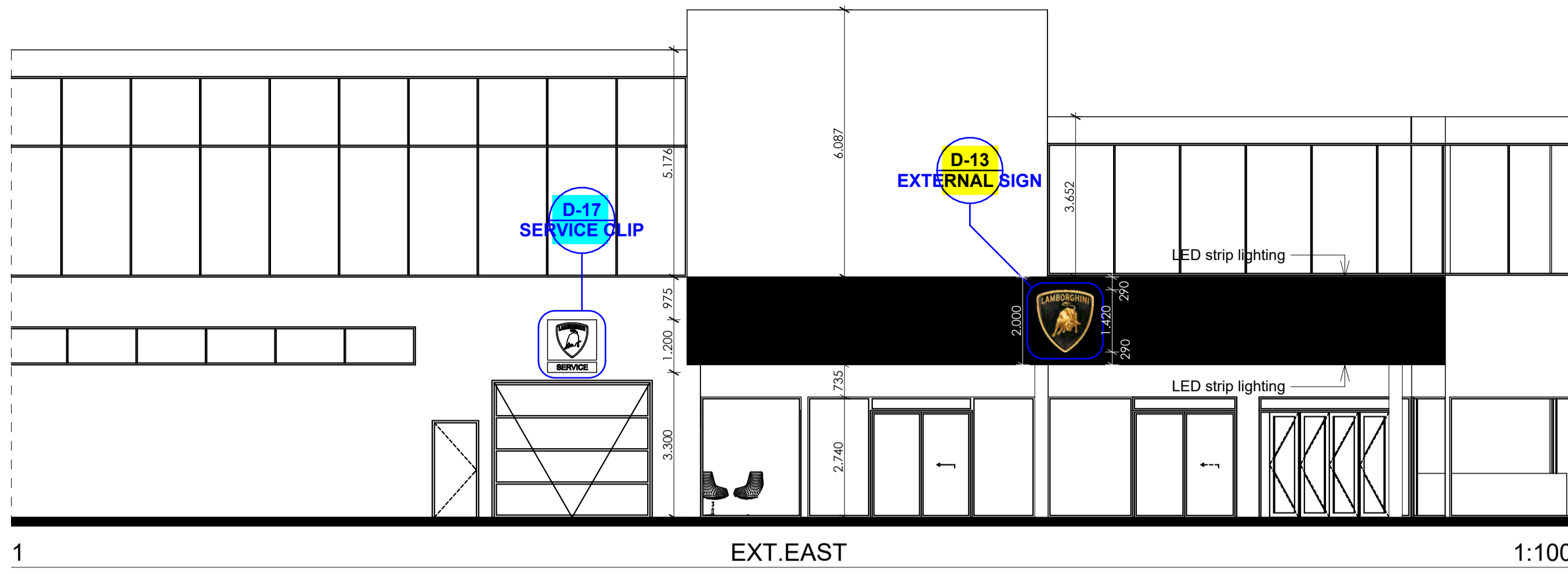
ALPOLIC RAINSCREEN SYSTEM  
ALUMINUM COMPOSITE MATERIAL (ACM)  
BLACK FINISH



RAL 7035 LIGHT GRAY PAINT  
EXTERIOR HOLLOW METAL DOORS & FRAMES  
PARAPET COPING AT CONCRETE WALLS



KAWNEER 1600 WALL SYSTEM 1 EXTERIOR  
CURTAINWALL WITH BLACK ALUMINUM FRAMES  
(RAL 9005 JET BLACK), EXTRA-CLEAR  
TRANSPARENT TEMPERED GLAZING (SOLARBAN 72)



**LEGEND:**

**EXTERNAL SIGN**

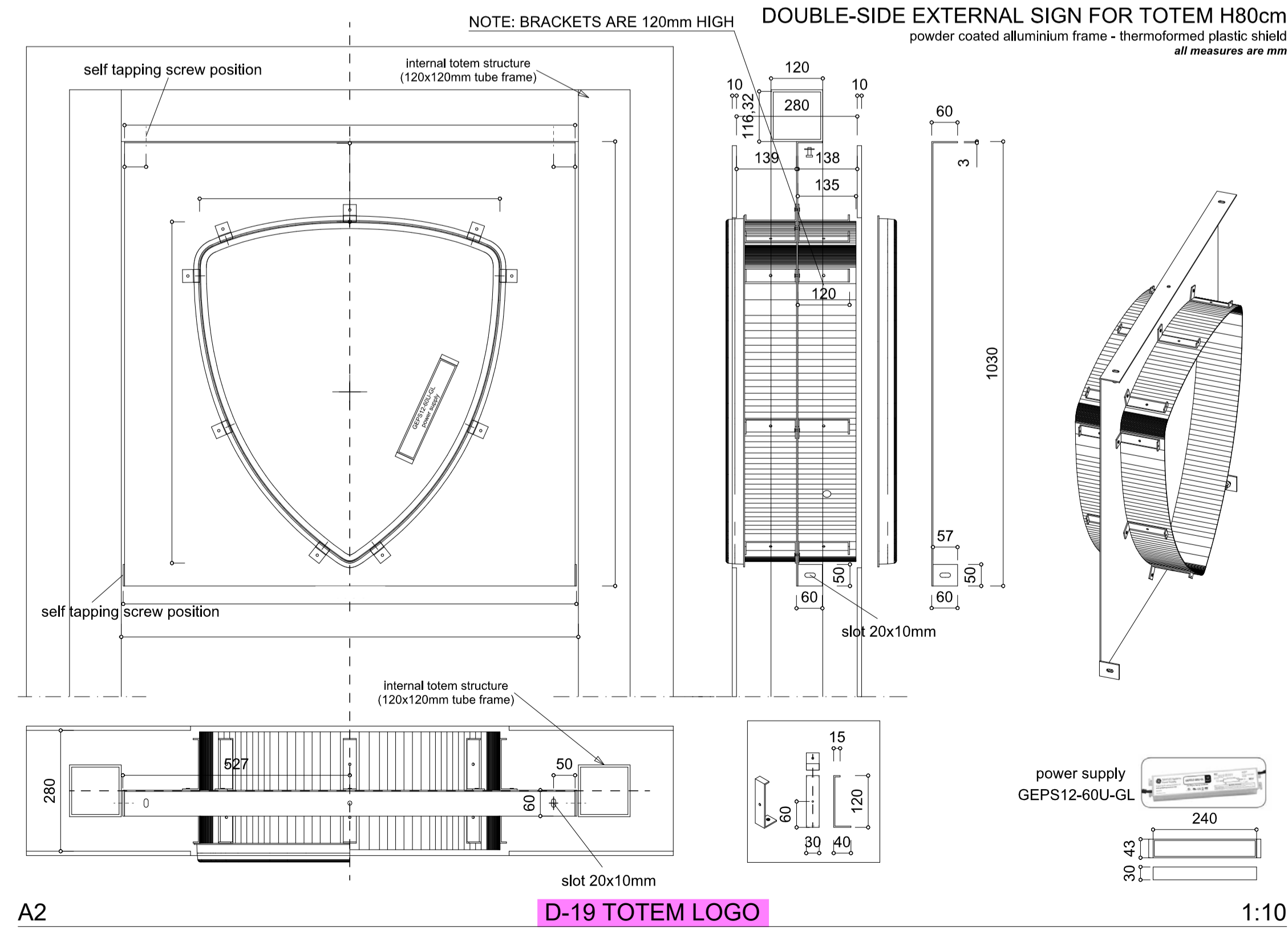
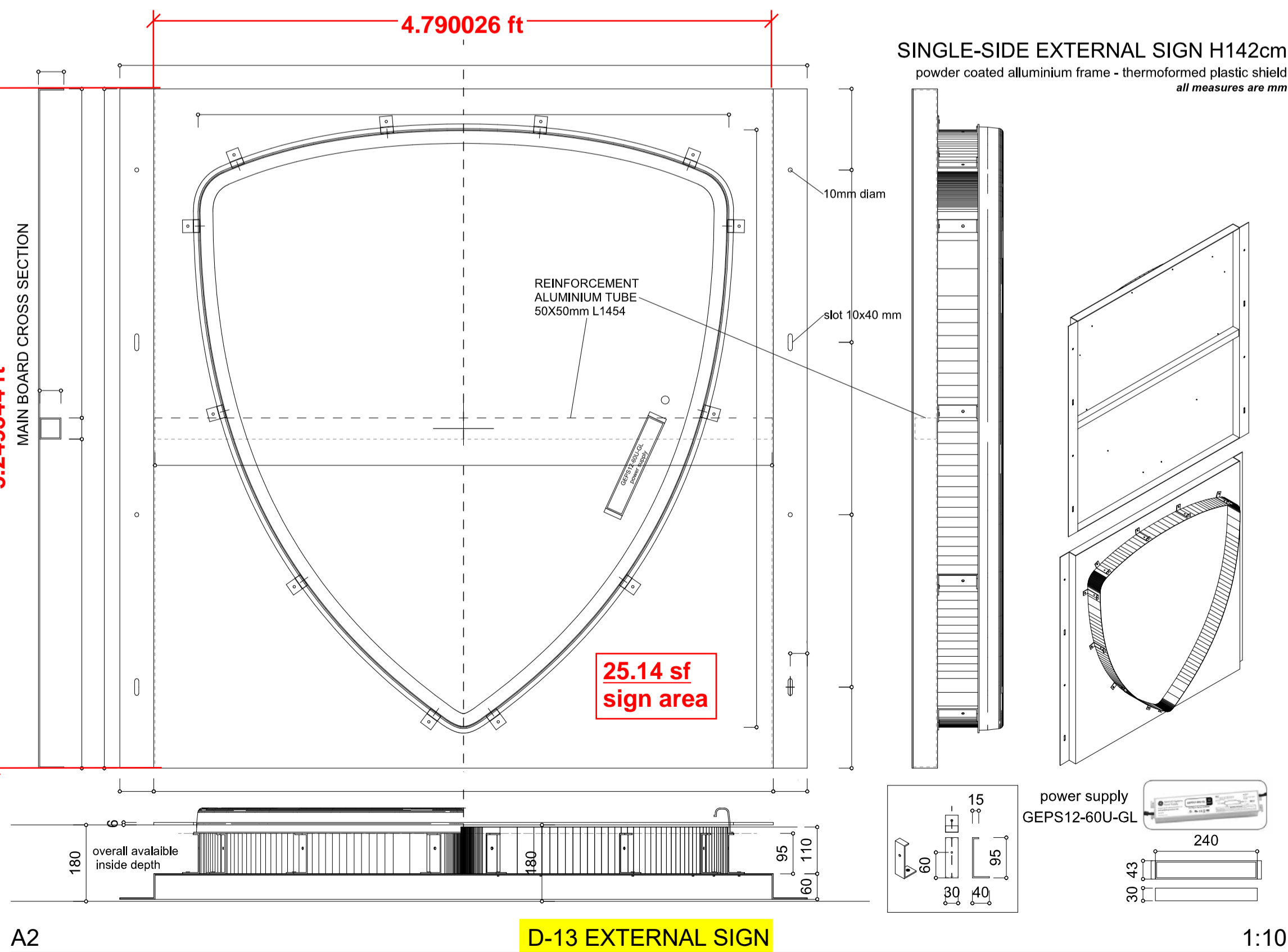
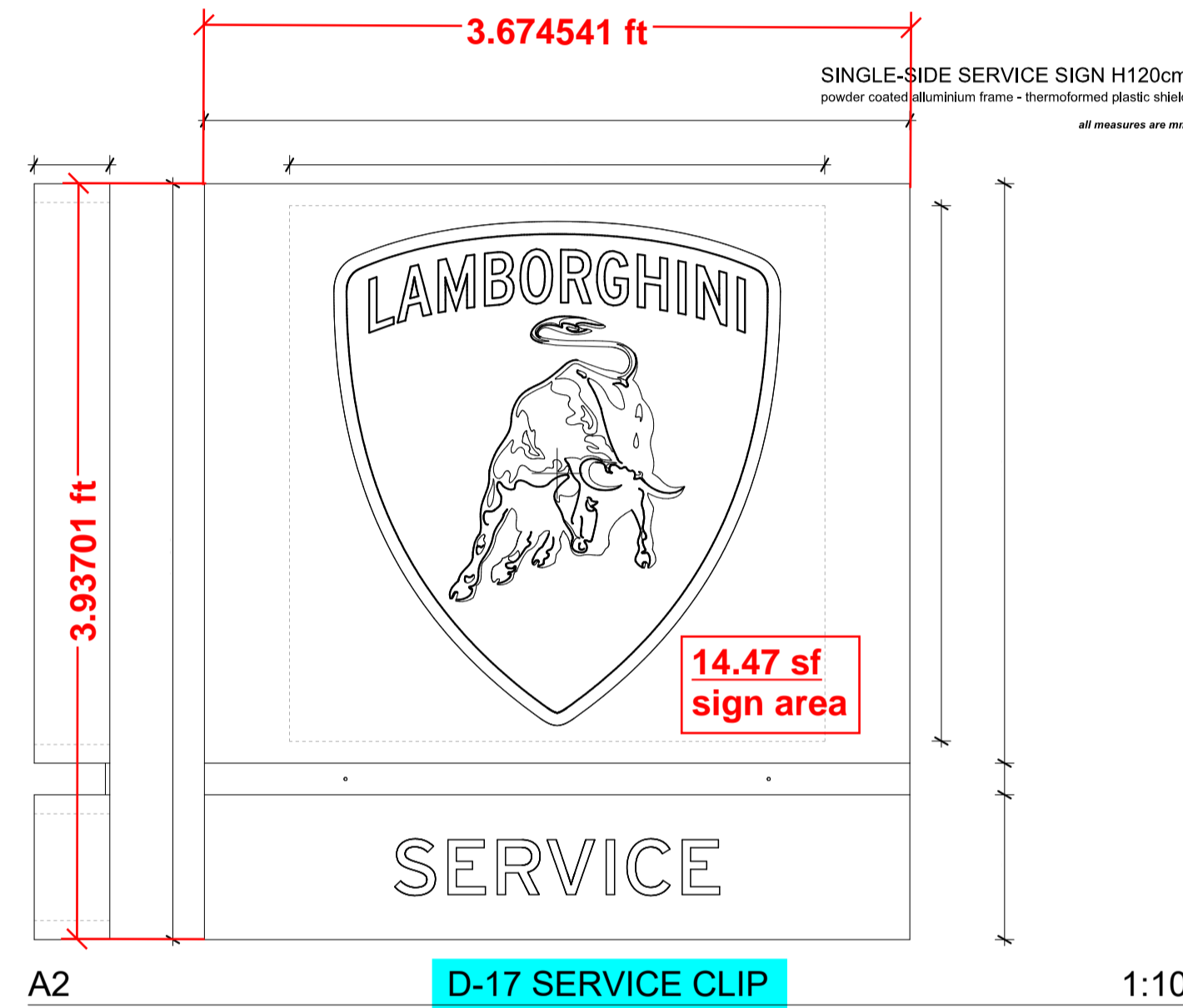
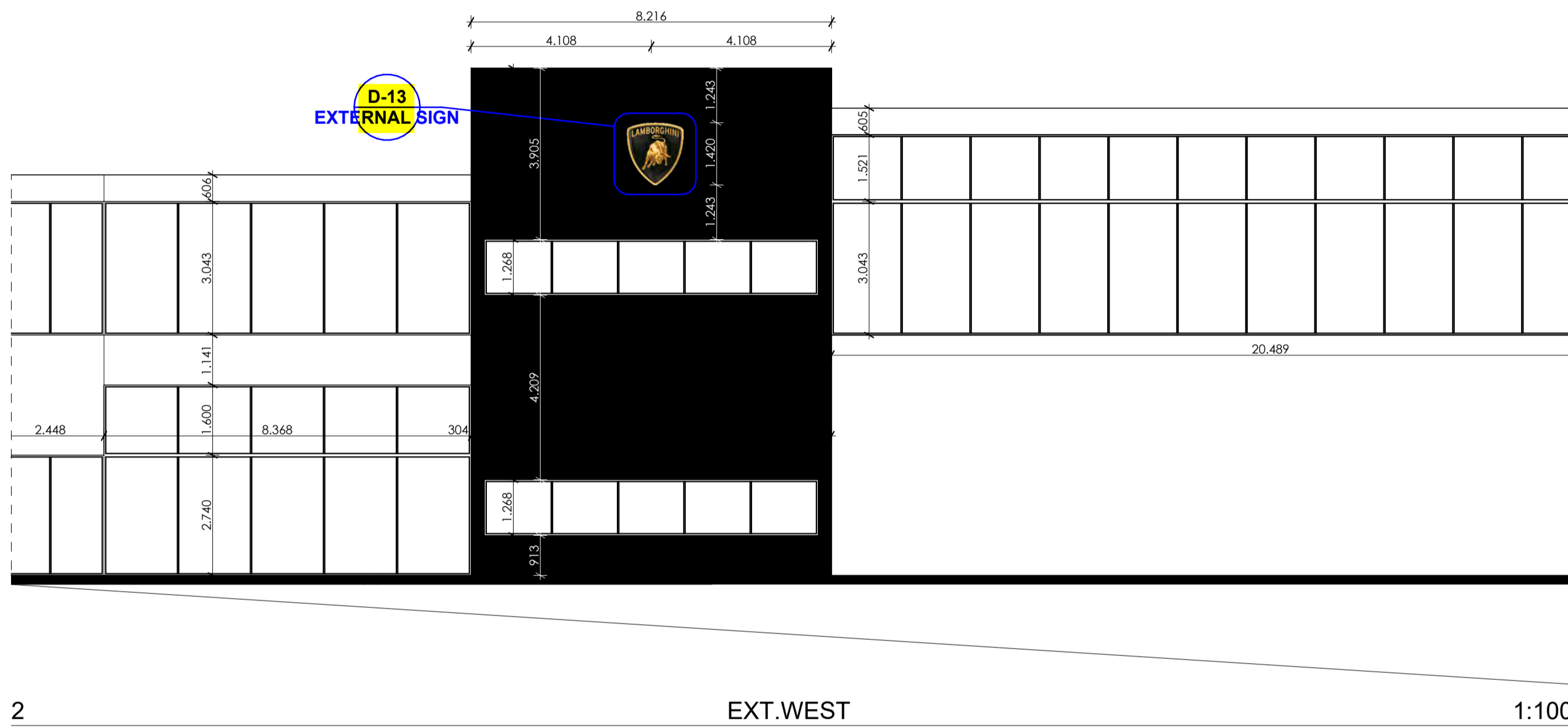
COVERING : ALUCOBOND  
Black 326 solid color

**EXTERNAL TOTEM**

TILES: FIANDRE  
Datauni MAXIMUM - Unipepper sl 1500x3000 mm P400 Resin SI (cod.LAMBO0861530)

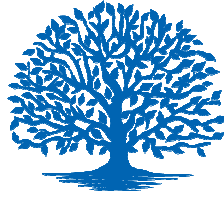
**MANDATORY ELEMENTS:**

- ① External Sign and Logo
- ② External Totem H: 4.500 mm
- ③ Service Clip



**AUTOMOBILI LAMBORGHINI  
PORTLAND**

<b>VERSION:</b>	01
<b>LAYOUT:</b>	01.3
<b>DATE:</b>	01/12/2023
<b>PLANFORMAT:</b>	DIN A2
<b>SCALE:</b>	1:100, 1:10
<b>SHOWROOM AREA:</b> (excluding: pillars and bearing walls)	530,5 sqm
<b>TOILET AREA:</b> (excluding: pillars and bearing walls)	14,8 sqm
<b>OTHER AREA:</b> (excluding: pillars and bearing walls)	45,5 sqm
<b>STAIRS AREA:</b> (excluding: pillars and bearing walls)	20,4 sqm



## Todd Prager & Associates<sub>LLC</sub>

### MEMORANDUM

**DATE:** April 22, 2024

**TO:** Kendra Kozak (Axis Design Group Architecture & Engineering, Inc.)

**FROM:** Rick Till, ISA Board Certified Master Arborist® PN-8730A

**RE:** New Commercial Development on SW Parkway Avenue, Wilsonville, OR

### Summary

A new building, access drive, and hardscape improvements are proposed at 3S-1-32DA Tax Lot 1000, SW Parkway Avenue in Wilsonville, Oregon. The tree inventory resulted in 65 trees on the subject property or on adjacent properties to the north and south. Twenty-nine (29) trees are proposed for removal, including 27 on-site trees (including two straddling ODOT property to the east) and two trees on the adjacent private property to the north. Twenty-seven (27) on-site trees will be retained and protected. This report addresses tree removal and tree protection requirements outlined in the City of Wilsonville Code, Chapter 4, Section 4.600.

### Background

The proposed development would include construction of a new building to the west side of the property and an access road, parking, and sidewalk along the north side of the property.

The 2.3-acre property is zoned Planned Development Commercial (“PDC”). There is a Significant Wetland and a corresponding Significant Resource Overlay Zone (“SROZ”) covering the middle and southern portion of the property. The property is not in the Willamette River Greenway. There are no Heritage Trees on the property.

### Assignment

The assignment asked of our firm was:

1. Inventory existing trees at the project site. Assessment to include tree species, sizes, physical and structural conditions of the trees, treatment (remove/retain), and any additional necessary comments.
2. In coordination with the project team, identify the trees to be retained and removed. This may involve working with project planners, engineers, contractors, and others to identify design and construction techniques necessary to retain required trees.
3. Develop tree removal/protection recommendations in accordance with the City of Wilsonville Code, Chapter 4, Section 4.600.



City of Wilsonville  
Exhibit B5 DB24-0006

## Type C Permit (Section 4.610.40)

Type C Permits require a tree survey and site map depicting existing trees on the property, trees to be removed, and tree protection measures. The following information demonstrates compliance with Type C Permit requirements.

### Tree Survey (Section 4.610.40.02(2))

I completed the inventory on March 9, 2024. Sixty-five (65) trees either on-site or on the properties to the north and south were inventoried (Attachment 1) and depicted on a site map (Attachment 2). Trees on ODOT property to the west are depicted on the map for informational purposes. The following information was collected for each tree: tree tag, common name, scientific name, trunk diameter (DBH), single DBH, average canopy radius, health condition rating, structural condition rating, property status (on or off the subject property), pertinent comments, and treatment (remove or retain).

The tree numbers listed in Attachment 1 correspond with the tree numbers listed in Attachment 2. Onsite trees were tagged with aluminum tags if accessible. No Oregon white oak (*Quercus garryana*) or Pacific yew (*Taxus brevifolia*) were found on the development site.

### Standards for Tree Removal, Relocation, and Replacement (Section 4.610.10)

Tree removal is proposed for 29 trees for compliance with Section 4.610.10. This includes 27 trees on-site (trees 1, 2, 6–11, 17, 29, 30–39, and 59–65) and two trees off-site on the adjacent property to the north (trees 57 and 58). Two trees (30 and 31) are on or adjacent to the property line to the west and are treated as on-site trees. Removal is consistent with Section 4.610.10.

- **Parkway Avenue Sidewalk Conflicts:** Trees 1 and 2 are 11-inch DBH sweet cherries (*Prunus avium*) located on the Parkway Avenue frontage. These trees are proposed for removal because they are naturalized, non-native trees that are encroaching over the public sidewalk on the street frontage (see Section 4.610.10.H.2 and H.3).
- **Necessary for Construction:** Trees 6–11, 17, 29, 32–39, and 59–65 are either within the footprint of the development or the development would intrude into the minimum development setback for preserving adequate tree rooting space. Removal is necessary for construction, consistent with Section 4.610.10.H.1. Due to the location of the protected wetland to the south of the proposed development, alternative layouts that would avoid the conflict are not feasible.
  - Trees 6–10 are cottonwoods (*Populus trichocarpa*) ranging in size from 7- to 14-inches DBH and located within the footprint of the proposed access drive.
  - Tree 11 is a 20-inch DBH Douglas-fir (*Pseudotsuga menziesii*) that is located within the proposed footprint of the access drive.
  - Trees 17, 29, and 39 are sweet cherries 9- to 13-inch DBH that are non-native, naturalized trees located within the footprint of the access drive and parking areas.
  - Trees 30 and 31 are a 15-inch DBH Douglas-fir and a 31-inch DBH deodar cedar (*Cedrus deodara*) located on or adjacent to the western property line and the development footprint would encroach within the minimum construction setback for tree preservation.
  - Trees 32–37 are a group of pines (*Pinus sp.*) 8- to 12-inches DBH and a Norway maple (*Acer platanoides*) 16-inches DBH located along the western property line.



These trees are located within the proposed development footprint or within five feet of the development.

- Trees 59–65 are black locust (*Robinia pseudoacacia*) 8- to 17-inch DBH are naturalized, non-native trees located within the footprint of the proposed access drive and parking lot.
- Trees 57 and 58 are 24- and 29-inch DBH red oaks (*Quercus rubra*) located on the adjacent property to the north. The proposed development, including required sidewalks, will require excavation to a depth greater than two feet within the typical minimum construction setback for these trees. Removal of these trees is necessary for construction.

## Tree Protection During Construction (Section 4.620.10)

A typical minimum root protection zone allows encroachments no closer than a radius from a tree of 0.5 feet per inch of DBH if no more than 25 percent of the root protection zone area (estimated at one foot radius per inch of DBH) is impacted. Figure 1 illustrates this concept. This standard may need to be adjusted on a case-by-case basis due to tree health, species, root distribution, whether the tree will be impacted on multiple sides, the specific development proposed, and other factors.

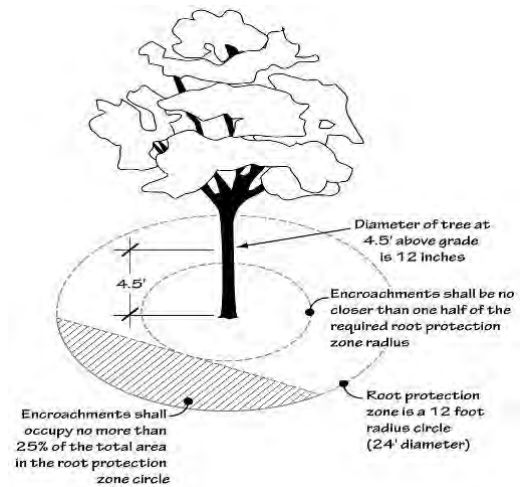


Figure 1: Typical minimum protection zone

Sediment control fencing will be placed between the proposed development and the wetland. Tree

protection fencing will be placed in conjunction with sediment fencing to protect the trees in closest proximity to development. This includes trees 3, 12–16, and 40, which are in closest proximity to the proposed development. The location of fencing is depicted in the site plan map included as Attachment 2. The only tree that would have a notable encroachment into the typical root protection zone is tree 3, a 24-inch DBH Norway spruce (*Picea abies*). A new stormwater facility and water meter installation would be installed near that tree, but not within the minimum protection zone.

The remaining trees on the property are located within the protected wetland area or are sufficiently remote from any ground disturbance to not require tree protection fencing. Proposed wetland protection measures, including standard construction and silt fencing will be sufficient to protect those trees from construction impacts.

The following tree protection measures are recommended for trees 3, 12–16, and 40:

1. **Tree protection fencing.** Tree protection fencing will act as a physical, protective barrier between protected trees and construction.
  - a. *Height:* Provide a minimum 3.5-foot-high hi-visibility fence.
  - b. *Posts & Spacing:* Secure fencing with metal t-stakes no more than 10 feet apart so as not to be moved.
  - c. *Existing Grade:* Install fencing flush to the ground.
  - d. *Locations:* Install fencing as shown in Attachment 2.
  - e. Tree protection fencing shall not be moved without written approval from the project arborist.
  - f. A tree protection fencing detail is on the tree protection plan (Attachment 2).
2. **Tree protection signage.**
  - a. Weatherproof tree protection signage shall be placed on tree protection fencing.
  - b. Signage should be placed at intervals of every 30 feet.
  - c. See Attachment 3 for an example tree protection sign.
3. **Tree protection fencing maintenance and removal.**
  - a. *Maintenance:* Maintain protection fencing in good effective condition at the approved and inspected location. Fencing that is damaged during site work shall

- be repaired and placed in the approved location prior to resuming work in the area.
- b. *Removal*: Tree protection fencing may be removed when all work is complete, and the final inspection has occurred.
- 4. Prevent protection zone impacts.** The following activities can cause significant harm to trees and should be prevented.
- a. Dumping of harmful chemicals and materials, such as paints, thinners, cleaning solutions, petroleum products, concrete or dry wall excess, construction debris, or run-off;
  - b. Storage of materials such as building supplies, soil, rocks, or waste items;
  - c. Placement of portable toilets, drop-boxes, or similar temporary items;
  - d. Parking of vehicles or equipment; and,
  - e. Excavation, trenching, grading, root pruning, or similar activities unless directed by an arborist present on site.
- 5. Project arborist oversight.** The project arborist is not required to be on-site.
- 6. Erosion control.** Any required sediment fencing shall be routed outside of tree protection fencing to protect the root systems of the trees to be retained.
- 7. Additional tree protection measures.** Additional tree protection measures consistent with industry standards and best management practices are in Attachment 4.
- 8. Report sharing.** Share this report in its entirety with the project team and construction staff.

## Conclusion

The proposed development and hardscape improvements at SW Parkway Avenue can be constructed in compliance with the City of Wilsonville development code. Twenty-nine (29) trees are proposed for removal as needed for development and to maintain clearance over the property frontage. Twenty-seven (27) remaining on-site trees will be preserved. Tree protection fencing and wetland protection fencing will protect on-site trees from impacts.

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

Sincerely,



Rick Till

*ISA Board Certified Master Arborist® PN-8358B*  
*ISA Qualified Tree Risk Assessor*  
*Member, American Society of Consulting Arborists*  
*rick@toddprager.com | 503-750-6599*

Enclosures: Attachment 1 – Tree Inventory  
Attachment 2 – Tree Inventory Map and Protection Plan  
Attachment 3 – Tree Protection Signage  
Attachment 4 – Tree Protection Recommendations  
Attachment 5 – Assumptions and Limiting Conditions



Attachment 1 - Tree Inventory - March 9 April 16, 2024  
Wilsonville Lamborghini Development

Tree Tag	Common Name	Scientific Name	DBH <sup>1</sup> (in)	Single DBH <sup>2</sup> (in)	C-Rad <sup>3</sup> (ft)	Health Condition <sup>4</sup>	Structural Condition <sup>4</sup>	Property Status <sup>5</sup>	Comments	Treatment
1	Sweet cherry	<i>Prunus avium</i>	11	11	21	Fair	Fair	On	Nuisance species, possible road and sidewalk conflict	Preserve
2	Sweet cherry	<i>Prunus avium</i>	11	11	18	Fair	Fair	On	Nuisance species, codominant at 7', possible road and sidewalk conflict	Preserve
3	Spruce sp.	<i>Picea sp.</i>	24	24	12	Fair	Fair	On	2 stems at 20', multiple tops, slightly thin crown (6" cones)	Preserve
4	Sweet cherry	<i>Prunus avium</i>	18	18	20	Fair	Poor	On	Codominant with included bark at 6'	Preserve
5	Spruce sp.	<i>Picea sp.</i>	12	12	7	Poor	Fair	On	Very shaded north side, very low live crown ratio (2" cones)	Preserve
6	Cottonwood	<i>Populus trichocarpa</i>	7	7	9	Good	Good	On	Conflict with proposed access road, species poorly suited for preservation	Preserve
7	Cottonwood	<i>Populus trichocarpa</i>	11	11	9	Fair	Poor	On	Low live crown ratio, conflict with access road	Preserve
8	Cottonwood	<i>Populus trichocarpa</i>	14	14	15	Fair	Fair	On	One-sided/shaded, conflict with access road	Preserve
9	Cottonwood	<i>Populus trichocarpa</i>	14	14	15	Fair	Fair	On	One-sided/shaded, conflict with access road	Preserve
10	Cottonwood	<i>Populus trichocarpa</i>	9	9	15	Fair	Fair	On	One-sided/shaded, conflict with access road	Preserve
11	Douglas-fir	<i>Pseudotsuga menziesii</i>	20	20	15	Good	Fair	On	Part shade from cottonwood. Possible remove to move road south to create more space for neighbor's oaks	Preserve
12	Cottonwood	<i>Populus trichocarpa</i>	9	9	15	Fair	Fair	On	Suppressed, poorly suited for preservation	Preserve
13	Cottonwood	<i>Populus trichocarpa</i>	8	8	0	Dead	Dead	On	15' snag,	Preserve
14	Cottonwood	<i>Populus trichocarpa</i>	15, 13	20	15	Fair	Poor	On	Codominant at base	Preserve
15	Cottonwood	<i>Populus trichocarpa</i>	14	14	20	Fair	Fair	On	One-sided/shaded	Preserve
16	Cottonwood	<i>Populus trichocarpa</i>	28	28	25	Good	Good	On		Preserve
17	Sweet cherry	<i>Prunus avium</i>	13	13	15	Fair	Fair	On	Conflict with access road	Preserve
18	Cottonwood	<i>Populus trichocarpa</i>	13, 7	15	15	Fair	Fair	On	Grove, part shaded	Preserve
19	Cottonwood	<i>Populus trichocarpa</i>	13	13	15	Fair	Fair	On	Grove, part shaded	Preserve
20	Cottonwood	<i>Populus trichocarpa</i>	20	20	20	Fair	Fair	On	Grove, part shaded	Preserve
21	Cottonwood	<i>Populus trichocarpa</i>	18	18	20	Fair	Fair	On	Grove, part shaded	Preserve
22	Cottonwood	<i>Populus trichocarpa</i>	17	17	20	Fair	Fair	On	Grove, part shaded	Preserve
23	Cottonwood	<i>Populus trichocarpa</i>	17	17	15	Fair	Fair	On	Grove, part shaded	Preserve
24	Cottonwood	<i>Populus trichocarpa</i>	13	13	18	Fair	Poor	On	One-sided, previously shaded by adjacent tree that failed	Preserve
25	Cottonwood	<i>Populus trichocarpa</i>	20	20	15	Very Poor	Very Poor	On	Stem failure at 20', lower trunk still alive	Preserve
26	Cottonwood	<i>Populus trichocarpa</i>	14	14	15	Fair	Fair	On	One-sided	Preserve
27	Cottonwood	<i>Populus trichocarpa</i>	12	12	6	Very Poor	Very Poor	On	Stem failure at 18'	Preserve
28	Cottonwood	<i>Populus trichocarpa</i>	8	8	15	Poor	Poor	On	One-sided	Remove
29	Sweet cherry	<i>Prunus avium</i>	11	11	15	Good	Good	On	Non-native/nuisance, conflict with development	Remove
30	Douglas-fir	<i>Pseudotsuga menziesii</i>	15	15	15	Fair	Good	Off	Estimated diameter, 2' from fence, roots likely in conflict with development	Remove
31	Deodar cedar	<i>Cedrus deodara</i>	31	31	25	Fair	Fair	Off	Dead and damaged branches, 2' from fence, roots likely in conflict with development	Remove
32	Pine	<i>Pinus sp.</i>	12	12	10	Fair	Fair	On	50% live crown, conflict with development	Remove
33	Pine	<i>Pinus sp.</i>	9	9	5	Poor	Poor	On	Dead branches, low live crown ratio, conflict with development	Remove
34	Pine	<i>Pinus sp.</i>	8	8	3	Poor	Poor	On	Dead branches, low live crown ratio, conflict with development	Remove
35	Pine	<i>Pinus sp.</i>	8	8	6	Poor	Poor	On	Dead branches, low live crown ratio, conflict with development	Remove
36	Pine	<i>Pinus sp.</i>	10	10	8	Poor	Poor	On	Dead branches, low live crown ratio, conflict with development	Remove
37	Norway maple	<i>Acer platanoides</i>	16	16	20	Good	Fair	On	Shaded by pines, non-native, conflict with development	Remove
38	English hawthorn	<i>Crataegus monogyna</i>	9, 4	10	15	Fair	Fair	On	Nuisance species, conflict with development	Remove
39	Sweet cherry	<i>Prunus avium</i>	9	9	15	Good	Good	On	Nuisance species, conflict with development	Remove
40	Domestic apple	<i>Malus domestica</i>	12	12	12	Fair	Fair	On	Edible fruit tree	Remove
41	Sweet cherry	<i>Prunus avium</i>	8	8	9	Fair	Good	On	Nuisance species	Remove
42	Willow species	<i>Salix sp.</i>	6, 6, 6, 6, 6	15	10	Fair	Poor	On	Diameter estimated, thicket of mature sprouts, great habitat	Remove
43	Red alder	<i>Alnus rubra</i>	9, 9	13	12	Very Poor	Poor	On	1/2 dead, good habitat	Remove
44	Douglas-fir	<i>Pseudotsuga menziesii</i>	24	24	18	Good	Good	Off	Diameter estimated	Remove
45	Douglas-fir	<i>Pseudotsuga menziesii</i>	18	18	18	Good	Good	Off	Diameter estimated	Remove
46	Douglas-fir	<i>Pseudotsuga menziesii</i>	24	24	18	Good	Good	Off	Diameter estimated	Remove
47	Red alder	<i>Alnus rubra</i>	17, 9	19	18	Poor	Poor	On	Codominant with included bark at 3', dead top, good habitat	Remove



Attachment 1 - Tree Inventory - March 9 April 16, 2024  
Wilsonville Lamborghini Development

Tree Tag	Common Name	Scientific Name	DBH <sup>1</sup> (in)	Single DBH <sup>2</sup> (in)	C-Rad <sup>3</sup> (ft)	Health Condition <sup>4</sup>	Structural Condition <sup>4</sup>	Property Status <sup>5</sup>	Comments	Treatment
48	Red alder	<i>Alnus rubra</i>	15	15	18	Fair	Fair	On	In thicket of blackberry	Remove
49	Cottonwood	<i>Populus trichocarpa</i>	18	18	12	Good	Fair	On	One-sided	Remove
50	Cottonwood	<i>Populus trichocarpa</i>	28	28	15	Good	Good	On		Remove
51	Douglas-fir	<i>Pseudotsuga menziesii</i>	10	10	15	Fair	Fair	Off	Diameter estimated, part shaded in grove	Remove
52	Douglas-fir	<i>Pseudotsuga menziesii</i>	12	12	15	Fair	Fair	Off	Diameter estimated, part shaded in grove	Remove
53	Douglas-fir	<i>Pseudotsuga menziesii</i>	6	6	15	Fair	Fair	Off	Diameter estimated, part shaded in grove	Preserve
54	Douglas-fir	<i>Pseudotsuga menziesii</i>	14	14	15	Fair	Fair	Off	Diameter estimated, part shaded in grove	Preserve
55	Cottonwood	<i>Populus trichocarpa</i>	18	18	18	Fair	Fair	Off	Diameter estimated	Preserve
56	Douglas-fir	<i>Pseudotsuga menziesii</i>	18	18	15	Fair	Fair	Off	Diameter estimated, part shaded in grove	Preserve
57	Red oak	<i>Quercus rubra</i>	24	27	30	Good	Fair	Off	Arborist added to map, location approximate, roots would be impacted by development	Preserve
58	Red oak	<i>Quercus rubra</i>	29	29	30	Good	Good	Off	Arborist added to map, location approximate, roots would be impacted by development	Preserve
59	Black locust	<i>Robinia pseudoacacia</i>	10	10	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Preserve
60	Black locust	<i>Robinia pseudoacacia</i>	10	10	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Preserve
61	Black locust	<i>Robinia pseudoacacia</i>	10, 10, 10	17	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Preserve
62	Black locust	<i>Robinia pseudoacacia</i>	8	8	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Preserve
63	Black locust	<i>Robinia pseudoacacia</i>	12, 12	17	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Preserve
64	Black locust	<i>Robinia pseudoacacia</i>	14	14	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Preserve
65	Black locust	<i>Robinia pseudoacacia</i>	10	10	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Preserve

<sup>1</sup>DBH is the trunk diameter in inches measured per International Society of Arboriculture (ISA) standards.

<sup>2</sup>Single DBH is the trunk diameter of a multi-stem tree converted to a single number according to the following formula: square root of the sum of the squared diameter of each trunk at 4½ feet above mean ground level.

<sup>3</sup>C-Rad is the approximate crown radius in feet.

<sup>4</sup>Condition and Structure ratings range from dead, very poor, poor, fair, to good.

<sup>5</sup>Property status categorizes trees as on the property, off the property, or on the boundary between two properties. Boundary trees proposed for removal will require approval from the neighboring property.

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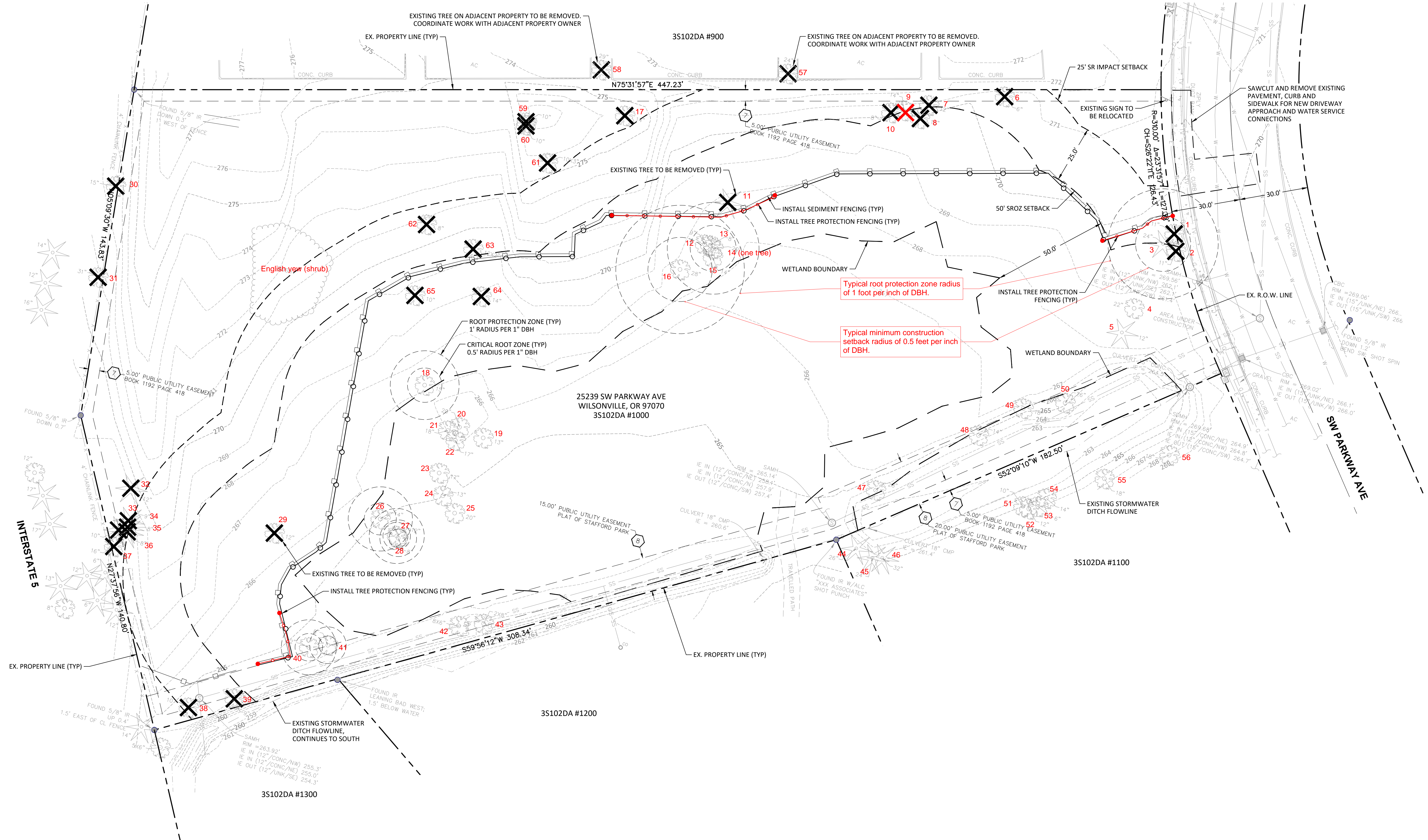


**TONKIN LAMBORGHINI**  
3S-1-32DA TAX LOT 1000, SW PARKWAY AVE  
WILSONVILLE, OR 97070

REVISIONS		
No.	Description	Date

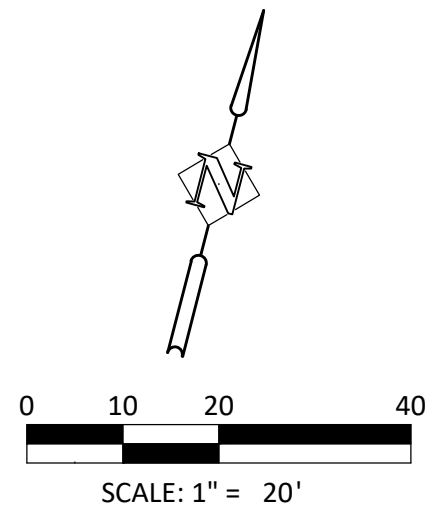
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CHECKED BY: HHPR  
JOB NO: 22-033  
DATE: 10/04/2024  
ISSUED FOR: PRELIMINARY  
SHEET TITLE  
EXISTING CONDITIONS & DEMO PLAN

SHEET NO.



**EXISTING CONDITIONS LEGEND:**

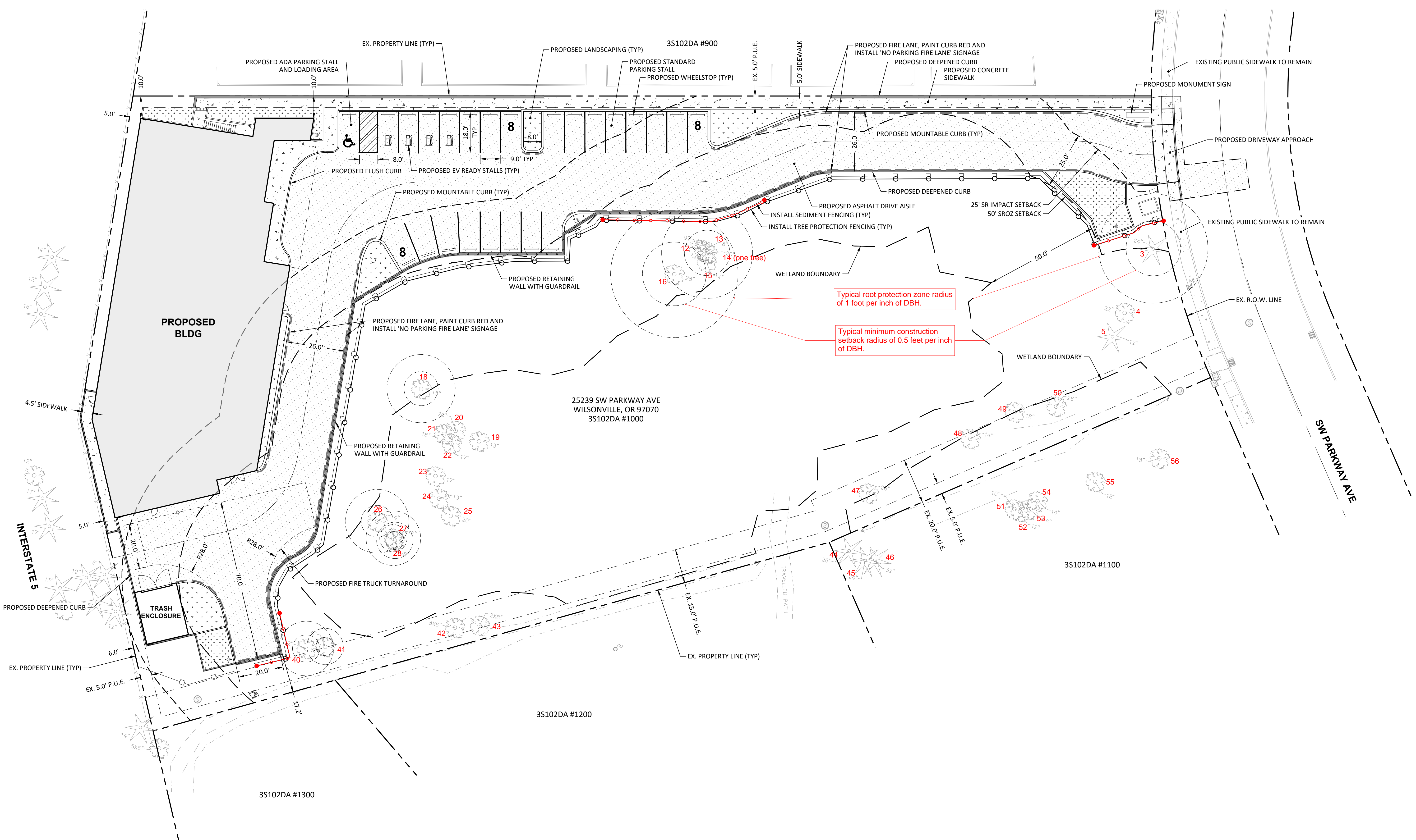
- FOUND MONUMENT AS NOTED
- CATCH BASIN CENTER
- STORM CULVERT
- STORM DRAIN MANHOLE
- CLEAN OUT
- SANITARY SEWER MANHOLE
- WATER VALVE
- ELECTRIC VAULT
- TELE RISER
- END LOCATES (SERVICE MAY CONTINUE)
- EXCEPTION NUMBER
- SIGN
- TEST PIT
- DECIDUOUS TREE
- EVERGREEN TREE
- SS UNDERGROUND SANITARY SEWER LINE
- SD UNDERGROUND STORM DRAIN LINE
- W UNDERGROUND WATER LINE
- G UNDERGROUND GAS LINE
- E UNDERGROUND POWER LINE
- T UNDERGROUND TELE-COM LINE
- TV UNDERGROUND CATV LINE
- CENTERLINE DITCH/FLOWLINE
- BUSH LINE
- FENCE AS NOTED
- EASEMENT LINE
- CONCRETE
- ASPHALT CONCRETE
- CONCRETE
- DOC. NO. DOCUMENT NUMBER, WASHINGTON COUNTY DEED RECORDS
- IR IRON ROD
- W/ WITH
- ALC ALUMINUM CAP
- UNK UNKNOWN
- CMP CORRUGATED METAL PIPE
- DELINEATED WETLAND BOUNDARY
- SROZ BOUNDARY (50' SETBACK)
- SROZ IMPACT AREA (25' SETBACK FROM SROZ)
- PROPOSED TREE PROTECTION FENCING
- PROPOSED EROSION CONTROL SEDIMENT FENCING
- REMOVE EXISTING TREE



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Righellis Inc.  
ENGINEERS ARCHITECTS PLANNERS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1111 www.hp.com 503.903.2117



- LEGEND:**
- EXISTING PROPERTY / RIGHT-OF-WAY LINE
  - - - EXISTING EASEMENT
  - - - DELINEATED WETLAND BOUNDARY
  - - - SROZ BOUNDARY (50' SETBACK)
  - - - SROZ IMPACT AREA (25' SETBACK FROM SROZ)
  - - - PROPOSED TREE PROTECTION FENCING
  - - - PROPOSED SEDIMENT FENCING
  - - - PROPOSED GUARDRAILING
  - [Pattern] PROPOSED STORM PLANTER
  - [Pattern] PROPOSED GENERAL LANDSCAPING
  - [Pattern] PROPOSED ASPHALT PAVEMENT
  - [Pattern] PROPOSED CONCRETE SIDEWALK

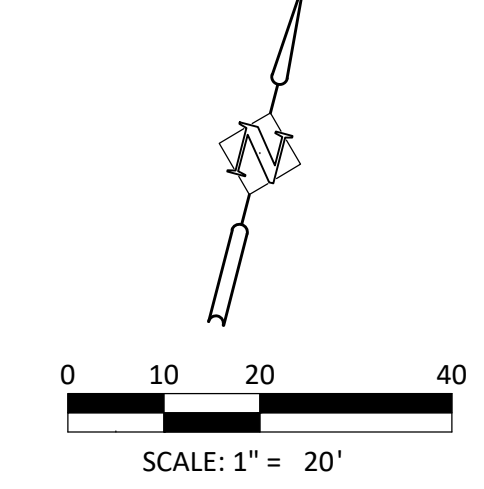
**TONKIN LAMBORGHINI**  
3S-1-32DA TAX LOT 1000, SW PARKWAY AVE  
WILSONVILLE, OR 97070

REVISIONS

No.	Description	Date

DRAWN BY: HHPR  
CHECKED BY: HHPR  
JOB NO: 22-033  
DATE: 10/04/2024  
ISSUED FOR: PRELIMINARY  
SHEET TITLE: PRELIMINARY CIVIL SITE PLAN

SHEET NO.



F:\01-Portland\ADC (Axis Design Group)\VDC-122 (Wilsonville Lamborghini)\VDC122-DWGS\Sheets\Sheet\_VDC122 - C-100 - SITE PLAN.dwg @Plot Date: Apr 18, 24 @ Time: 10:19 PM

***STOP!***  
***DO NOT MOVE THIS FENCE.***

**TREE PROTECTION ZONE**

Inside the fencing is a tree protection zone, not to be disturbed unless prior approval has been obtained from the project arborist.

For questions regarding tree protection please call the project arborist:  
Todd Prager & Associates, LLC  
todd@toddprager.com  
971.295.4835



## **Attachment 4**

### **Tree Protection Recommendations**

The following recommendations will help to ensure that the trees to be retained are adequately protected:

#### **Before Construction Begins**

1. **Notify all contractors of the tree protection procedures.** For successful tree protection on a construction site, all contractors must know and understand the goals of tree protection.
  - a. Hold a tree protection meeting with all contractors to explain the goals of tree protection.
  - b. Have all contractors sign memoranda of understanding regarding the goals of tree protection. The memoranda should include a penalty for violating the tree protection plan. The penalty should equal the appraised value of the tree(s) within the violated tree protection zone per the current Trunk Formula Method as outlined in the current edition of the *Guide for Plant Appraisal* plus any resulting fines by government agencies.
  - c. The penalty should be paid to the owner of the property.
2. **Fencing.**
  - a. Establish fencing around each tree or group of trees to be retained.
  - b. The fencing should be put in place before the ground is cleared to protect the trees and the soil around the trees from disturbance.
  - c. Fencing should be established by the project arborist based on the needs of the trees to be protected and to facilitate construction.
  - d. Fencing should consist of 3.5-foot-high hi-visibility mesh fencing secured to metal posts to prevent it from being moved by contractors, sagging, or falling down.
  - e. Fencing should remain in the position that is established by the project arborist and not be moved without approval from the project arborist until final project approval.
3. **Signage.**
  - a. All tree protection fencing should be provided with signage so that all contractors understand the purpose of the fencing.
  - b. Signage should be placed every 30 feet.
  - c. Signage should be weathered and secured to fencing.
  - d. Signage has been included in Attachment 3.

## During Construction

### 1. Protection Guidelines Within the Tree Protection Zones.

- a. No traffic should be allowed within the tree protection zones. This includes but is not limited to vehicle, heavy equipment, or even repeated foot traffic.
  - b. No storage of materials including but not limiting to soil, construction material, or waste from the site should be permitted within the tree protection zones. Waste includes but is not limited to concrete wash out, gasoline, diesel, paint, cleaner, thinners, etc.
  - c. Construction trailers should not to be parked/placed within the tree protection zones.
  - d. No vehicles should be allowed to park within the tree protection zones.
  - e. No activity should be allowed that will cause soil compaction within the tree protection zones.
2. The trees should be protected from any cutting, skinning or breaking of branches, trunks, or woody roots.
  3. The project arborist should be notified prior to the cutting of woody roots from trees that are to be retained to evaluate and oversee the proper cutting of roots with sharp cutting tools. Cut roots should be immediately covered with soil or mulch to prevent them from drying out.
  4. No grade changes should be allowed within the tree protection zones.
  5. Trees that have woody roots cut should be provided supplemental water during the summer months.
  6. Any necessary passage of utilities through the tree protection zones should be by means of tunneling under woody roots by hand digging or boring with oversight by the project arborist.
  7. Any deviation from the recommendations in this section should receive prior approval from the project arborist.

## After Construction

1. **Carefully landscape the areas within the tree protection zones.** Do not allow trenching for irrigation or other utilities within the tree protection zones.
2. **Carefully plant new plants within the tree protection zones.** Avoid cutting the woody roots of trees that are retained.
3. **Irrigation.** Do not install permanent irrigation within the tree protection zones unless it is drip irrigation to support a specific planting, or the irrigation is approved by the project arborist.
4. **Drainage.** Provide adequate drainage within the tree protection zones and do not alter soil hydrology significantly from existing conditions for the trees to be retained.
5. **Inspect the landscape for pests and disease.** Provide for the ongoing inspection and treatment of insect and disease populations that can damage the retained trees and plants.
6. **Fertilization.** The retained trees may need to be fertilized if recommended by the project arborist.
7. Any deviation from the recommendations in this section should receive prior approval from the project arborist.

## **Attachment 5**

### **Assumptions and Limiting Conditions**

1. Any legal description provided to the consultant is assumed to be correct. The site plans and construction information provided by Axis Design Group Architecture & Engineering, Inc. was the basis of the information provided in this report.
2. It is assumed that this property is not in violation of any codes, statutes, ordinances, or other governmental regulations.
3. The consultant is not responsible for information gathered from others involved in various activities pertaining to this project. Care has been taken to obtain information from reliable sources.
4. Loss or alteration of any part of this delivered report invalidates the entire report.
5. Drawings and information contained in this report may not be to scale and are intended to be used as display points of reference only.
6. The consultant's role is only to make recommendations. Inaction on the part of those receiving the report is not the responsibility of the consultant.
7. The purpose of this report is to:
  - a. Inventory existing trees at the Parkway Avenue project site. Assessment to include tree species, sizes, physical and structural conditions of the trees, treatment (remove/retain), and any additional necessary comments.
  - b. In coordination with the project team, identify the trees to be retained and removed. This may involve working with project planners, engineers, contractors, and others to identify design and construction techniques necessary to retain required trees.
  - c. Develop tree removal/protection recommendations in accordance with the City of Wilsonville Code, Chapter 4, Section 4.600.



March 26, 2024

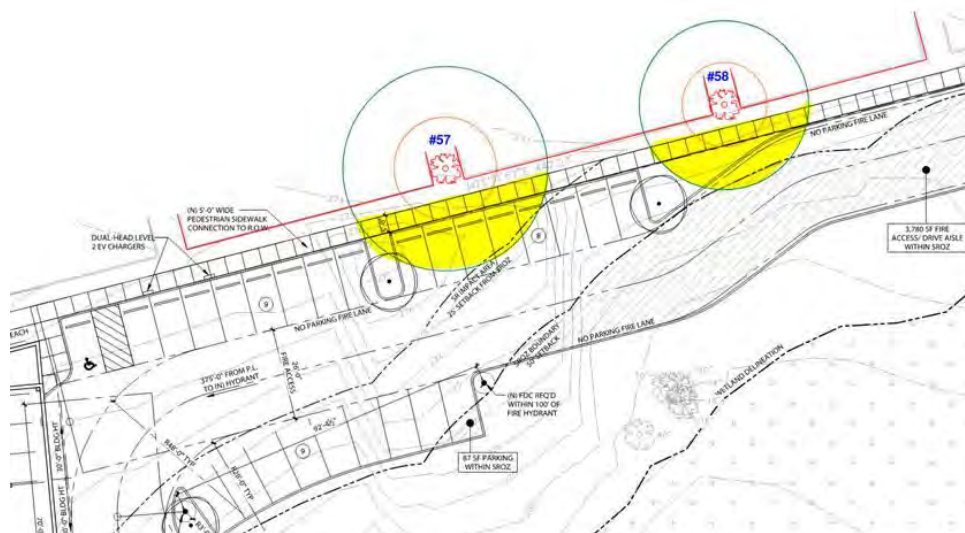
Casa Tonchinni LLC  
Bradley Tonkin et al.  
25300 SW Parkway Ave.  
Portland, OR 97070

Re: SW Parkway Ave. (R585263) Development and Tree Replacement

To whom it may concern:

I am the Managing Member of 25195 SW PARKWAY LLC, the owner of the property located at 25195 SW Parkway Ave., Wilsonville, Oregon (R585254), which is the property immediately to the north of R585263 (the development site owned by Casa Tonchinni LLC).

With regards to the two large trees at our south property line (#57 & #58 on the graphic below), which overhang the development site, I hereby give permission for Casa Tonchinni LLC to remove the indicated trees and replace them with new smaller trees of a similar type, at their expense.

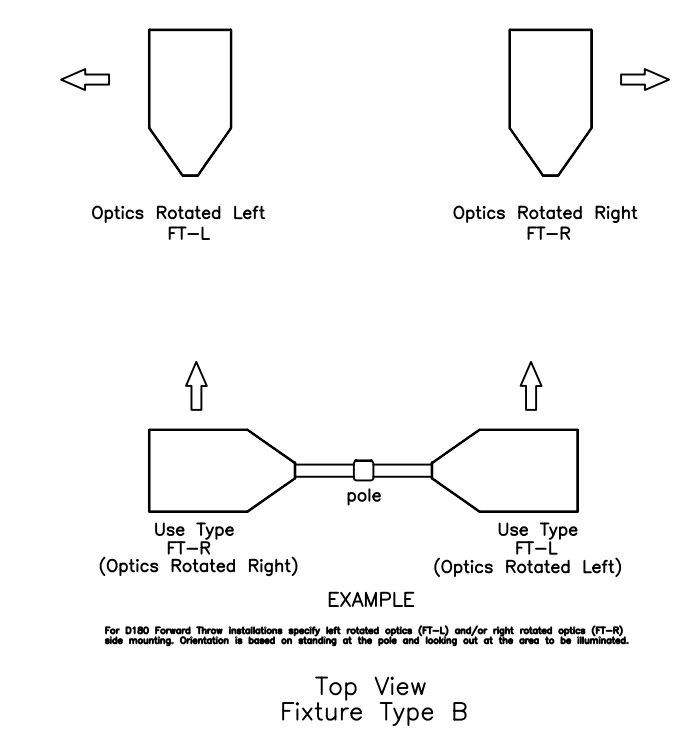


Please feel free to reach out to me at the phone number below if anything further is needed from the ownership entity at this time.

Sincerely,

Matthew Schweitzer  
Managing Member of 10500 SW CASCADE LLC  
503-381-3134 [matt@northrimpx.com](mailto:matt@northrimpx.com)

MS:ch  
CC: Joe Kappler, Macadam Forbes



Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ALL CALCS @ 4' ABOVE GRADE	Illuminance	Fc	0.58	33.3	0.0	N.A.	N.A.
PROPERTY LINE	Illuminance	Fc	0.13	1.5	0.0	N.A.	N.A.
PROPERTY LINE AGAINST BUILDING	Illuminance	Fc	2.84	8.2	0.0	N.A.	N.A.
WALKWAY BEHIND BLDG	Illuminance	Fc	5.76	11.3	0.0	N.A.	N.A.
INTERIOR LDT	Illuminance	Fc	3.37	33.3	0.0	N.A.	N.A.
WETLANDS AREA	Illuminance	Fc	0.00	0.1	0.0	N.A.	N.A.

Symbol	Qty	Label	Arrangement	Description	Mounting Height	LLD	LLF	Arr. Lum. Lumens	Arr. Watts
—	1	A	Single	MRS-LED-09L-SIL-FT-50-70CRI-IL-SINGLE	22'	1.000	1.000	6024	63
+	3	B	D180° 2RTD	MRS-LED-09L-SIL-(1)FT-L;(1)FT-R-50-70CRI-IL-D180RDT	22'	1.000	1.000	12048	126
—	1	C	Single	MRS-LED-06L-SIL-4-50-70CRI-IL-SINGLE	22'	1.000	1.000	3682	39
⊕	10	S	Single	LAD4-LED-24L-40-WF-TR4R-SF-HAZ	14'	1.000	1.000	2264	22.2
+	6	W	Single	XWS-LED-08L-SIL-FT-50-70CRI	14'	1.000	1.000	8207	61
+	1	W1	Single	XWS-LED-08L-SIL-FT-50-70CRI	8'	1.000	1.000	8207	61
+	7	W2	Single	XWS-LED-05L-SIL-2-50-70CRI	14'	1.000	1.000	4970	35

PHOTOMETRIC EVALUATION  
NOT FOR CONSTRUCTION

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with the Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted. Fixture nomenclature noted does not include mounting hardware or poles. This drawing is for photometric evaluation purposes only and should not be used as a construction document or as a final document for ordering product.

Total Project Watts  
Total Watts = 1374

TONKIN LAMBORGHINI  
WILSONVILLE, OR

LIGHTING PROPOSAL LD-159992-1

BY:AK DATE:4/10/24 REV:4/17/24 SHEET 1 OF 1

SCALE: 1"=30'



# 6" Architectural Downlight (LAD6)

## New Construction



OVERVIEW	
Lumen Package (lm)	1,100 - 4,200
Wattage Range (W)	14 - 42
Efficacy Range (LPW)	92 - 116
Weight lbs (kg)	9 (4.1)

### QUICK LINKS

- Ordering Guide
- Performance
- Photometrics
- Dimensions

### FEATURES & SPECIFICATIONS

#### Optical System

- LED source provides superior lumen output with maximum visual comfort.
- Tailored spot, narrow flood, flood and wide flood beam optics designed for glare free illumination.
- Choice of flanged or flangeless spun reflector utilizing heavy gauge highly reflective diffuse anodized aluminum to deliver low glare, even illumination of the space.
- Reflectors are retained with three retention clips holding the flange tight to the finished ceiling surface.
- Minimum CRI of 80.

#### Electrical

- High-performance driver features over-voltage, under voltage, short-circuit and over temperature protection.
- 0 - 10V dimming (1% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz.
- L70 Calculated Life: > 50k Hours projected @ 25°C per IESNA TM-21-11.
- Total harmonic distortion: <20%.
- Power factor: >.90.
- Input power stays constant over life.
- Driver can be accessed from below plenum for servicing.

- High-efficacy LEDs with integrated circuit board mount directly to an extruded aluminum heatsink to maximize heat dissipation and promote long life.
- Remote Emergency Battery (120-277V) is available to meet critical life safety lighting requirements. The 90-minute battery provides 7.8watts constant power to the LED system, ensuring code compliance. To calculate light output during emergency mode(EM battery 7.8 watts x LPW of fixture being powered - see spec sheet). Detailed wiring diagram and installation instructions can be located on the website..

#### Controls

- 0 - 10V dimming standard.
- Compatible with most 0-10V dimmers
- Compatible with LSI AirLink® Blue for networked controls
- See controls table for more information

#### New Construction Housing/ Plaster Frame

- Designed for use in non-insulated ceiling where insulation must be kept a minimum of 3" from the fixture.
- Junction box listed for (8) #12 AWG (four in, four out) 90°C conductors and thru branch wiring.
- Junction box contains (5) 1/2" knockouts with trade pry-out slots and (4) Romex cable clamp knockouts.

- Accommodates ceiling thickness up to 1.5".
- Plaster frame with collar is designed with 20-gauge colled rolled steel, black-painted
- Universal mounting brackets provide up to 5" vertical adjustment and accepts 1/2" EMT conduit.
- Additional channel bar, nailer bar and suspended ceiling accessories available. See accessories.
- Frame kit can be ordered separately for new construction build.

#### Installation

- Additional channel bar, nailer bar and suspended ceiling accessories available to accommodate a variety of ceiling types.

#### Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to <https://www.lsicorp.com/resources/terms-conditions-warranty/> for more information.

#### Listings

- cETLus Listed to UL 1598 and UL 8750 standards for 25°C Ambient applications
- RoHS Compliant.
- EMI/RFI compliant with FCC 47CFR Part 15 Class B Consumer limits and Class A Commercial & Industrial.
- Damp location rated.
- Wet location rated with regressed lens.
- Title 24 Compliant.

# 6" Architectural Downlight (LAD6) New Construction

Type: Item 2.

 Have questions? Call us at (800) 436-7800

## ORDERING GUIDE

[Back to Quick Links](#)

TYPICAL ORDER EXAMPLE: LAD6 LED 25L UNV DIM1 35 NF TR6R HAZ							
Prefix	Light Source	Lumen Package	Voltage	Driver	Color Temperature	CRI <sup>2</sup>	Beam Optics <sup>3</sup>
LAD6 - 6" New Construction <sup>1</sup>	LED	14L - 1,400 Lumens 25L - 2,500 Lumens 32L - 3200 Lumens 41L - 4100 Lumens	UNV - 120 - 277V	DIM1 - Dims to 1% (0-10V dimming)	27 - 2700K 30 - 3000K 35 - 3500K 40 - 4000K	Blank - 80 min.	SP - Spot NF - Narrow Flood FL - Flood WF - Wide Flood
		Reflector	Finish				
Self-flanged	TR6R - Open Reflector	SF HAZ - Haze semi- diffused SF SPC - Specular clear					
	TR6RWW - Wall Wash <sup>4</sup>	SF HAZ - Haze semi-diffused					
Flangeless (Ships standard w/ white plastic trim ring)	TR6R - Open Reflector	HAZ - Haze semi-diffused, white trim ring SPC - Specular clear, white trim ring					
	TR6RWW - Wall Wash <sup>4</sup>	HAZ - Haze semi-diffused wall wash reflector, white trim ring					
	TR6B - Baffle	HAZ - Haze semi-diffused Reflector				WH - White baffle and white trim ring	
						BLK - Black Baffle and white trim ring	
	TR6BL - Baffle w/ Regressed Lens <sup>6</sup>	HAZ - Haze semi-diffused reflector				WH - White baffle and white trim ring	
		SPC - Specular clear				BLK - Black Baffle and white trim ring	
TR6RL - Regressed Lens <sup>6</sup>	HAZ - Haze semi-diffused reflector w/ specular clear regressed lens and white trim ring						
	SPC - Specular clear reflector w/ specular clear regressed lens and white trim ring						



Need more information?  
Click here for our glossary

Have additional questions?  
Call us at (800) 436-7800



## ACCESSORY ORDERING INFORMATION

Part Number	Description
616105	WH - White metal trim ring (only compatible w/ flangeless trims)
205599	C27 - 27" channel bars (pair)
287522	C52 - 52" channel bars (pair)
345989	NB - Nailer bar kt (set of 4)
234808	SCIK - Suspended ceiling installation kit (set of 4 channel bars & 4 T-grid clips)
647671	BL1 - Black metal trim ring
778196	Remote Mount Battery
786277	Remote Battery with Grid Mount Kit <sup>7</sup>
687986	New Construction Frame Kit-1 pack
791427	New Construction Frame Kit-2 pack
791429	New Construction Frame Kit-1 pack with Self-Diagnostic EM
791430	New Construction Frame Kit-2 pack with Self-Diagnostic EM
791431	T-Grid Bracket for EM <sup>8</sup>

1 Housing can ship ahead of the light engine and reflector.

2 90 CRI requires 55 day leadtime & 100 MOQ; Consult Factory.

3 Refer to IES Files for Beam Spread.

4 Self-flanged TR6RWW wall wash reflector comes with 40° integrated optic; additional beam optics not compatible.

5 Flangeless TR6RFL frosted floating lens comes with integrated white metal trim; accessory white metal trim ring not required.

6 Regressed lens trims are wet location listed. All other trims are rated for damp location.

7 For complete fixture with remote mount EM for T-Grid install, order remote battery with grid mount kit.

8 For new construction frame kit with EM for T-Grid install, order T-Grid bracket separately.

# 6" Architectural Downlight (LAD6) New Construction

Type: Item 2.

 Have questions? Call us at (800) 436-7800

## PERFORMANCE

[Back to Quick Links](#)

DELIVERED LUMENS*										
Lumen Package	Distribution	2700K CCT		3000K CCT		3500K CCT		4000K CCT		Wattage
		Delivered Lumens	Efficacy	Delivered Lumens	Efficacy	Delivered Lumens	Efficacy	Delivered Lumens	Efficacy	
14L	SP	1184	84.6	1184	84.6	1467	104.8	1467	104.8	14
	NF	1156	82.6	1156	82.6	1432	102.3	1432	102.3	
	FL	1152	82.3	1152	82.3	1428	102.0	1428	102.0	
	WF	1079	77.1	1079	77.1	1337	95.5	1337	95.5	
25L	SP	2066	93.9	2066	93.9	2560	116.4	2560	116.4	22
	NF	2017	91.7	2017	91.7	2499	113.6	2499	113.6	
	FL	2011	91.4	2011	91.4	2492	113.3	2492	113.3	
	WF	1883	85.6	1883	85.6	2333	106.0	2333	106.0	
32L	SP	2665	83.3	2665	83.3	3302	103.2	3302	103.2	32
	NF	2602	81.3	2602	81.3	3224	100.8	3224	100.8	
	FL	2594	81.1	2594	81.1	3215	100.5	3215	100.5	
	WF	2429	75.9	2429	75.9	3010	94.1	3010	94.1	
41L	SP	3409	81.2	3409	81.2	4224	100.6	4224	100.6	42
	NF	3328	79.2	3328	79.2	4123	98.2	4123	98.2	
	FL	3318	79.0	3318	79.0	4112	97.9	4112	97.9	
	WF	3107	74.0	3107	74.0	3849	91.6	3849	91.6	

\*Electrical Data at 25C (77F)/ Actual Wattage may differ +/-10%

ELECTRICAL DATA (AMPS)*				
Lumen Package	120V	208V	240V	277V
14L	0.12	0.07	0.06	0.05
25L	0.18	0.11	0.09	0.08
32L	0.27	0.15	0.13	0.12
41L	0.35	0.20	0.18	0.15

\*LED Chips are frequently updated therefore values may change.  
Data is based on Haze Reflector.



# 6" Architectural Downlight (LAD6) New Construction

Type: Item 2.

 Have questions? Call us at (800) 436-7800

## PHOTOMETRICS

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Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

See the individual product page on <https://www.lsicorp.com/> for detailed photometric data.

### LAD6-LED-25L-35-SP-TR6R-SF-HAZ

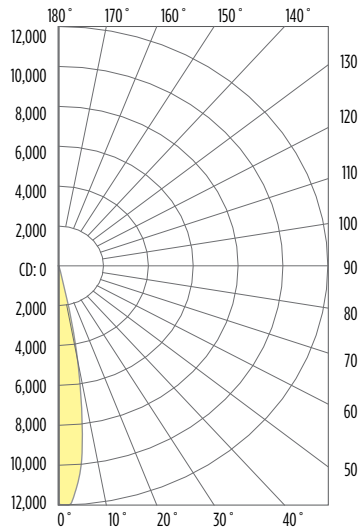
Lumens: 2,560

Watts: 22.2

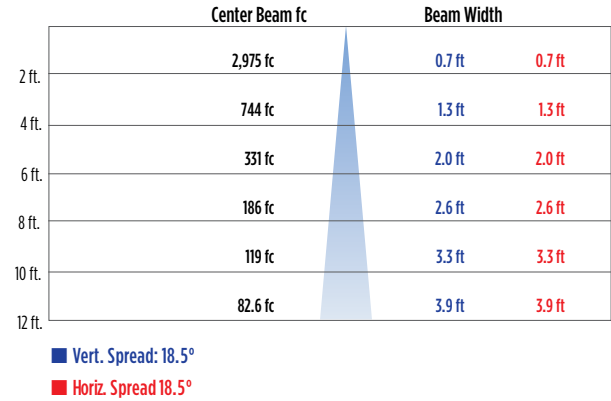
Efficacy: 115

ZONAL LUMEN SUMMARY			CANDELA TABLE	
Zone	Lumens	%Fixture	Degree Vertical	Candela
0-10	797	31.2%	0	11,901
10-20	766	29.9%	5	10,123
20-30	611	23.9%	10	5,266
30-40	315	12.3%	15	2,578
40-50	51	2.0%	20	1,645
50-60	14	0.5%	25	1,309
60-70	3	0.1%	30	1,091
70-80	1	0.0%	35	426
80-90	1	0.0%	40	128
90-100	0	0.0%	45	60
0-180	2,560	100.0%	50	32
			55	14
			60	6
			65	3
			70	1
			75	1
			80	0
			85	1
			90	0

Polar Candela Distribution



Illuminance at a Distance



### LAD6-LED-25L-35-NF-TR6R-SF-HAZ

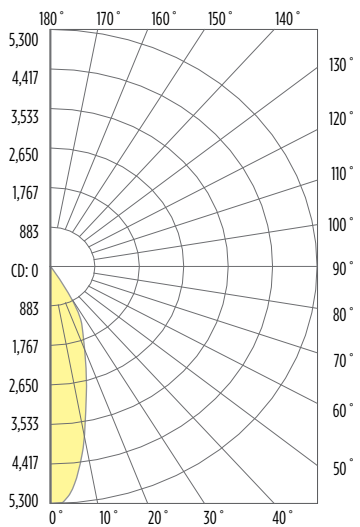
Lumens: 2,499

Watts: 22.2

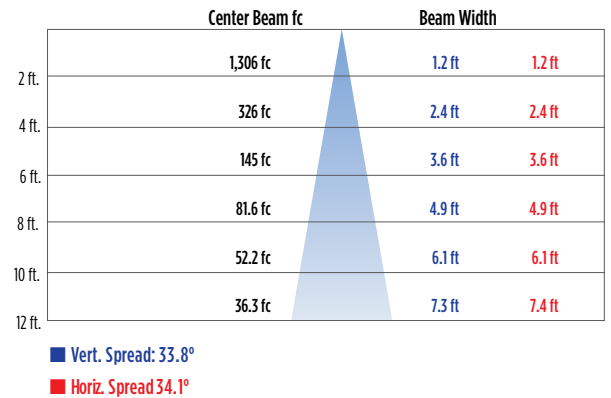
Efficacy: 113

ZONAL LUMEN SUMMARY			CANDELA TABLE	
Zone	Lumens	%Fixture	Degree Vertical	Candela
0-10	445	17.8%	0	5,233
10-20	831	33.2%	5	4,982
20-30	755	30.2%	10	4,023
30-40	375	15.0%	15	2,984
40-50	71	2.9%	20	2,165
50-60	17	0.7%	25	1,607
60-70	4	0.1%	30	1,246
70-80	1	0.1%	35	493
80-90	1	0.0%	40	180
90-100	0	0.0%	45	82
0-180	2,499	100.0%	50	40
			55	16
			60	7
			65	3
			70	2
			75	1
			80	1
			85	0
			90	0

Polar Candela Distribution



Illuminance at a Distance



# 6" Architectural Downlight (LAD6) New Construction

Type: Item 2.

 Have questions? Call us at (800) 436-7800

## PHOTOMETRICS

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### LAD6-LED-25L-35-FL-TR6R-SF-HAZ

Lumens: 2,492

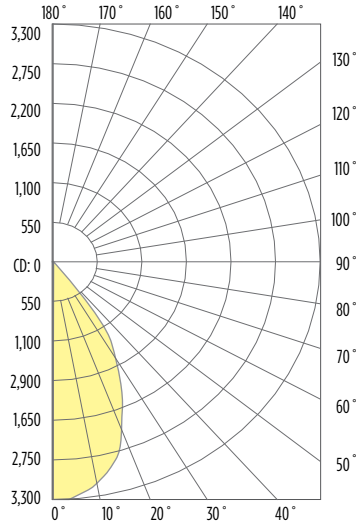
Watts: 22.2

Efficacy: 112

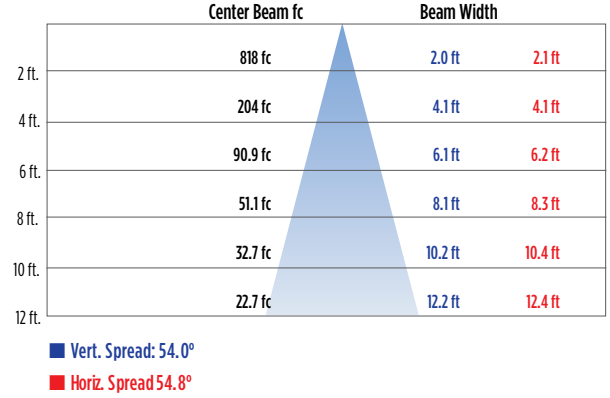
ZONAL LUMEN SUMMARY		
Zone	Lumens	%Fixture
0-10	304	12.2%
10-20	773	31.0%
20-30	8475	34.0%
30-40	443	17.8%
40-50	99	4.0%
50-60	19	0.8%
60-70	4	0.2%
70-80	2	0.1%
80-90	1	0.0%
90-100	0	0.0%
0-180	2,492	100.0%

CANDELA TABLE	
Degree Vertical	Candela
0	3,271
5	3,236
10	3,071
15	2,780
20	2,315
25	1,812
30	1,415
35	624
40	257
45	120
50	52
55	18
60	7
65	4
70	2
75	1
80	1
85	0
90	0

Polar Candela Distribution



Illuminance at a Distance



### LAD6-LED-25L-35-WF-TR6R-SF-HAZ

Lumens: 2,333

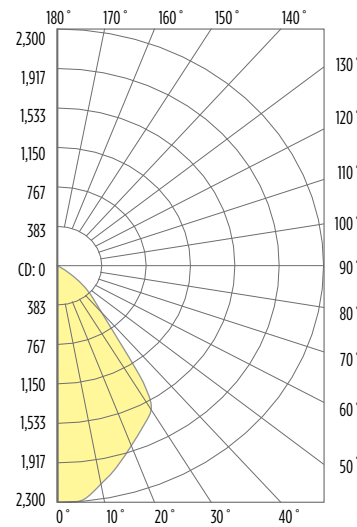
Watts: 22.2

Efficacy: 105

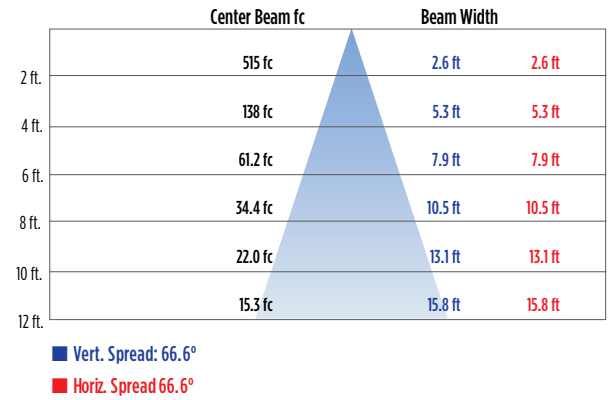
ZONAL LUMEN SUMMARY		
Zone	Lumens	%Fixture
0-10	237	10.5%
10-20	617	27.2%
20-30	722	31.9%
30-40	405	17.9%
40-50	219	9.7%
50-60	53	2.3%
60-70	9	0.4%
70-80	2	0.1%
80-90	0	0.0%
90-100	0	0.0%
0-180	2,264	100.0%

CANDELA TABLE	
Degree Vertical	Candela
0	3,826
5	3,844
10	3,654
15	3,182
20	2,513
25	1,770
30	852
35	391
40	206
45	104
50	45
55	17
60	6
65	3
70	2
75	1
80	1
85	0
90	0

Polar Candela Distribution



Illuminance at a Distance



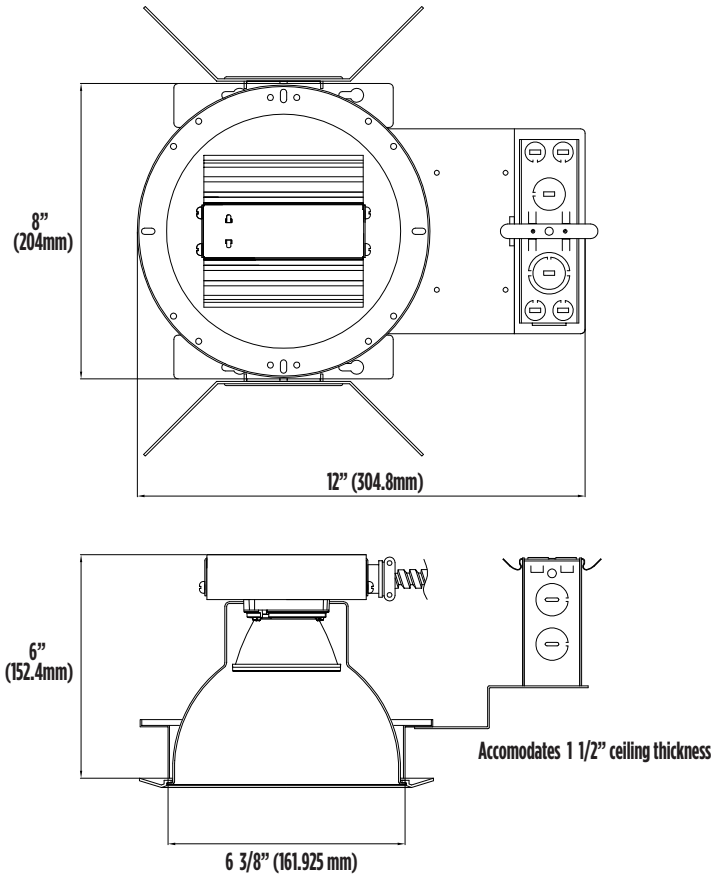
# 6" Architectural Downlight (LAD6) New Construction

 Have questions? Call us at (800) 436-7800

Type: Item 2.

## PRODUCT DIMENSIONS

[Back to Quick Links](#)



## 6" RECESSED DOWNLIGHT REFLECTORS

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### TR6R - Open Reflector

Self-Flange or Flangeless  
HAZ - Haze semi-diffused  
SPC - Specular clear

### TR6B - Baffle

Flangeless  
HAZ - Haze semi-diffused reflector  
Choice of white or black baffle

### TR6RL - Regressed Lens w/ Specular Clear Reflector

Flangeless  
HAZ - Haze semi-diffused  
SPC - Specular clear  
Wet Location Listed



### TR6BL - Baffle w/ Regressed Lens

Flangeless  
HAZ - Haze semi-diffused  
SPC - Specular clear  
Choice of white or black baffle  
Wet Location listed



Catalog #: \_\_\_\_\_

Project: \_\_\_\_\_

Prepared By: \_\_\_\_\_

Date: \_\_\_\_\_

Item 2.

# Mirada Small Area (MRS)

## Turtle friendly LED Area Light



IP66 IK08



### OVERVIEW

Lumen Package	2,000 - 4,000
Wattage Range	36 - 93
Efficacy Range (LPW)	39 - 73
Fixture Weight lbs (kg)	20 (9.1)

### QUICK LINKS

[Ordering Guide](#)
[Performance](#)
[Photometrics](#)
[Dimensions](#)

## FEATURES & SPECIFICATIONS

### Construction

- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 27 lbs in carton.

### Optical System

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated seal.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in distribution types 2, 3, 5W, and FT.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in narrow band amber with peak intensity at 596nm.
- Integral louver (IL) and integral half louver (IH) options available for enhanced backlight control.
- External shielding available for blocking visibility from any side of the luminaire.

### Electrical

- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
  - 0-10V dimming (10% - 100%) standard.
  - Standard Universal Voltage (120-277 VAC) Input 50/60 Hz or optional High Voltage (347-480 VAC).
  - Total harmonic distortion: <20%
  - Operating temperature: -40°C to +50°C (-40°F to +122°F).
  - Power factor: >.90
  - Input power stays constant over life.
  - Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
  - LEDs mounted to metal-core circuit board to maximize heat dissipation
  - Driver is fully encased in potting material for moisture resistance and complies with FCC standards. Driver and key electronic components can easily be accessed.
- ### Controls
- Optional integral passive infrared Bluetooth™ motion and photocell sensor. Fixtures operate independently and can be commissioned via iOS or Android configuration app.
  - LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7.

### Installation

- Designed to mount to square or round

poles.

- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment.
- Included terminal block accepts up to 12 ga. wire.
- Utilizes LSI's traditional B3 drill pattern.

### Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to <https://www.lsicorp.com/resources/terms-conditions-warranty/> for more information.

### Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant.
- Suitable for wet locations.
- IP66 rated Luminaire per IEC 60598-1.
- 3G rated for ANSI C136.31 high vibration applications are qualified.
- IK08 rated luminaire per IEC 66262 mechanical impact code.

# Mirada Small Area Light (MRS)

Have questions? Call us at (800) 436-7800

Type: Item 2.

## ORDERING GUIDE

[Back to Quick Links](#)

### TYPICAL ORDER EXAMPLE: MRS LED 4L SIL FT L UNV DIM AMT ALBCS1 BLK IH

Prefix	Light Source	Lumen Package	Lens	Distribution	Orientation <sup>2</sup>	Voltage	Driver
MRS - Mirada Small Area Light	LED	2L - 2,000 lms 4L - 4,000 lms Custom Lumen Packages <sup>1</sup>	SIL - Silicone	2 - Type 2 3 - Type 3 5W - Type 5 Wide FT - Forward Throw	(blank) - standard L - Optics rotated left 90° R - Optics rotated right 90°	UNV - Universal Voltage (120-277V) HV - High Voltage (347-480V)	DIM - 0-10V Dimming (0-10%)

Color Temp	Controls (Choose One)	Finish	Options
AMT - Narrow Band Amber	<p>(Blank) - None</p> <p><b>Wireless Controls System</b>                      ALSC - AirLink Synapse Control System                      ALSCS2 - AirLink Synapse Control System with 12-20' MH Motion Sensor                      ALSCS4 - AirLink Synapse Control System with 20-40' MH Motion Sensor                      ALBCS1 - AirLink Blue Wireless Motion &amp; Photo Sensor Controller (8-24' MH)                      ALBCS2 - AirLink Blue Wireless Motion &amp; Photo Sensor Controller (25-40' MH)</p> <p><b>Stand-Alone Controls</b>                      EXT - 0-10v Dimming leads extended to housing exterior                      CR7P - 7 Pin Control Receptacle ANSI C136.41<sup>3</sup>                      IMSBTL1 - Integral Bluetooth™ Motion and Photocell Sensor (8-24' MH)<sup>4</sup>                      IMSBTL2 - Integral Bluetooth™ Motion and Photocell Sensor (25-40' MH)<sup>4</sup></p>	<p>BLK - Black                      BRZ - Dark Bronze                      GMG - Gun Metal Gray                      GPT - Graphite                      MSV - Metallic Silver                      PLP - Platinum Plus                      SVG - Satin Verde Green                      WHT - White</p>	<p>(Blank) - None</p> <p>IH - Integral Half Louver (Moderate Spill Light Cutoff)<sup>2</sup>                      IL - Integral Louver (Sharp Spill Light Cutoff)<sup>2</sup></p>



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### Accessory Ordering Information<sup>5</sup>

CONTROLS ACCESSORIES	
Description	Order Number
Twist Lock Photocell (120V) for use with CR7P	122514
Twist Lock Photocell (208-277) for use with CR7P	122515
Twist Lock Photocell (347V) for use with CR7P	122516
Twist Lock Photocell (480V) for use with CR7P	1225180
AirLink 5 Pin Twist Lock Controller	661409
AirLink 7 Pin Twist Lock Controller	661410
Shorting Cap for use with CR7P	149328

SHIELDING OPTIONS	
Description	Order Number
Mirada Small	<a href="#">See Shielding Guide</a>
Mirada Medium	
Mirada Large	
Zone Medium	
Zone Large	
Slice Medium	

1. Custom lumen and wattage packages available, consult factory. Values are within industry standard tolerances but not DLC listed.
2. Not available on "Type 5W" distribution.
3. Control device or shorting cap must be ordered separately. See Accessory Ordering Information.
4. IMSBT is field configurable via the LSI app that can be downloaded from your smartphone's native app store.
5. Accessories are shipped separately and field installed.
6. "CLR" denotes finish. See Finish options.

## ACCESSORIES

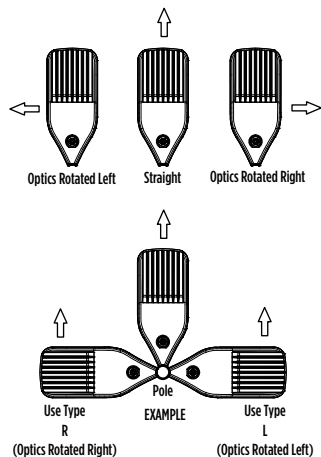
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MOUNTING ACCESSORIES		SHIELDING, POLES & MISC. ACCESSORIES			
Side Arm	<b>Universal Mounting Bracket</b> Mounts to $\geq 3"$ square or round (tapered/straight) poles with (2) mounting hole spaces between 3.5" to 5"  <b>Part Number: BKA UMB CLR</b>		<b>Integral Louver</b> Field Install Integral Louver provides maximum backlight control by shielding each individual row of LEDs  <b>Part Number: 763445</b>		
	<b>Quick Mount Plate</b> True one person installation to existing/new construction poles with hole spaces between 2.4 to 4.6"  <b>Part Number: BKS POM B3B5 XX CLR</b>		<b>Integral Half Louver</b> Field Install Integral Half Louver provides great backlight control without impacting front side distribution.  <b>Part Number: 763446</b>		
	<b>15° Tilt Quick Mount Plate</b> True one person installation to existing/new construction poles with hole spaces between 2.4 to 4.6"  <b>Part Number: BKS PQ15 B3B5 XX CLR</b>		<b>External Shield</b> External shield blocks view of light source from anyside of luminaire, additional shielding configurations available  <b>Part Number: 783607BLK (3") / 776538BLK (6")</b>		
Tenon / Slipfitter	<b>Adjustable Slipfitter</b> Mounts onto a 2" (51mm) IP, 2.375" (60mm) O.D. tenon and provides 180° of tilt (max 45° above horizontal)  <b>Part Number: BKA ASF CLR</b>		<b>Poles</b>	<b>Square Poles</b> 14 - 39' steel and aluminum poles in 4", 5" and 6" sizes for retrofit and new construction  <b>Part Number: 45Q/55Q/65Q</b>	
	<b>Square Tenon Top</b> Mounts onto a 2" (51mm) IP, 2.375" (60mm) O.D. tenon and allows for mounting up to 4 luminaires  <b>Part Number: BKA XNM *</b>			<b>Round Poles</b> 10 - 30' steel and aluminum poles in 4" and 5" sizes for retrofit and new construction  <b>Part Number: 4RP/5RP</b>	
	<b>Square Internal Slipfitter</b> Mounts inside 4" or 5" square pole and allows for mounting up to 4 luminaires  <b>Part Number: BKA X_ISF * CLR</b>			<b>Tapered Poles</b> 20' - 39' steel and aluminum poles for retrofit and new construction  <b>Part Number: RTP</b>	
Wall Mount / Wood Pole	<b>Wall Mount Bracket</b> Mounts onto vertical wall surface ( hardware/anchors not included)  <b>Part Number: BKS XBO WM CLR</b>		<b>Misc.</b>	<b>Bird Spikes</b> 10' Linear Bird Spike Kit, 4' recommended per luminaire, includes silicone adhesive and application tool  <b>Part Number: 736795</b>	
	<b>Wood Pole Bracket</b> Mounts onto wooden poles (6" minimum OD, hardware/anchors not included)  <b>Part Number: BKS XBO WP CLR</b>				

Replace CLR with paint finish description  
 Replace XX with SQ for square pole or RD for round pole ( $\geq 3"$  OD)  
 Replace \* with S (Single), D180 (Double @180°), D90 (Double @90°), T90 (Triple), Q90 (Quad)  
 Replace \_ with 4 (4" square pole) or 5 (5" square pole)

## OPTICS ROTATION

Top View



## ACCESSORIES/OPTIONS

### Integral Louver (IL) and House-Side Shield (IH)

Integral louver (IL) and half louver (IH) accessory shields available for improved backlight control without sacrificing street side performance. LSI's Integral Louver (IL) and Integral House-Side Shield (IH) options deliver backlight control that significantly reduces spill light behind the poles for applications with pole locations close to adjacent properties. The design maximizes forward reflected light while reducing glare, maintaining the optical distribution selected, and most importantly eliminating light trespass. Both options rotate with the optical distribution.

Luminaire Shown with Integral Louver (IL)



Luminaire Shown with IMSBTL Option



### 7 Pin Photoelectric Control

7-pin ANSI C136.41-2013 control receptacle option available for twist lock photocontrols or wireless control modules. Control accessories sold separately. Dimming leads from the receptacle will be connected to the driver dimming leads (Consult factory for alternate wiring).



# Mirada Small Area Light (MRS)

 Have questions? Call us at (800) 436-7800

Type: Item 2.

## PERFORMANCE

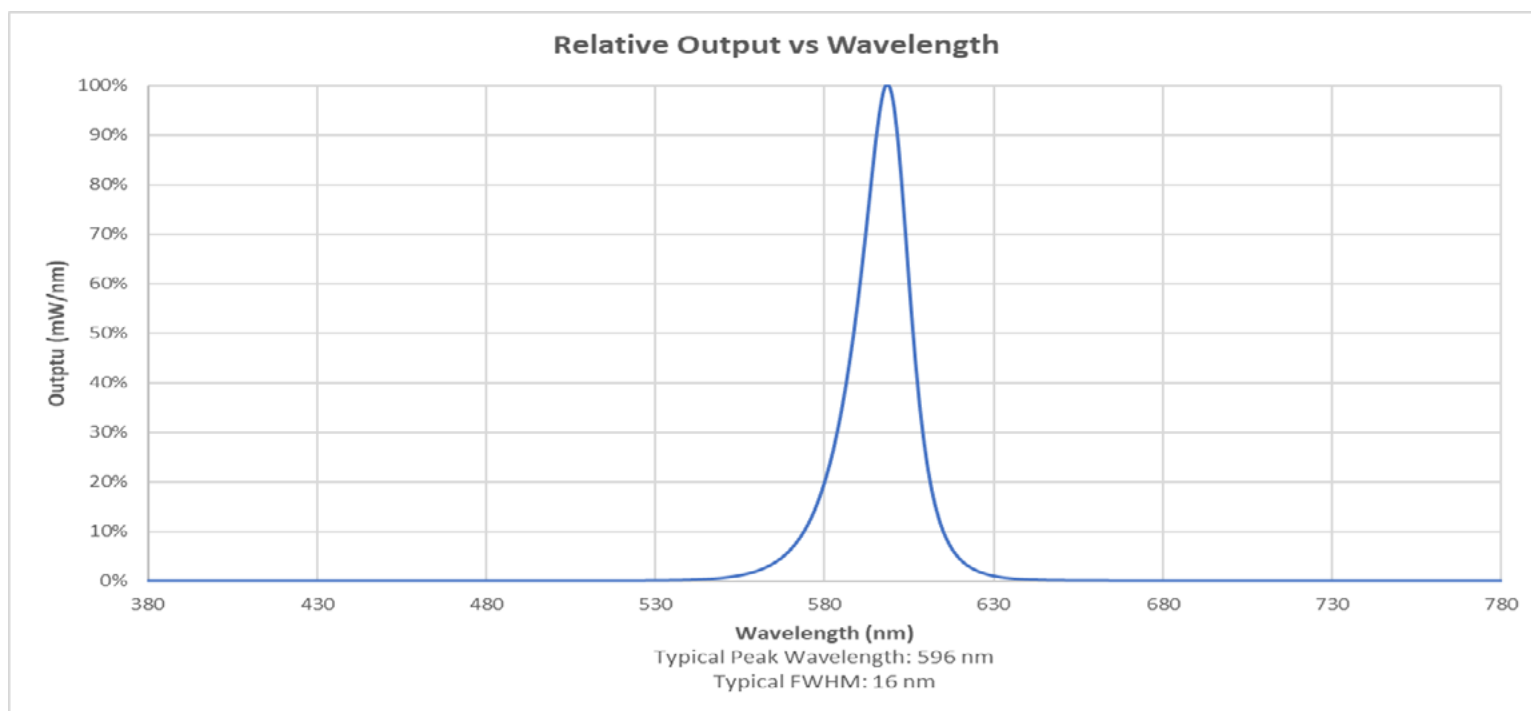
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DELIVERED LUMENS*					
Lumen Package	Distribution	Narrow Band Amber			Wattage
		Delivered Lumens	Efficacy	BUG Rating	
2L	2	2557	72	B1-U0-G1	36
	3	2599	73	B1-U0-G1	
	5W	2459	69	B2-U0-G1	
	FT	2516	70	B1-U0-G1	
4L	2	3761	40	B1-U0-G1	93
	3	3822	41	B1-U0-G1	
	5W	3616	39	B3-U0-G1	
	FT	3699	40	B1-U0-G1	

ELECTRICAL DATA (AMPS)*							
Lumens	Wattage	120V	208V	240V	277V	347V	480V
2L	36	0.30	0.17	0.15	0.13	0.10	0.07
4L	93	0.78	0.45	0.39	0.34	0.27	0.19

\*Electrical data at 25°C (77°F). Actual wattage may differ by +/-10%

\*LEDs are frequently updated therefore values are nominal.



- Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.
- In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).
- In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times NA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

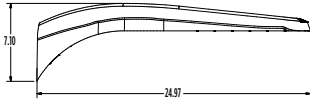
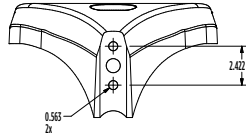
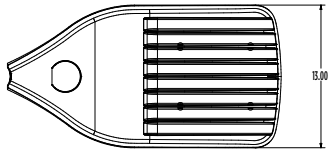
# Mirada Small Area Light (MRS)







 **Have questions?** Call us at (800) 436-7800

Type: Item 2.

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## PRODUCT DIMENSIONS



Tilt Degree		0°	30°	45°	Tilt Degree		0°	30°	45°
	Single	0.5	1.3	1.8		T90°	1.4	2.3	2.6
	D180°	0.9	1.3	1.8		TM120°	1.4	1.9	2.3
	D90°	0.9	1.8	2.2		O90°	1.4	2.3	2.6



# Mirada Small Area Light (MRS)

 Have questions? Call us at (800) 436-7800

## CONTROLS

[Back to Quick Links](#)

### Integral Bluetooth™ Motion and Photocell Sensor (IMSBTxL)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is IP66 rated for cold and wet locations (-40°F to 167°F). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

[Click here to learn more details about IMSBT](#)



LEVITON App



Apple



Android

### AirLink Blue (ALBCSx)

Wireless Bluetooth Mesh Outdoor Lighting Control System that provides energy savings, code compliance and enhanced safety/security for parking lots and parking garages. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an iOS App. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into Area/ Site, Wall Mounted, Parking Garage and Canopy luminaires.

[Click here to learn more details about AirLink Blue](#)



AirLink Blue App



Apple

### Sensor Sequence of Operations

Standard Programming	On Event	Off Event	On Light Level	Dim Light Level	Daylight Harvesting	Delay To Off	Sensitivity
OMSBTxL/IMSBTxL	Motion	No Motion	100%	N/A	On; Auto Calibration	20 minutes	High
OMS	Motion	No Motion	N/A	N/A	N/A	30 seconds	Auto

Operation	Description
<b>On Event</b>	Trigger that activates lights to turn on; either automatic via motion detected or manually activated via push of button.
<b>Off Event</b>	Trigger that activates lights to turn off; either automatic via no motion detected or manually activated via push of button.
<b>On Light Level</b>	The light level that the fixtures will turn on to when ON EVENT occurs.
<b>Dim Light Level</b>	The light level that the fixtures will dim down to when no motion is detected.
<b>Delay to Dim</b>	The amount of time after which no motion is detected that the fixtures will be triggered to dim down. This sequence is optional, and sensor can be programmed to only trigger the fixture to turn off by entering 100% in this field.
<b>Delay to Off</b>	The amount of time after which no motion is detected that the fixtures will be triggered to turn off. If delay to dim is part of the programmed functionality, this is the amount of time after which no motion is detected after the fixture have already dimmed down.
<b>Sensitivity</b>	The sensitivity can be set to high, medium, low, or auto where applicable. High will detect smaller, simple motions. Low will only detect larger more complex motions. Auto temperature calibration adjusts the PIR sensitivity as ambient temperature rises to increase detection of heat movement through the field of view.



# Mirada Small Wall Sconce Silicone (XWS SIL)

## Outdoor LED Wall Light



OVERVIEW	
Lumen Package (lm)	2,000 - 8,000
Wattage Range (W)	13 - 61
Efficacy Range (LPW)	126 - 162
Weight lbs (kg)	10 (4.5)

### QUICK LINKS

- Ordering Guide
- Performance
- Photometrics
- Dimensions

### FEATURES & SPECIFICATIONS

#### Construction

- Rugged die-cast aluminum housing.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Extended housing available with 1/2" threaded hubs for surface conduit and rated wire.
- Standard luminaire shipping weight: TBD lbs in carton.
- Max luminaire shipping weight: 12 lbs in carton (20 lbs w/EH option)

#### Optical System

- State-of-the-Art one piece silicone optic provides industry leading optical control while also acting as an integrated gasket reducing system complexity and improving fixture reliability.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in distribution types 2, 3, and FT.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in 5000K, 4000K, and 3000K color temperatures per ANSI C78.377.
- Minimum CRI of 70

#### Electrical

- High-performance driver features over-voltage under-voltage, short-circuit, and over temperature protection.

- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 VAC) Input 50/60 Hz or optional High Voltage (347-480 VAC).
- L70 Calculated Life: >60k Hours
- Total harmonic distortion (THD): <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F).
- Power factor (PF): >.90
- Input power stays constant over life.
- Optional 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Driver is fully encased in potting material for moisture resistance. Driver complies with FCC standards. Accessible driver and electrical components.
- Optional battery backup provides 90-minutes of constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed on the housing for ease of maintenance. Standard battery rated for 0°C to 50°C with cold weather battery rated for -20°C to 50°C (40°C max for 8L). 120-277V Only.

#### Controls

- Optional integral passive infrared Bluetooth™ motion. Fixtures operate independently and can be commissioned via iOS or Android configuration app.
- Optional button photocell turns fixtures on and off based on ambient light levels for dusk to dawn lighting.

- LSI's AirLink Blue wireless control system options allow for fixture and motion sensor grouping while reducing energy and maintenance costs.

#### Installation

- Universal wall mounting plate mounts directly to vertical surface or 4" junction box (octagonal or square).
- Luminaire hinges to the top of the mounting plate and is secured via two flush mount screws that help to conceal the hardware and prevent over tightening during installation.

#### Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to <https://www.lsicorp.com/resources/terms-conditions-warranty/> for more information.

#### Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet locations.
- IP65 rated luminaire per IEC 60598-1.
- IK08 rated luminaire per IEC 66262 mechanical impact code.
- DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified.

# Mirada Small Wall Sconce Silicone (XWS SIL)

Type: Item 2.

 Have questions? Call us at (800) 436-7800

## ORDERING GUIDE

[Back to Quick Links](#)

TYPICAL ORDER EXAMPLE: XWS LED 6L SIL FT UNV DIM 40 70CRI ALBCS1 BLK CWBB						
Prefix	Light Source	Lumen Package	Lens	Distribution	Voltage	Driver
XWS - Mirada Small Wall Sconce	LED	2L - 2,000 3L - 3,000 5L - 5,000 6L - 6,000 8L - 8,000 Custom Lumen Packages <sup>1</sup>	SIL - Silicone	2 - Type 2 3 - Type 3 FT - Forward Throw	UNV - Universal Voltage (120-277V) HV - High Voltage (347-480V)	DIM - 0-10v Dimming (0-10%)
Color Temperature	Color Rendering	Controls			Finish	Options
50 - 5000K 40 - 4000K 30 - 3000K	70CRI - 70 CRI	Blank - None <b>Wireless Controls</b> ALBCS1 - AirLink Blue Wireless Motion & Photo Sensor Controller (8-24' mounting height) <sup>2</sup> <b>Standalone Controls</b> EXT - 0-10v Dimming leads extended to housing exterior IMSBT1L - Integral Bluetooth™ Motion Sensor 8-24' MH <sup>2,3</sup> <b>Button Type Photocells</b> PCI120 - 120V PCI208-277 - 208 -277V PCI347 - 347V			BLK - Black BRZ - Dark Bronze GMG - Gun Metal Gray GPT - Graphite MSV - Metallic Silver PLP - Platinum Plus SVG - Satin Verde Green WHT - White	Blank - None BB - 10w Battery Back-up (0°C) <sup>4</sup> CWBB - 10w Cold Weather Battery Backup (-20°C) <sup>4</sup> BB20 - 20W Battery Back-up (0°C) <sup>4</sup> EH - Extended Housing <sup>5</sup> SP1 - 10kV Surge Protection Device



Need more information?  
[Click here for our glossary.](#)

Have additional questions?  
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## ACCESSORY ORDERING INFORMATION\*

Part Number	Description
758274CLR	XWS Extended Housing/Surface Conduit Wiring Box
760159CLR	XWS Spacer Plate/Wiring Box

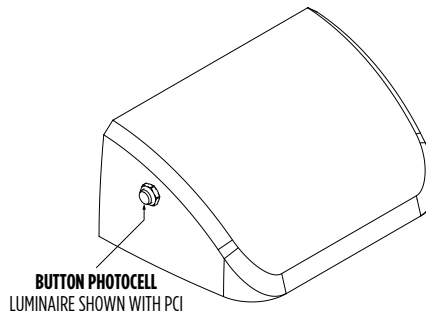
\*Accessories are shipped separately and field installed.

### Battery Backup

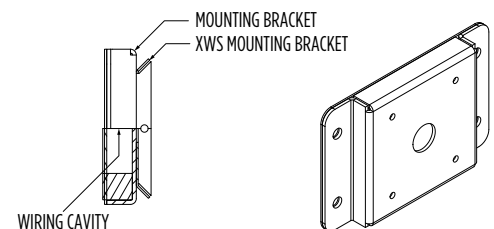
- Emergency battery system provides 90-minutes of constant power to the LED system, ensuring code compliance.
- A test switch/indicator button is installed on the housing for ease of maintenance.
- 10w battery delivers ~1,500 lumens during emergency mode.
- 20w battery delivers ~3,000 lumens during emergency mode.



Luminaire shown with sensor & battery backup



BUTTON PHOTOCELL  
LUMINAIRE SHOWN WITH PCI



WIRING CAVITY

MOUNTING BRACKET  
XWS MOUNTING BRACKET

1 Custom lumen and wattage packages available, consult factory. Values are within industry standard tolerances but not DLC listed.  
 2 When high voltage (HV) is specified, IMSBT and ALBCS control options are limited to 6L and 8L lumen packages.  
 3 IMSBTxL is field configurable via the LSI app that can be downloaded from your smartphone's native app store.  
 4 Universal Voltage Only (120-277V). 20W Battery Backup only available 2L - 6L.  
 5 For applications with surface conduit.

# Mirada Small Wall Sconce Silicone (XWS SIL)

Type: Item 2.

 Have questions? Call us at (800) 436-7800

## PERFORMANCE

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Delivered Lumens <sup>1</sup>												
Lumen Package	Distribution	CRI	3000K CCT			4000K CCT			5000K CCT			Wattage
			Delivered Lumens	Efficacy	Bug Rating	Delivered Lumens	Efficacy	Bug Rating	Delivered Lumens	Efficacy	Bug Rating	
2L	2	70	1,851	142	B1-U0-G1	1,974	152	B1-U0-G1	1,976	152	B1-U0-G1	13
	3		1,930	148	B1-U0-G1	2,058	158	B1-U0-G1	2,060	158	B1-U0-G1	
	FT		1,889	145	B1-U0-G1	2,015	155	B1-U0-G1	2,017	155	B1-U0-G1	
3L	2	70	2,765	146	B1-U0-G1	2,950	155	B1-U0-G1	2,953	155	B1-U0-G1	19
	3		2,884	152	B1-U0-G1	3,077	162	B1-U0-G1	3,079	162	B1-U0-G1	
	FT		2,822	149	B1-U0-G1	3,010	158	B1-U0-G1	3,012	159	B1-U0-G1	
5L	2	70	4,655	133	B2-U0-G1	4,965	142	B2-U0-G1	4,970	142	B2-U0-G1	35
	3		4,855	139	B1-U0-G1	5,179	148	B1-U0-G1	5,184	148	B1-U0-G1	
	FT		4,750	136	B1-U0-G2	5,067	145	B1-U0-G2	5,072	145	B1-U0-G2	
6L	2	70	5,578	130	B2-U0-G1	5,950	138	B2-U0-G2	5,956	139	B2-U0-G2	43
	3		5,819	135	B1-U0-G2	6,207	144	B1-U0-G2	6,214	145	B1-U0-G2	
	FT		5,693	132	B1-U0-G2	6,073	141	B1-U0-G2	6,079	141	B1-U0-G2	
8L	2	70	7,531	123	B2-U0-G2	8,034	132	B2-U0-G2	8,041	132	B2-U0-G2	61
	3		7,856	129	B2-U0-G2	8,380	137	B2-U0-G2	8,388	138	B2-U0-G2	
	FT		7,687	126	B2-U0-G2	8,199	134	B2-U0-G2	8,207	135	B2-U0-G2	

Electrical Data - Current Draw AMPS <sup>2</sup>						
Lumen Package	120V	208V	240V	277V	347V	480V
2L	0.11	0.06	0.05	0.05	0.04	0.03
3L	0.16	0.09	0.08	0.07	0.05	0.04
5L	0.29	0.17	0.15	0.13	0.10	0.07
6L	0.36	0.21	0.18	0.16	0.12	0.09
8L	0.51	0.29	0.25	0.22	0.18	0.13

Recommended Lumen Maintenance - XWS <sup>3</sup>					
Ambient Temperature C°	Initial <sup>4</sup>	25K hrs. <sup>4</sup>	50K hrs. <sup>4</sup>	75K hrs. <sup>5</sup>	100K hrs. <sup>5</sup>
25	100%	95%	90%	85%	80%
40	100%	91%	82%	73%	65%

<sup>1</sup> LEDs are frequently updated therefore values are nominal

<sup>2</sup> Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

<sup>3</sup> Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.

<sup>4</sup> In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip).

<sup>5</sup> In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times NA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip).

# Mirada Small Wall Sconce Silicone (XWS SIL)

Have questions? Call us at (800) 436-7800

Type: Item 2.

## PHOTOMETRICS

[Back to Quick Links](#)

Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

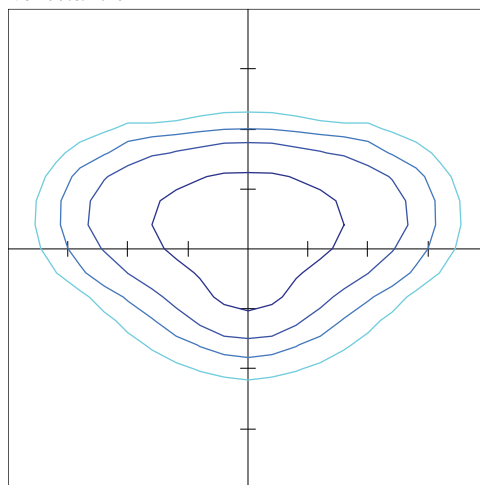
See the individual product page on <https://www.lsicorp.com/> for detailed photometric data.

### XWS-LED-6L-SIL-2-40-70CRI

Luminaire Data	
Type 2 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	5,951
Watts	42.5
Efficacy	138
IES Type	Type II - Short
BUG Rating	B1-U0-G1

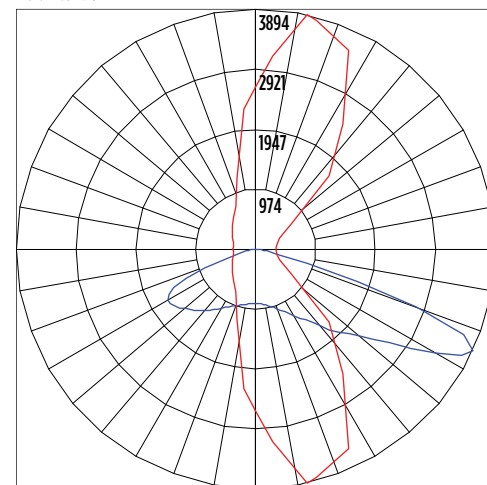
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
Low (0-30°)	834	20%
Medium (30-60°)	3,379	50%
High (60-80°)	1,647	28%
Very High (80-90°)	91	1%
Uplight (90-180°)	0	0%
<b>Total Flux</b>	<b>5,951</b>	<b>100%</b>

#### ISO Footcandle



10' Mounting Height / 10' Grid Spacing  
■ 5 FC ■ 2 FC ■ 1 FC ■ 0.5 FC

#### Polar Curve



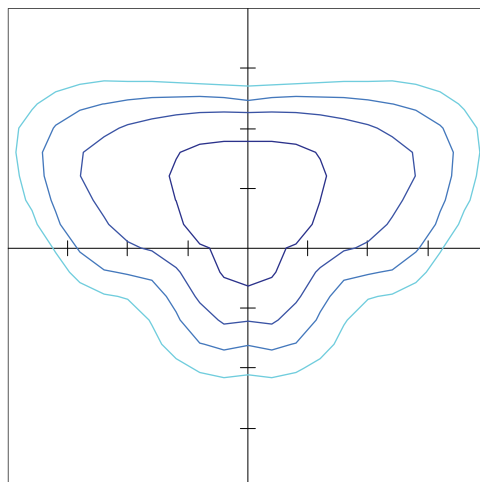
■ Vertical Plane ■ Horizontal Cone

### XWS-LED-6L-SIL-3-40-70CRI

Luminaire Data	
Type 3 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	6,208
Watts	42.5
Efficacy	146
IES Type	Type III - Medium
BUG Rating	B1-U0-G2

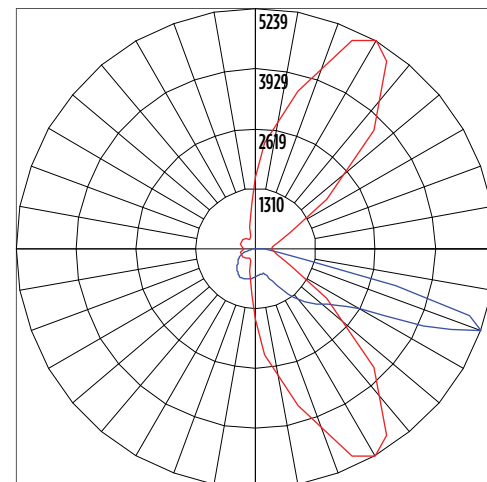
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
Low (0-30°)	582	9%
Medium (30-60°)	2,997	48%
High (60-80°)	2,506	40%
Very High (80-90°)	124	2%
Uplight (90-180°)	0	0%
<b>Total Flux</b>	<b>6,208</b>	<b>100%</b>

#### ISO Footcandle



10' Mounting Height / 10' Grid Spacing  
■ 5 FC ■ 2 FC ■ 1 FC ■ 0.5 FC

#### Polar Curve



■ Vertical Plane ■ Horizontal Cone

# Mirada Small Wall Sconce Silicone (XWS SIL)

 Have questions? Call us at (800) 436-7800

Type: Item 2.

## PHOTOMETRICS

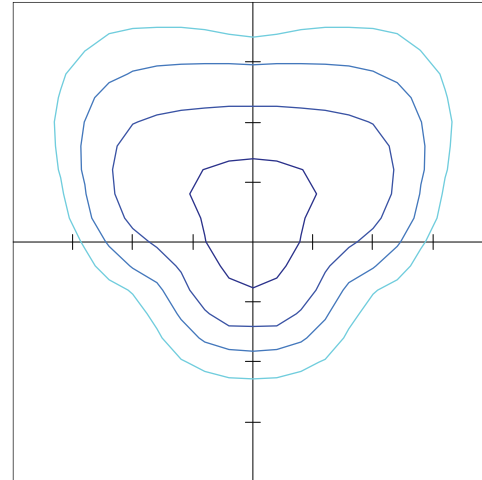
[Back to Quick Links](#)

### XWS-LED-6L-SIL-FT-40-70CRI

Luminaire Data	
<b>Type FT Distribution</b>	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	6,073
Watts	42.5
Efficacy	143
IES Type	Type IV - Short
BUG Rating	B1-U0-G2

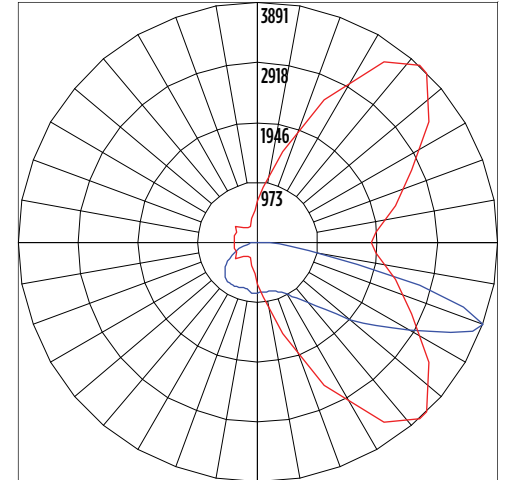
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
Low (0-30°)	708.3	12%
Medium (30-60°)	2,715.5	45%
High (60-80°)	2,475.4	41%
Very High (80-90°)	173.6	3%
Uplight (90-180°)	0	0%
<b>Total Flux</b>	<b>6,073</b>	<b>100%</b>

### ISO Footcandle



10' Mounting Height / 10' Grid Spacing  
 5 FC  
 2 FC  
 1 FC  
 0.5 FC

### Polar Curve



Vertical Plane  
 Horizontal Cone

# Mirada Small Wall Sconce Silicone (XWS SIL)

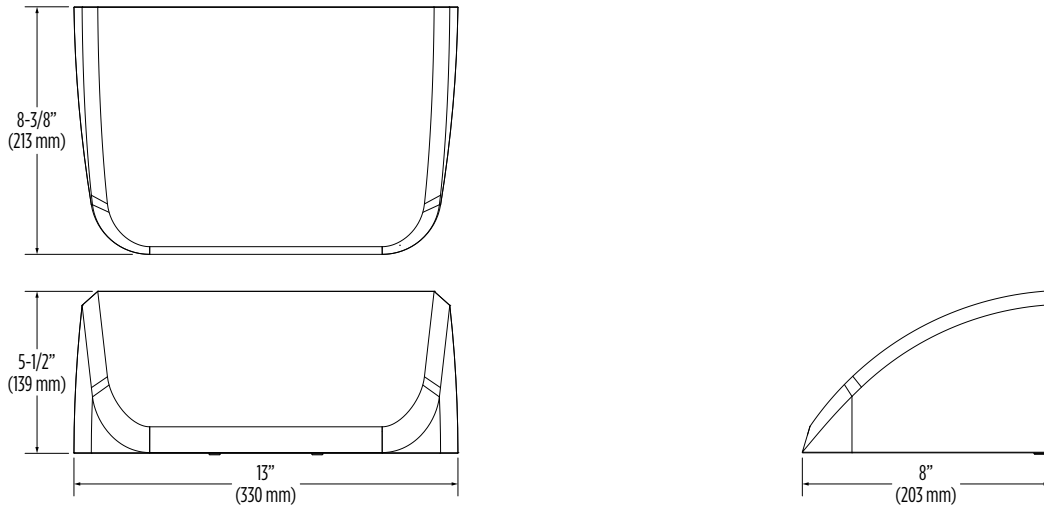
Have questions? Call us at (800) 436-7800

Type: Item 2.

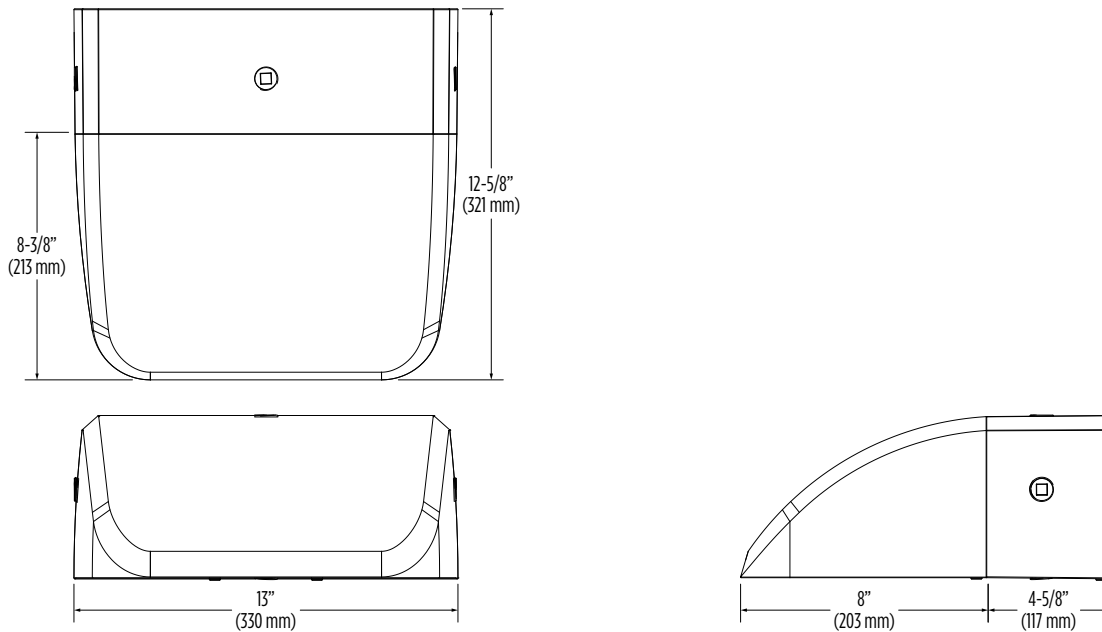
## PRODUCT DIMENSIONS

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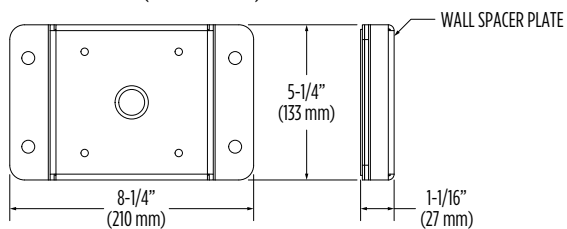
### STANDARD HOUSING (XWS)



### SCWB EXTENDED HOUSING (XWS 758274CLR)



### XWS SPACER PLATE/WIRING BOX (XWS 760159CLR)



**NOTE:** Wall spacer plate allows the luminaire to float off the wall and provides space for securing wires (8.25" X 5.25" X 1.07").

# Mirada Small Wall Sconce Silicone (XWS SIL)

Type: Item 2.

 **Have questions?** Call us at (800) 436-7800

## CONTROLS

[Back to Quick Links](#)

### Integral Bluetooth™ Motion and Photocell Sensor (IMSBTxL)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is IP66 rated for cold and wet locations (-40°F to 167°F). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

[Click here to learn more details about IMSBT](#)



LEVITON App



Apple



Android

### AirLink Blue (ALBCSx)

Wireless Bluetooth Mesh Outdoor Lighting Control System that provides energy savings, code compliance and enhanced safety/security for parking lots and parking garages. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an iOS App. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into Area/Site, Wall Mounted, Parking Garage and Canopy luminaires.

[Click here to learn more details about AirLink Blue](#)



AirLink Blue App



Apple

### Sensor Sequence of Operations

Standard Programming	On Event	Off Event	On Light Level	Dim Light Level	Daylight Harvesting	Delay To Off	Sensitivity
IMSBTxL	Motion	No Motion	100%	N/A	On; Auto Calibration	20 minutes	High

Operation	Description
<b>On Event</b>	Trigger that activates lights to turn on; either automatic via motion detected or manually activated via push of button.
<b>Off Event</b>	Trigger that activates lights to turn off; either automatic via no motion detected or manually activated via push of button.
<b>On Light Level</b>	The light level that the fixtures will turn on to when ON EVENT occurs.
<b>Dim Light Level</b>	The light level that the fixtures will dim down to when no motion is detected.
<b>Delay to Dim</b>	The amount of time after which no motion is detected that the fixtures will be triggered to dim down. This sequence is optional, and sensor can be programmed to only trigger the fixture to turn off by entering 100% in this field.
<b>Delay to Off</b>	The amount of time after which no motion is detected that the fixtures will be triggered to turn off. If delay to dim is part of the programmed functionality, this is the amount of time after which no motion is detected after the fixture have already dimmed down.
<b>Sensitivity</b>	The sensitivity can be set to high, medium, low, or auto where applicable. High will detect smaller, simple motions. Low will only detect larger more complex motions. Auto temperature calibration adjusts the PIR sensitivity as ambient temperature rises to increase detection of heat movement through the field of view.



Harper  
Houf Peterson  
Righellis Inc.

# Wilsonville Tonkin Lamborghini

ADG-122

## Preliminary Stormwater Management Report

June 2024

Prepared For:

Axis Design Group  
11104 SE Stark St  
Portland, OR 97216

ADG-122

Prepared By:

Harper Houf Peterson Righellis Inc.  
205 SE Spokane Street, Suite 200  
Portland, OR 97202  
P: 503-221-1131 F: 503-221-1171

Morgan Worthington, PE



ENGINEERS ♦ PLANNERS  
LANDSCAPE ARCHITECTS ♦ SURVEYORS



City of Wilsonville  
Exhibit B7 DB24-0006

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    BMP Operation and Maintenance ..... 7

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- Appendix B: WES BMP Data
- Appendix C: Conveyance Calculations
- Appendix D: NRCS Web Soil Survey
- Appendix E: Geotechnical Report (Carlson Geotechnical)
- Appendix F: Downstream Analysis Support
- Appendix G: Operation & Maintenance – Storm Facilities



## Project Description

The project site is located at 25239 SW Parkway Ave in Wilsonville, Oregon (tax lot 3S102DA #1000). The property is approximately 2.30 acres in size and is designated as Planned Development Commercial (PDC) on the City of Wilsonville Zoning Map. The proposed project constructs a new luxury vehicle dealership which includes a showroom, service shop, and surface parking areas.

No public stormwater improvements are part of this project.

Low impact development site approaches (LID) are proposed to treat the entire site's impervious and pervious surface runoff. The LID facilities will also provide stormwater flow control for their respective basin areas.

Proposed stormwater management improvements are detailed further in this report. Refer to the Appendix for EX-1 proposed (post-development) basin map, and the WES BMP calculator printouts along with additional calculations and information.

The purpose of this stormwater memorandum is to present stormwater best management practices (BMP) for water quality treatment, flow control, and conveyance to be installed as part of this development project and designed to comply with the 2015 City of Wilsonville Stormwater & Surface Water Design & Construction Standards.

## Existing Site Description

The existing site is moderately sloped, grassy land with trees throughout the property. The site is heavily impacted by existing wetlands lined with vegetation along the central and southern areas of the site. The western property line adjoins ODOT right-of-way (Interstate 5), while the eastern property line is SW Parkway Avenue right-of-way.

The site slopes to the south/southwest and generally varies between 3% - 10% grade. Slopes along the western property line drop off at approximately 4:1. Elevations on the property range from 277' to 264' (NAVD88).

There is currently an existing stormwater drainage ditch running along the southern property line, partially within the property boundary. An existing storm manhole at the southeast corner of the site is at the upstream end of this part of the system, and receives storm drainage from SW Parkway Ave, via existing catchbasins in the roadway. The storm manhole then outfalls to the southwest into the ditch, and drainage moves through an 18" culvert before continuing southwest and turning south near the southwest property corner. It is our understanding that stormwater continues to flow to the south/southwest and eventually travels west beneath the Interstate 5 corridor.

## Soils Characteristics

The Natural Resources Conservation Service (NRCS) with the United States Department of Agriculture (USDA) has classified the soils within Washington County in the Web Soil Survey. Soils are categorized into Hydrologic Soil Groups based on estimated runoff from precipitation. These groupings assume the soils are saturated and receive precipitation from long-duration storms. This rainfall to runoff relationship is complex and includes the Drainage and



Permeability characteristics of the soil. Pre-developed conditions for the site are the existing site’s landscape areas. According to the USDA web soil survey, the site consists of soil group: 4B – Briedwell Silt Loam (Soil Group B) and 43 – Wapato Silty Clay Loam (Soil Group C/D). Upon further exploration and site-specific geotechnical exploration and analysis, the site is underlain primarily by organic soil, silty sands, and clayey silts with varying proportions of sand and gravel. Please reference the geotechnical report and addendum for further information.

**Groundwater**

Refer to the geotechnical report for detailed boring logs and investigation. Per the report, *“groundwater was encountered at variable depths (ranging from 1 to 12 feet bgs). The report also states that “due to the presence on shallow groundwater, infiltration testing was not performed at the site,” and that “the relatively shallow groundwater effectively precludes infiltration of stormwater collected from new impervious areas of the site.”*

Therefore, full stormwater infiltration is not considered feasible for the site. The proposed stormwater facilities will be impermeable lined due to the high groundwater, as well as planter locations adjacent to building foundations.

**Proposed Conditions**

Stormwater management improvements will include three LID vegetated filtration planters: one constructed adjacent to the proposed building, one near the drive aisle entry at the north, and one at the southwest corner of the drive aisle. Basins 1 and 2 will be piped to an outfall at the existing stormwater ditch running along the southern property border, while Basin 3 will be piped to connect to an existing stormwater manhole near the southeastern property corner. This existing structure routes stormwater to the existing stormwater ditch along the southern property border through an existing 18” culvert. This stormwater ditch continues southward beyond the property limits.

**Table 1 – Stormwater Runoff Basins**

Basin	Impervious Area (SF)	Facility Type and Required Size
1	12,835	Filtration Planter: 406 SF
2	6,565	Filtration Planter: 216 SF
3	17,780	Filtration Planter: 568 SF
<b>TOTAL</b>	37,180	



**Table 2 – Stormwater Management Requirements**

Table 2: City of Wilsonville Stormwater Management Requirements	
Design Requirement	City of Wilsonville Criteria
Conveyance Design Storm	10-Year; 24-hour SBUH Method for Pipe
Treatment Area	All Disturbed Impervious Area + New Impervious Area
Treatment Storm	1.0" / 24-hour storm per City of Wilsonville
Detention	Peak Flow Duration matching between 42% of the 2-year up through the 10-year storm event

Stormwater facility design calculations have been completed using the BMP Sizing Tool application. This tool addresses water quality treatment and flow control requirements when sizing stormwater management facilities. The design process includes separating the site into Discharge Management Areas (DMA) that are routed to BMP's. The application will adequately size the BMP's based on growing media infiltration rates and facility depth.

**Proposed Basin Characteristics**

The proposed site's stormwater management basins are broken into three basins, 1-3. See exhibit EX-1 in the Appendix for an illustration of these proposed management basin areas. See Table 1 above for a summary of the proposed basin areas.

**Water Quality**

The City of Wilsonville water quality treatment criteria will be met by treatment of the site runoff solely through LID vegetated facilities. Treatment will occur via biofiltration and is met using the WES BMP Calculator. The proposed LID planter facilities will consist of an overflow set 12 inches above the topsoil growing media elevation. This will allow for 12" of ponding depth and filtration through the soil media prior to overflow. The facilities consist of an 18" depth section of growing filtration soil media, with 15" of drain rock below. A PVC liner is placed at the bottom of the facilities due to high groundwater and proximity to building foundations. A perforated underdrain pipe is set at the bottom of each facility to ensure full drawdown. The water quality event has been routed through each LID facility in the WES BMP calculator to ensure that the event does not cause stormwater to enter the overflow structure during the water quality storm event. Treated stormwater will be collected in the underdrain system and routed to site conveyance. Studies from the International Stormwater BMP Database (July 2012) indicate that bio filtration BMPs are good candidates for treatment of phosphorus, TSS and algae and mercury / metals.

Landscaping and trees are retained and proposed throughout the site to the maximum extent feasible. Above-ground vegetated stormwater facilities will benefit from tree canopy during the summer months to mitigate stormwater temperature rise. Underdrain systems will be necessary for collecting and routing stormwater that will filter through the proposed soil media but will not infiltrate the underlying native soils.



The WES BMP calculations are located in the Appendix.

Proper delineation and erosion and sediment control will be installed to protect the proposed facilities from potentially being compacted and/or inundated with sediment during construction.

Following treatment and detention, stormwater will ultimately discharge to the drainage ditch along the southern edge of the property. See Table 1 above for a summary of stormwater management basins.

### Detention / Flow Control

The project site will meet detention/flow control requirements solely with LID facilities. All proposed LID planter facilities are designed to allow for 12" of ponding to provide flow control while stormwater is infiltrating through the soil media. Each planter overflow structure has an orifice cap on the incoming perforated underdrain to limit inflow and facilitate detention storage ponding within the basin. Flow control for the site is required to meet peak flow duration matching between 42% of the 2-year up through the 10-year storm event. The WES BMP calculator has been used to size the facilities to ensure that this requirement is met. See Table 1 above for a summary of stormwater management basins. See the WES BMP calculator printout in the appendix for additional information.

### Conveyance

The proposed storm pipe system is designed to have the capacity to convey the runoff from a 10-year storm event return frequency storm event without ponding. The site storm system was designed to convey all of the impervious area and contributing pervious area for the entire site. A minimum pipe size and slope will be maintained throughout the system. The intent is to maintain a minimum free flow velocity of 3.0 fps in all pipes. See the Appendix for pipe sizing calculations (minimum pipe slopes & sizes required to meet these conditions).

A conduit Flow Mannings "n" = 0.013 for pipe flow is used in all calculations.

The time of concentration ( $t_c$ ) is defined as the time for runoff to travel from the furthestmost point of the watershed to the point in question. Time of concentration can be estimated from several formulas. The minimum time of concentration is 5 minutes in developed urban areas and the maximum is 100 minutes in rural areas. A time of concentration of 5 minutes is used for design of the stormwater basins in this project.

### Downstream Analysis

Per the City of Wilsonville Stormwater & Surface Water Design & Construction Standards, downstream analysis shall extend downstream to a point in the drainage system where the proposed development site constitutes 10% or less of the total tributary drainage flow. If the proposed development area is less than 10% of the total tributary drainage area at the approved point of discharge, the analysis will continue for one-quarter mile downstream of the approved point of discharge.

Per the WES BMP Calculator results in Appendix B, the site's stormwater facilities will release **0.132 cfs** during the 25-year event, post development. Total tributary flow for the overall basin



was calculated using Wilsonville GIS mapping and the Hydraflow Hydrographs program. Sub-Basins 1000B, 1133A, and contributing portions of Sub-Basin 1000 (see Appendix F for basin information, delineation and hydrographs) were considered as the larger tributary to the project's discharge points. Drainage flow was estimated to be **45.84 cfs** during the 25-year event. This calculation assumes that developed areas within the basin consist of 85% impervious area and 15% pervious area, while undeveloped areas are entirely pervious forested/grassy area. This analysis does not consider any upstream detention, although there are existing LID and detention facilities present within this tributary area. Since **0.132 cfs < 10% of 45.84 cfs**, this analysis continues for one-quarter mile downstream of the approved discharge point.

Once stormwater is collected and routed through stormwater filtration planters on the project site, there are two discharge points where stormwater leaves the site and enters the public system. Planters 1 and 2 discharge at the southwest corner of the property into the existing stormwater ditch (Discharge Point #1), while Planter 3 discharges into the existing public storm manhole at the southeast corner of the property (Discharge Point #2). Exhibit "Storm System Map" in the Appendix notes these discharge points and downstream facilities, and shows that both discharge points eventually outfall into the existing drainage ditch running southwest along the project property. At the southwest corner of the property, the ditch turns to the south/southeast and runs along the west side of the existing hotel property. South of the hotel, a 30" pipe collects and routes the stormwater under SW Elligsen Rd and outfalls into a swale within the ODOT Interstate 5 right-of-way. Stormwater runs roughly southwest and is collected by an existing grated manhole, which routes water west under the freeway and outfalls into a stormwater ditch/wetland area. The existing 30" concrete ODOT storm pipe crossing under Interstate 5 is the furthest downstream point of this analysis.

The first downstream point which was analyzed is immediately downstream of Discharge Point #1, where a cross-section of the existing drainage channel was taken based on topographic survey data. To determine the ditch's capacity, the cross-section was modeled in the Hydraflow Express program. Using the estimated tributary flow for Sub-Basins 1000B, 1133A, and contributing portions of Sub-Basin 1000, the model found that the ditch had sufficient conveyance capacity. See Appendix F for the Hydraflow Express Channel Report results.

The second downstream point which was studied is the 30" ODOT storm drain pipe running under Interstate 5. The pipe receives runoff from Sub-Basins 1000, 1000B, 1133A, 1133B and 2118, and has a tributary drainage flow estimated to be 70.66 cfs based on the assumptions and methods discussed earlier in this section. Conveyance calculations found in Appendix F estimate the capacity of this pipe is 41.03 cfs, assuming a 1% pipe slope. Although the pipe's assumed capacity is not great enough to manage the total calculated drainage flow, in speaking with City staff we are unaware of flooding, damage, or detrimental effects that occur at this specific culvert location. As noted earlier, existing LID and other detention facilities in the surrounding area that operate to lower peak flow rates have not been modeled as part of this report, so the actual peak drainage flow which the culvert experiences is theoretically lower than what was calculated. Since we have not observed or been provided evidence that this 30" ODOT pipe has been inundated during larger storms, this part of the storm system will not be greatly affected by the additional flows created by the proposed project. The proposed on-site LID facilities limit peak flow rates to a level that are expected to have a negligible impact on downstream facilities.



## **BMP Operation and Maintenance**

Proposed stormwater management facilities will be maintained by the Owner, Ron Tonkin Gran Turismo. All facilities shall be maintained per the schedule and requirements listed in the O&M plan included in the Appendix and as recorded with Clackamas County.

Contact Person: Celia Tonkin, 503-258-5608

See exhibits in the Appendix for stormwater planter locations and further information.

## **Conclusion**

The proposed stormwater management plan will achieve pollutant removal and flow control to the maximum extent practicable via vegetated stormwater planters. The proposed facilities satisfy City of Wilsonville stormwater quality and water quantity requirements. As designed, this project shall not create any adverse impacts to the downstream storm system.

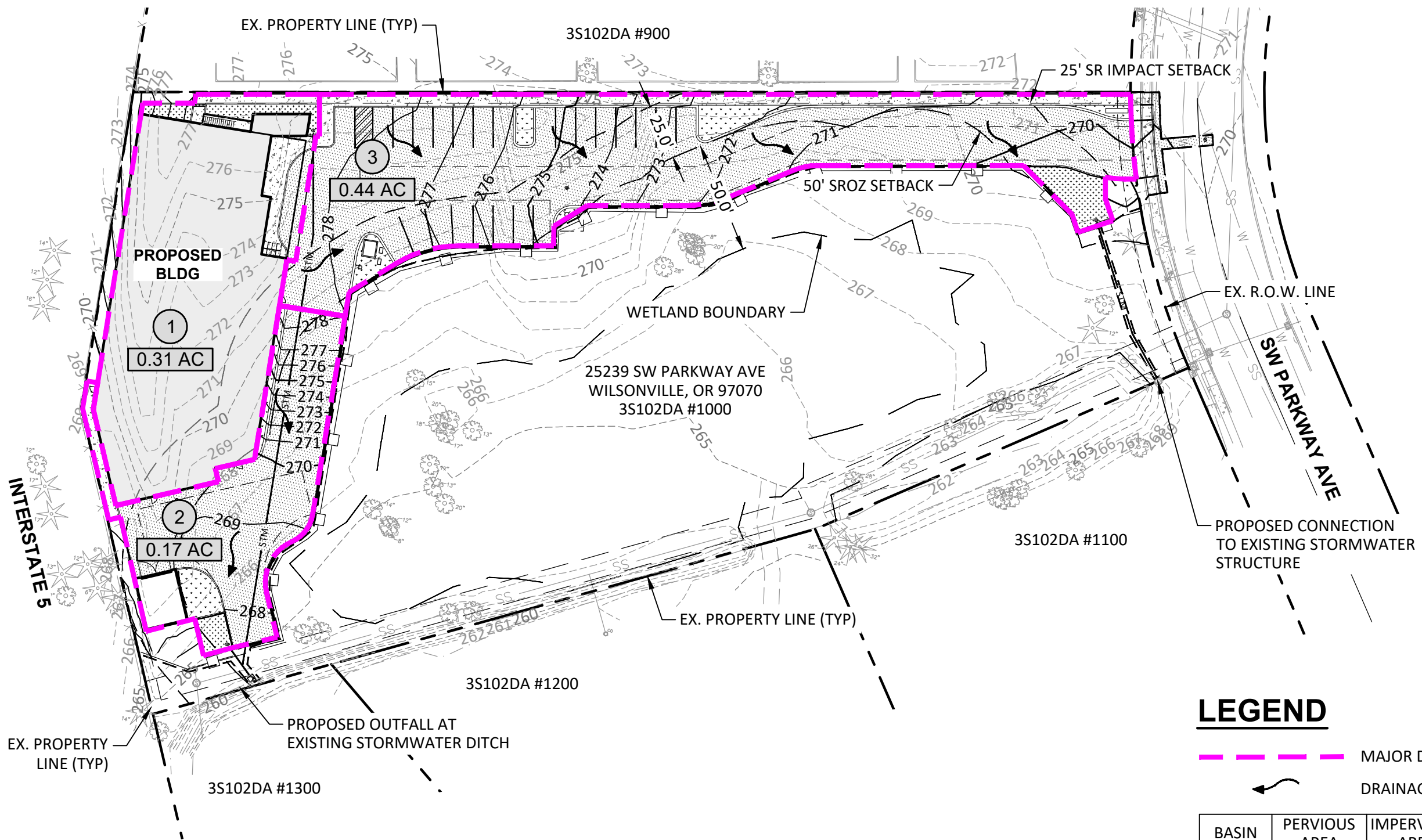




# APPENDIX A – Basin Map



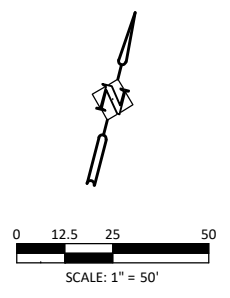
P:\01-Portland\ADG (Axis Design Group)\ADG-122 (Wilsonville Lamborghini)\ADG-122-DOCS\Reports\Stormwater\CAD\ADG122 - Proposed Basin Map.dwg



**LEGEND**

- MAJOR DRAINAGE BASIN BOUNDARY
- DRAINAGE ARROW

BASIN	PERVIOUS AREA	IMPERVIOUS AREA	TOTAL AREA
1	505 SF	12,835 SF	13,340 SF
2	835 SF	6,565 SF	7,400 SF
3	1,580 SF	17,780 SF	19,360 SF



DATE	NO.	DESCRIPTION
R E V I S I O N S		

DESIGNED:	HHPR
DRAWN:	HHPR
CHECKED:	HHPR
DATE:	JUNE 2024

**HHPR** Harper Houf Peterson Righellis Inc.  
 ENGINEERS\*PLANNERS  
 LANDSCAPE ARCHITECTS\*SURVEYORS  
 205 SE Spokane Street, Suite 200, Portland, OR 97202  
 phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

PROPOSED BASIN MAP EXHIBIT  
**TONKIN LAMBORGHINI**  
 WILSONVILLE, OREGON

SHEET NO.  
**EX-1**  
 JOB NO. ADG-282

# APPENDIX B – WES BMP Data



WES BMP Sizing Software Version 1.6.0.2, May 2018

## WES BMP Sizing Report

## Project Information

Project Name	ADG122 - Tonkin Lamborghini Wilsonville
Project Type	Commercial
Location	
Stormwater Management Area	39710
Project Applicant	
Jurisdiction	OutofDistrict

## Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
Basin 1 - Impervious	12,835	Grass	ConventionalConcrete	D	Basin 1 Planter
Basin 1 - Pervious	505	Grass	LandscapeSoil	D	Basin 1 Planter
Basin 2 - Impervious	6,565	Grass	ConventionalConcrete	D	Basin 2 Planter
Basin 2 - Pervious	835	Grass	LandscapeSoil	D	Basin 2 Planter
Basin 3 - Impervious	17,780	Grass	ConventionalConcrete	D	Basin 3 Planter
Basin 3 - Pervious	1,580	Grass	LandscapeSoil	D	Basin 3 Planter

## LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)	Design flow (cfs)
Basin 1 Planter	FlowControlAndTreatment	Stormwater Planter - Filtration	Lined	395.7	406.0	1.3	0.044
Basin 2 Planter	FlowControlAndTreatment	Stormwater Planter - Filtration	Lined	214.5	216.0	1.0	0.024
Basin 3 Planter	FlowControlAndTreatment	Stormwater Planter - Filtration	Lined	566.6	568.0	1.6	0.064

Total 0.132 cfs

### Pond Sizing Details

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.

# APPENDIX C – Conveyance Calculations



## Wilsonville Tonkin Lamborghini

### Pipe Conveyance Calculations

Prepared by Harper Houf Peterson Righellis, Inc.

HHPR Job No. ADG-122

April 1, 2024

Pipe Segment	Upstream Basin(s)	Area1 (ac)	C1 (--)	T <sub>c</sub> (min)	Rainfall (10-year) (in/hr)	Pipe Size (in)	Area (sf)	Per. (ft)	N (--)	Q <sub>10</sub> (cfs)	Slope (%)	Q <sub>CAPACITY</sub> (cfs)	Velocity Full (fps)	Capacity Met?
1	Basin 1	0.31	0.97	5.0	3.40	8	0.35	2.09	0.013	1.02	1.00%	1.21	3.46	YES
2	Basin 2	0.17	0.96	5.0	3.40	8	0.35	2.09	0.013	0.55	1.00%	1.21	3.46	YES
3	Basin 3	0.44	0.97	5.0	3.40	12	0.79	3.14	0.013	1.45	0.50%	2.52	3.21	YES
4	Basins 1 & 2	-	-	-	-	12	0.79	3.14	0.013	1.57	1.00%	3.56	4.54	YES

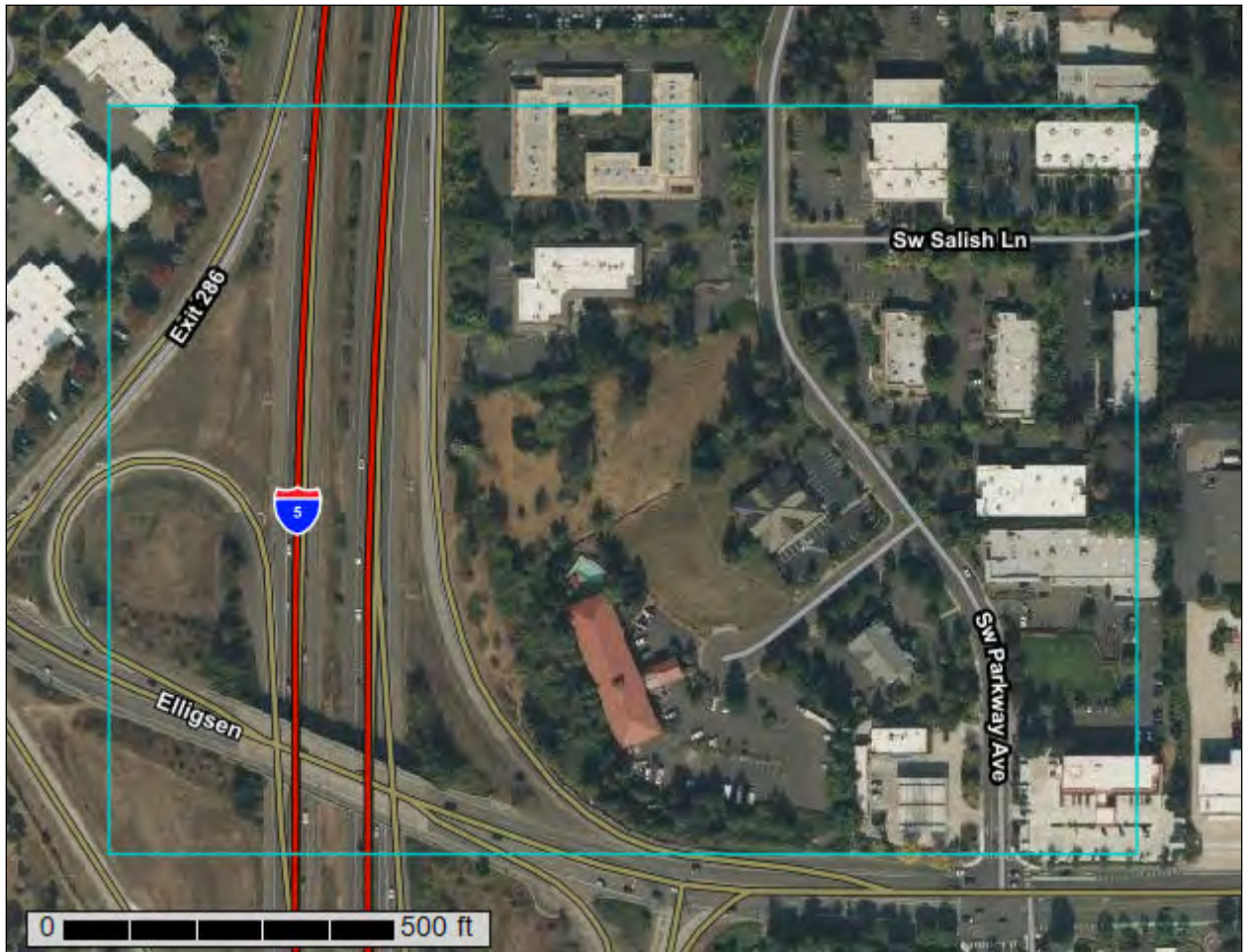
# APPENDIX D – NRCS Web Soil Survey





Item 2.

# Custom Soil Resource Report for Washington County, Oregon



# Preface

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

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

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

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

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

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

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# How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

# Soil Map

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



# Custom Soil Resource Report Soil Map

Item 2.



Map Scale: 1:2,910 if printed on A landscape (11" x 8.5") sheet.


0 40 80 160 240 Meters

0 100 200 400 600 Feet


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


### MAP LEGEND

**Area of Interest (AOI)**

 Area of Interest (AOI)




















**Soils**







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

**Special Point Features**






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


**Water Features**

 Streams and Canals

**Transportation**

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

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

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

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

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

Soil Survey Area: Washington County, Oregon  
 Survey Area Data: Version 23, Sep 7, 2023

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

Date(s) aerial images were photographed: Sep 26, 2022—Oct 11, 2022

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

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4B	Briedwell silt loam, 0 to 7 percent slopes	18.9	46.7%
5B	Briedwell stony silt loam, 0 to 7 percent slopes	0.5	1.2%
43	Wapato silty clay loam	4.9	12.2%
45A	Woodburn silt loam, 0 to 3 percent slopes	9.7	24.0%
45B	Woodburn silt loam, 3 to 7 percent slopes	6.5	16.0%
<b>Totals for Area of Interest</b>		<b>40.4</b>	<b>100.0%</b>

## Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

## Washington County, Oregon

### 4B—Briedwell silt loam, 0 to 7 percent slopes

#### Map Unit Setting

*National map unit symbol:* 220g  
*Elevation:* 200 to 320 feet  
*Mean annual precipitation:* 40 to 60 inches  
*Mean annual air temperature:* 50 to 54 degrees F  
*Frost-free period:* 165 to 210 days  
*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Briedwell and similar soils:* 85 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Briedwell

##### Setting

*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Silty over gravelly alluvium

##### Typical profile

*H1 - 0 to 12 inches:* silt loam  
*H2 - 12 to 26 inches:* clay loam  
*H3 - 26 to 60 inches:* extremely cobbly clay loam

##### Properties and qualities

*Slope:* 0 to 7 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
 (0.57 to 1.98 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Moderate (about 6.2 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 2e  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* B  
*Ecological site:* R002XC006OR - Stream Terrace Group  
*Forage suitability group:* Well drained < 15% Slopes (G002XY002OR)  
*Other vegetative classification:* Well drained < 15% Slopes (G002XY002OR)  
*Hydric soil rating:* No

**5B—Briedwell stony silt loam, 0 to 7 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 220h  
*Elevation:* 200 to 320 feet  
*Mean annual precipitation:* 40 to 60 inches  
*Mean annual air temperature:* 50 to 54 degrees F  
*Frost-free period:* 165 to 210 days  
*Farmland classification:* Farmland of statewide importance

**Map Unit Composition**

*Briedwell and similar soils:* 85 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Briedwell**

**Setting**

*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Silty over gravelly alluvium

**Typical profile**

*H1 - 0 to 12 inches:* stony silt loam  
*H2 - 12 to 26 inches:* clay loam  
*H3 - 26 to 60 inches:* extremely cobbly clay loam

**Properties and qualities**

*Slope:* 0 to 7 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 5.7 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* B  
*Ecological site:* R002XC006OR - Stream Terrace Group  
*Forage suitability group:* Well drained < 15% Slopes (G002XY002OR)  
*Other vegetative classification:* Well drained < 15% Slopes (G002XY002OR)  
*Hydric soil rating:* No

## 43—Wapato silty clay loam

### Map Unit Setting

*National map unit symbol:* 2203

*Elevation:* 100 to 300 feet

*Mean annual precipitation:* 40 to 60 inches

*Mean annual air temperature:* 52 to 54 degrees F

*Frost-free period:* 165 to 210 days

*Farmland classification:* Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

### Map Unit Composition

*Wapato and similar soils:* 85 percent

*Minor components:* 7 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Wapato

#### Setting

*Landform:* Flood plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Recent alluvium

#### Typical profile

*H1 - 0 to 14 inches:* silty clay loam

*H2 - 14 to 42 inches:* silty clay loam

*H3 - 42 to 60 inches:* silty clay

#### Properties and qualities

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)

*Depth to water table:* About 0 to 12 inches

*Frequency of flooding:* Frequent

*Frequency of ponding:* Frequent

*Available water supply, 0 to 60 inches:* High (about 10.1 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3w

*Land capability classification (nonirrigated):* 3w

*Hydrologic Soil Group:* C/D

*Ecological site:* F002XC002OR - Backswamp Group

*Forage suitability group:* Poorly Drained (G002XY006OR)

*Other vegetative classification:* Poorly Drained (G002XY006OR)

*Hydric soil rating:* Yes

**Minor Components**

**Cove, silty clay loam surface**

*Percent of map unit:* 4 percent  
*Landform:* Flood plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

**Labish**

*Percent of map unit:* 3 percent  
*Landform:* Lakebeds (relict), flood plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* Poorly Drained (G002XY006OR)  
*Hydric soil rating:* Yes

**45A—Woodburn silt loam, 0 to 3 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2208  
*Elevation:* 150 to 400 feet  
*Mean annual precipitation:* 40 to 50 inches  
*Mean annual air temperature:* 50 to 54 degrees F  
*Frost-free period:* 165 to 210 days  
*Farmland classification:* All areas are prime farmland

**Map Unit Composition**

*Woodburn and similar soils:* 85 percent  
*Minor components:* 1 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Woodburn**

**Setting**

*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Old alluvium

**Typical profile**

*H1 - 0 to 16 inches:* silt loam  
*H2 - 16 to 31 inches:* silty clay loam  
*H3 - 31 to 60 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 3 percent



*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 25 to 32 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* High (about 12.0 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* 2w  
*Land capability classification (nonirrigated):* 2w  
*Hydrologic Soil Group:* C  
*Ecological site:* R002XC008OR - Valley Terrace Group  
*Forage suitability group:* Moderately Well Drained < 15% Slopes (G002XY004OR)  
*Other vegetative classification:* Moderately Well Drained < 15% Slopes (G002XY004OR)  
*Hydric soil rating:* No

#### **Minor Components**

##### **Dayton**

*Percent of map unit:* 1 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* Poorly Drained (G002XY006OR)  
*Hydric soil rating:* Yes

### **45B—Woodburn silt loam, 3 to 7 percent slopes**

#### **Map Unit Setting**

*National map unit symbol:* 2209  
*Elevation:* 150 to 400 feet  
*Mean annual precipitation:* 40 to 50 inches  
*Mean annual air temperature:* 50 to 54 degrees F  
*Frost-free period:* 165 to 210 days  
*Farmland classification:* All areas are prime farmland

#### **Map Unit Composition**

*Woodburn and similar soils:* 85 percent  
*Minor components:* 1 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### **Description of Woodburn**

##### **Setting**

*Landform:* Terraces  
*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Old alluvium

**Typical profile**

*H1 - 0 to 16 inches:* silt loam  
*H2 - 16 to 31 inches:* silty clay loam  
*H3 - 31 to 60 inches:* silt loam

**Properties and qualities**

*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 25 to 32 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* High (about 12.0 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2e  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* C  
*Ecological site:* R002XC008OR - Valley Terrace Group  
*Forage suitability group:* Moderately Well Drained < 15% Slopes (G002XY004OR)  
*Other vegetative classification:* Moderately Well Drained < 15% Slopes (G002XY004OR)  
*Hydric soil rating:* No

**Minor Components**

**Dayton**

*Percent of map unit:* 1 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* Poorly Drained (G002XY006OR)  
*Hydric soil rating:* Yes

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United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242)

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# APPENDIX E – Geotechnical Report



# Carlson Geotechnical

A division of Carlson Testing, Inc.  
Phone: (503) 601-8250  
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**Report of  
Geotechnical Investigation  
Ron Tonkin Gran Turismo Lamborghini Dealership  
Lot South of 25195 SW Parkway Avenue  
Wilsonville, Oregon**

**CGT Project Number G2306033**

Prepared for

Celia Tonkin  
Ron Tonkin Gran Turismo  
25300 SW Parkway Avenue  
Wilsonville, Oregon 97070

December 27, 2023

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December 27, 2023

Celia Tonkin  
Ron Tonkin Gran Turismo  
25300 SW Parkway Avenue  
Wilsonville, Oregon 97070

**Report of  
Geotechnical Investigation  
Ron Tonkin Gran Turismo Lamborghini Dealership  
Lot South of 25195 SW Parkway Avenue  
Wilsonville, Oregon**

CGT Project Number G2306033

Dear Celia Tonkin:

Carlson Geotechnical (CGT), a division of Carlson Testing, Inc. (CTI), is pleased to submit this report summarizing the results of our geotechnical investigation for the proposed Ron Tonkin Gran Turismo Lamborghini Dealership project. The site is located directly south of 25195 SW Parkway Avenue in Wilsonville, Oregon. We performed our work in general accordance with CGT Proposal GP23-302R1, dated November 7, 2023. Written authorization for our services was received on November 9, 2023

We appreciate the opportunity to work with you on this project. Please contact us at (503) 601-8250 if you have any questions regarding this report.

Respectfully Submitted,  
**CARLSON GEOTECHNICAL**

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Ron Tonkin Gran Turismo Lamborghini Dealership  
Wilsonville, Oregon  
CGT Project Number G2306033  
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## 1.0 INTRODUCTION

Carlson Geotechnical (CGT), a division of Carlson Testing, Inc. (CTI), is pleased to submit this report summarizing the results of our geotechnical investigation for the proposed Ron Tonkin Gran Turismo Lamborghini Dealership project. The site is located directly south of 25195 SW Parkway Avenue in Wilsonville, Oregon, as shown on the attached Site Location, Figure 1.

### 1.1 Project Information

CGT developed an understanding of the proposed project based on our correspondence with the project architect, Axis Design Group (Axis), and review of the provided preliminary project plan set prepared by Axis, dated October 4, 2023, and a survey map, prepared by Westlake Consultants, Inc. Based on our review, we understand the project will include:

- Construction of a new showroom and service building within the northwest portion of the site. The building will be three-stories, metal- and steel-framed, will incorporate a slab on grade ground floor, and include a partially below-grade vehicle storage level. For the purposes of this report, we have assumed maximum column, continuous wall, and uniform floor slab loads will be on the order of 100 kips, 4.5 kips per lineal foot (klf), and 250 pounds per square foot (psf), respectively.
- Construction of paved passenger car parking areas located east of the showroom and service building, and along the north and east margins of the site. We assume new pavements will be surfaced with asphalt concrete (AC), while loading docks and driveway aprons will be surfaced with Portland Cement Concrete (PCC).
- If conditions allow, stormwater collected from new impervious areas at the site will be disposed of, at least in part, via onsite infiltration. Infiltration testing was requested at three locations as part of this assignment. As described later in this report, due to the presence of shallow groundwater, infiltration testing was not performed at the site.
- Although no grading plans have been provided, we anticipate permanent grade changes at the site will include minimal fills. Cuts up to about 6 feet in depth are anticipated in the planned building pad to achieve desired ground floor elevations.
- No development or grading is anticipated to occur within a designated wetland (identified by others) within the south central portion of the site.

### 1.2 Scope of Services

Our scope of work included the following:

- Contact the Oregon Utilities Notification Center to mark the locations of public utilities within a 20-foot radius of our explorations at the site.
- Explore subsurface conditions at the site by advancing five drilled borings to depths of up to about 26½ feet below ground surface (bgs). Details of the subsurface investigation are presented in Appendix A.
- Classify the soils encountered in the explorations in general accordance with ASTM D2488 (Visual-Manual Procedure).
- Provide a technical narrative describing surface and subsurface deposits, and local geology of the site, based on the results of our explorations and published geologic mapping.
- Provide recommendations for the Seismic Site Class, mapped maximum considered earthquake spectral response accelerations, and site seismic coefficients.

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- Provide a qualitative evaluation of seismic hazards at the site, including earthquake-induced liquefaction, landsliding, and surface rupture due to faulting or lateral spread.
- Provide geotechnical recommendations for site preparation and earthwork.
- Provide geotechnical engineering recommendations for use in design and construction of shallow foundations, floor slabs, retaining walls, and pavements.
- Provide this written report summarizing the results of our geotechnical investigation and recommendations for the project.

## 2.0 SITE DESCRIPTION

### 2.1 Site Geology

Based on available geologic mapping<sup>1,2</sup> of the area, the site is underlain by basalt bedrock. The basalt bedrock unit is composed of lava flows associated with the Columbia River Basalt group. The Columbia River basalt group consists of numerous fine-grained lava flows that primarily erupted from fissures in eastern Washington and Oregon and western Idaho during the Miocene (23.8 to 5.3 million years ago). Many individual flows are interbedded with thin paleosols that consist of clay-rich soils or sediments formed during period of volcanic inactivity. The basalt can weather in place to form clay and silt rich residual soils that overly the intact basalt bedrock. When intact, the basalt features jointed patterns ranging from columnar to entablature/colonnade, and is described as having fresh exposures that are dark gray to black, while weathered exposures area greenish-gray to grayish-black. Based on results of the drilled borings advanced at the site (described below) and review of local well logs, we anticipate that residual soils (fully decomposed bedrock) extend to depths of about 30 to 60 feet bgs, and are underlain by intact basalt bedrock.

### 2.2 Site Surface Conditions

The site is bordered by SW Parkway Avenue to the east, an on-ramp to Interstate 5 to the west, and commercial properties to the north and south. At the time of our field investigation, the north, west, and east perimeters of the site descended towards its center at gradients up to 4 horizontal:1 vertical (4H:1V). The south-central portion of the site is mapped (by others) as a wetlands. Vegetation on the southern portion of the site consisted of grasses and scattered coniferous and deciduous trees. The northern and western portions of the site were densely vegetated with brush and trees. The western portion of the site exhibited moderately dense vegetation and resulted in limited access for exploration equipment. Site layout and surface conditions at the time of our field investigation are shown on the attached Site Plan (Figure 2) and Site Photographs (Figure 3).

### 2.3 Subsurface Conditions

#### 2.3.1 Subsurface Investigation & Laboratory Testing

Our subsurface investigation consisted of five drilled borings (B-1 through B-5) completed on December 4, 2023. The approximate boring locations are shown on the Site Plan, attached as Figure 2. In summary, the borings were advanced to depths ranging from about 6½ to 26½ feet bgs. Details regarding the subsurface

<sup>1</sup> Madin, I.P., 2004. Geologic mapping and database for the Portland area fault studies: Final report, Clackamas, Multnomah, and Washington Counties, Oregon: Oregon Department of Geology and Mineral Industries, Open-File Report O-04-02, scale 1:100,000.

<sup>2</sup> Beeson, M.H., Tolan, T.L., and Madin, I.P., 1991. Geologic map of the Portland quadrangle, Multnomah and Washington counties, Oregon, and Clark County, Washington: Oregon Department of Geology and Mineral Industries, Geological Map Series 75, scale 1:24,000.

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investigation, logs of the explorations, and results of laboratory testing are presented in Appendix A. Subsurface conditions encountered during our investigation are summarized below.

### 2.3.2 Subsurface Materials

Logs of the explorations are presented in Appendix A. The following describes each of the subsurface materials encountered at the site.

#### Organic Soil (OL)

Organic soil was encountered at the surface of each boring. The organic soil was typically dark brown, moist, exhibited low plasticity, and contained varying amounts of rootlets. This soil extended to depths of about ¼-foot bgs in the borings.

#### Elastic Silt (MH)

Elastic silt was encountered below the organic soil in each boring. The elastic silt was typically brown, moist, exhibited medium plasticity, and contained varying amounts of weathered rock fragments up to ¼-inch in diameter. In terms of consistency, this soil was very soft in the upper 5 feet in borings B-1 and B-2. Below that depth and in the remaining borings, this soil was typically medium stiff to stiff. This soil extended to depths of about 7 to 10 feet bgs in borings B-1 through B-4, and to the full depth explored in boring B-5, about 6½ feet bgs.

#### Silty Sand (SM)

Underlying the elastic silt in borings B-1 through B-4 was silty sand. The silty sand was typically medium dense, multicolored, moist to wet, fine- to coarse-grained, and contained medium plasticity fines and varying amounts of weathered rock fragments up to ½-inch in diameter. This soil extended to the full depths explored in those borings, about 9 to 26½ feet bgs. This soil was interpreted to consist of residual soils.

### 2.3.3 Groundwater

As shown on the attached logs and on the attached Site Plan, Figure 2, the groundwater level (phreatic surface) was encountered at variable depths (ranging from 1 to 12 feet bgs) within borings B-1 through B-5 during our investigation in early December 2023. To determine approximate regional groundwater levels in the area, we researched well logs available on the Oregon Water Resources Department (OWRD)<sup>3</sup> website for wells located within Section 02, Township 03 South, Range 01 West, Willamette Meridian. Our review indicated that groundwater levels in the area generally ranged from about 12½ to 25 feet bgs. It should be noted groundwater levels vary with local topography. In addition, the groundwater levels reported on the OWRD logs often reflect the purpose of the well, so water well logs may only report deeper, confined groundwater, while geotechnical or environmental borings will often report any groundwater encountered, including shallow, unconfined groundwater. Therefore, the levels reported on the OWRD well logs referenced above are considered generally indicative of local water levels and may not reflect actual groundwater levels at the project site. We anticipate that groundwater levels will fluctuate due to seasonal and annual variations in precipitation, changes in site utilization, or other factors. Additionally, the on-site fine-grained (silty) soils are conducive to formation of perched groundwater.

<sup>3</sup> Oregon Water Resources Department, 2023. Well Log Records, accessed December 2023, from OWRD web site: [http://apps.wrd.state.or.us/apps/gw/well\\_log/](http://apps.wrd.state.or.us/apps/gw/well_log/).

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### 3.0 SEISMIC CONSIDERATIONS

#### 3.1 Seismic Design

Section 1613.2.2 of the 2022 Oregon Structural Specialty Code (2022 OSSC) requires that the determination of the seismic site class be in accordance with Chapter 20 of the American Society of Civil Engineers Minimum Design Loads for Buildings and Other Structures (ASCE 7-16). We have assigned the site as Site Class D (“Stiff Soil”) based on geologic mapping and subsurface conditions encountered during our investigation.

Earthquake ground motion parameters for the site were obtained in accordance with the 2022 OSSC using the Seismic Hazards by Location calculator on the ATC website<sup>4</sup>. The site Latitude 45.337419° North and Longitude 122.767954° West were input as the site location. The following table shows the recommended seismic design parameters for the site.

**Table 1 Seismic Ground Motion Values**

	Parameter	Value
Mapped Acceleration Parameters	Spectral Acceleration, 0.2 second ( $S_s$ )	0.826g
	Spectral Acceleration, 1.0 second ( $S_1$ )	0.384g
Coefficients (Site Class D)	Site Coefficient, 0.2 second ( $F_A$ )	1.169
	Site Coefficient, 1.0 second ( $F_V$ ) <sup>1</sup>	1.916
Adjusted MCE Spectral Response Parameters	MCE Spectral Acceleration, 0.2 second ( $S_{MS}$ )	0.966g
	MCE Spectral Acceleration, 1.0 second ( $S_{M1}$ )	0.736g
Design Spectral Response Accelerations	Design Spectral Acceleration, 0.2 second ( $S_{DS}$ )	0.644g
	Design Spectral Acceleration, 1.0 second ( $S_{D1}$ )	0.491g
Seismic Design Category (Risk Category II)		D

<sup>1</sup>Value determined from 2022 OSSC Table 1613.2.3(2).

#### 3.2 Seismic Hazards

##### 3.2.1 Liquefaction

In general, liquefaction occurs when deposits of loose/soft, saturated, cohesionless soils, generally sands and silts, are subjected to strong earthquake shaking. If these deposits cannot drain quickly enough, pore water pressures can increase, approaching the value of the overburden pressure. The shear strength of a cohesionless soil is directly proportional to the effective stress, which is equal to the difference between the overburden pressure and the pore water pressure. When the pore water pressure increases to the value of the overburden pressure, the shear strength of the soil approaches zero, and the soil can liquefy. The liquefied soils can undergo rapid consolidation or, if unconfined, can flow as a liquid. Structures supported by the liquefied soils can experience rapid, excessive settlement, shearing, or even catastrophic failure.

For fine-grained soils, susceptibility to liquefaction is evaluated based on penetration resistance and plasticity, among other characteristics. Criteria for identifying non-liquefiable, fine-grained soils are constantly evolving. Current practice to identify non-liquefiable, fine-grained soils is based on moisture content and

<sup>4</sup> Applied Technology Council (ATC), 2023. USGS seismic design parameters determined using “Seismic Hazards by Location,” accessed December 2023, from the ATC website <https://hazards.atcouncil.org/>.

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plasticity characteristics of the soils<sup>5,6,7</sup>. The susceptibility of sands, gravels, and sand-gravel mixtures to liquefaction is typically assessed based on penetration resistance, as measured using SPTs, CPTs, or Becker Hammer Penetration tests (BPTs).

The Oregon Department of Geology and Mineral Industries' Oregon Statewide Geohazards Viewer (HazVu)<sup>8</sup> shows a *low* hazard for liquefaction at the site. The Oregon Hazard Explorer for Lifelines Program (O-HELP)<sup>9</sup> show a *very low* hazard for liquefaction for the site or immediate vicinity due to a M9.0 Cascadia Subduction Zone earthquake.

Based on its plasticity, the native elastic silt (MH) is not susceptible to liquefaction. Based on the plasticity characteristics of the fines and its classification as residual soils (fully decomposed rock), the silty sand (SM) encountered within our explorations is considered non-liquefiable. Based on review of geologic mapping and our previous experience in the area, we do not anticipate liquefiable conditions are present at depths below those explored as part of this assignment.

### 3.2.2 Slope Instability

We did not observe any obvious signs of past or on-going slope instability at the site. Review of the Statewide Landslide Information Database for Oregon (SLIDO), available at the DOGAMI website<sup>10</sup>, shows no historic or prehistoric landslides at or in the immediate vicinity of the site. HazVu shows a *low* hazard for landslides at the site. O-HELP shows a *very low* probability of seismically-induced landslides at the site due to a M9.0 Cascadia Subduction Zone earthquake. Given the relatively gentle site grades, the lack of evidence of previous landslides in the vicinity, and the generally low hazard indicated by the hazard mapping, the risk of seismically-induced slope instability occurring at the site is considered very low. The proposed grading includes relatively minimal planned changes in site grades and is not anticipated to significantly increase this risk.

### 3.2.3 Surface Rupture

#### 3.2.3.1 Faulting

Although the site is situated in a region of the country with known active faults and historic seismic activity, no known faults exist on or immediately adjacent to the site. Therefore, the risk of surface rupture at the site due to faulting is considered low.

#### 3.2.3.2 Lateral Spread

Surface rupture due to lateral spread can occur on sites underlain by liquefiable soils that are located on or immediately adjacent to slopes steeper than about 3 degrees (20H:1V), and/or adjacent to a free face, such as a stream bank or the shore of an open body of water. During lateral spread, the materials overlying the

<sup>5</sup> Seed, R.B. et al., 2003. Recent Advances in Soil Liquefaction Engineering: A Unified and Consistent Framework. Earthquake Engineering Research Center Report No. EERC 2003-06.

<sup>6</sup> Bray, Jonathan D., Sancio, Rodolfo B., et al., 2006. Liquefaction Susceptibility of Fine-Grained Soils, Journal of Geotechnical and Geoenvironmental Engineering, Volume 132, Issue 9, September 2006.

<sup>7</sup> Idriss, I.M., Boulanger, R.W., 2008. Soil Liquefaction During Earthquakes, Earthquakes Engineering Research Institute Monograph MNO-12.

<sup>8</sup> Oregon Department of Geology and Mineral Industries, 2023. Oregon Statewide Geohazards Viewer, accessed December 2023, from DOGAMI web site: <http://www.oregongeology.org/sub/hazvu/index.htm>.

<sup>9</sup> Oregon State University College of Engineering, 2023. Oregon Hazard Explorer for Lifelines Program (O-HELP), accessed December 2023, from O-HELP web site: <http://ohelp.oregonstate.edu/#&ui-state=dialog>.

<sup>10</sup> Oregon Department of Geology and Mineral Industries, 2023. Statewide Landslide Information Database for Oregon (SLIDO), accessed December 2023, from DOGAMI web site: <https://gis.dogami.oregon.gov/maps/slido/>.

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liquefied soils are subject to lateral movement downslope or toward the free face. Based on the relatively level topography at the site and the discontinuous nature of the liquefiable soil layers, the risk of damage associated with lateral spread is negligible.

#### 4.0 CONCLUSIONS

Based on the results of our field explorations and analyses, the site may be developed as described in Section 1.1 of this report, provided the recommendations presented in this report are incorporated into the design and development. Satisfactory subgrade support for shallow foundations, floor slabs, retaining walls, and pavements can be achieved from the native, medium stiff to better elastic silt (MH), the native, medium dense to better silty sand (SM), or new structural fill that is properly placed and compacted on these materials during construction.

The near surface fine-grained silty soils (MH, SM) are susceptible to disturbance during wet weather. Trafficability of these soils may be difficult, and significant damage to the subgrade could occur, if earthwork is undertaken without proper precautions at times when the exposed soils are more than a few percentage points above optimum moisture content. In the event that construction occurs during wet weather, CGT recommends that measures be implemented to protect the fine-grained subgrade in areas of repeated construction traffic and within footing excavations. Geotechnical recommendations for wet weather construction are presented in Section 5.3 of this report.

As indicated in Section 2.3.3 above, the groundwater level (phreatic surface) was encountered at depths of about 1 to 12 feet bgs in the borings advanced at the site in early December 2023. The following geotechnical conclusions are presented relative to the groundwater levels observed at this site:

- Some seasonal and annual fluctuation<sup>11</sup> of the groundwater level should be anticipated at this site. With regard to the building pad, we recommend the “seasonal high groundwater level” be assigned at an elevation of 265 feet. In the event the building ground floor will be established within 2 feet of that elevation, the geotechnical engineer should be consulted to review the proposed construction and provide supplemental recommendations for waterproofing and/or underslab drainage, if warranted.
- Within planned pavement areas, we recommend site grades be maintained at their current elevations to the extent possible. Permanent cuts at the site extending below a depth of 1-foot bgs, if proposed, should be reviewed by the geotechnical engineer.
- The relatively shallow groundwater effectively precludes infiltration of stormwater collected from new impervious areas of the site. Notwithstanding the preceding, in the event stormwater infiltration facilities(ies) are to be pursued at this site, the geotechnical engineer should be consulted to review potential siting and depth(s) of those facilities.
- With regard to construction, depending on the time of year (and the area of the site) that site work takes place, groundwater may be encountered when excavations extend below a few feet below existing ground surface and should be factored. Dewatering plans will rest with the project contractor. Additional discussion of dewatering considerations is presented in Section 5.2.2 of this report.

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<sup>11</sup> The client is advised that monitoring of the groundwater level at the site could be performed at the site via periodic explorations (e.g. hand auger borings) and/or through the installation of piezometers. Such services are outside the scope of this current assignment, but could be provided, upon request, for an additional fee.

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## 5.0 RECOMMENDATIONS

The recommendations presented in this report are based on the information provided to us, results of our field investigation and analyses, laboratory data, and professional judgment. CGT has observed only a small portion of the pertinent subsurface conditions. The recommendations are based on the assumptions that the subsurface conditions do not deviate appreciably from those found during the field investigation. CGT should be consulted for further recommendations if the design of the proposed development changes and/or variations or undesirable geotechnical conditions are encountered during site development.

### 5.1 Site Preparation

#### 5.1.1 Stripping & Grubbing

Existing vegetation, topsoil, and rooted soils (OL) should be removed from within, and for a minimum 5-foot margin around, proposed building pad, structural fill, and pavement areas. Based on the results of our field explorations, topsoil stripping depths are anticipated to be on the order of about ¼-foot bgs. These materials may be deeper or shallower at locations away from the completed explorations. The geotechnical engineer's representative should provide recommendations for actual stripping depths based on observations during site stripping. Stripped surface vegetation and rooted soils should be transported off-site for disposal, or stockpiled for later use in landscaped areas.

Grubbing of trees should include the removal of the root mass and roots greater than ½ inch in diameter. Grubbed materials should be transported off-site for disposal. Root masses from larger trees may extend greater than 3 feet bgs. Where root masses are removed, the resulting excavation should be properly backfilled with structural fill in conformance with Section 5.4 of this report.

#### 5.1.2 Existing Utilities & Below-Grade Structures

All existing utilities at the site should be identified prior to excavation. Abandoned utility lines beneath the new building, pavements, and hardscaping features should be completely removed or grouted full. Soft, loose, or otherwise unsuitable soils encountered in utility trench excavations should be removed and replaced with structural fill in conformance with Section 5.4 this report. Buried structures (i.e. footings, foundation walls, retaining walls, slabs-on-grade, tanks, etc.), if encountered during site development, should be completely removed and replaced with structural fill in conformance with Section 5.4 of this report.

#### 5.1.3 Subgrade Preparation - Building Pad & Pavement Areas

After site preparation as recommended above, but prior to placement of structural fill and/or aggregate base, the geotechnical engineer's representative should observe the exposed subgrade soils in order to identify areas of excessive yielding through either proof rolling or probing. Proof rolling of subgrade soils is typically conducted during dry weather using a fully-loaded, 10- to 12-cubic-yard, tandem-axle, tire-mounted, dump truck or equivalent weighted water truck. Areas of limited access or that appear too soft or wet to support proof rolling equipment should be evaluated by probing. During wet weather, subgrade preparation should be performed in general accordance with the recommendations presented in Section 5.3 of this report. If areas of soft soil or excessive yielding are identified, the affected material should be over-excavated to firm, unyielding subgrade, and replaced with imported granular structural fill in conformance with Section 5.4.2 of this report.

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The elastic silt (MH) soils should be kept moist, near optimum moisture content, and not allowed to dry out. If allowed to dry below optimum moisture content, to a point where surface cracking appears in the subgrade, the affected material should be over-excavated and replaced with imported granular structural fill.

#### 5.1.4 Erosion Control

Erosion and sedimentation control measures should be employed in accordance with applicable City, County, and State regulations.

### **5.2 Temporary Excavations**

#### 5.2.1 Overview

Conventional earthmoving equipment in proper working condition should be capable of making necessary excavations for the anticipated site cuts as described earlier in this report. All excavations should be in accordance with applicable OSHA and state regulations. It is the contractor's responsibility to select the excavation methods, to monitor site excavations for safety, and to provide any shoring required to protect personnel and adjacent improvements. A "competent person," as defined by OR-OSHA, should be on-site during construction in accordance with regulations presented by OR-OSHA. CGT's current role on the project does not include review or oversight of excavation safety.

#### 5.2.2 Dewatering

As indicated in Section 2.3.3 above, groundwater was encountered at depths of approximately 1 to 12 feet bgs within the borings advanced at the site in early December 2023. The soils encountered at these depths exhibited relatively high fines content and are anticipated to exhibit low to moderate rates of transmissivity. Accordingly, we would expect low to moderate seepage when excavations extend below the groundwater level. Pumping from sumps may be effective in removing groundwater within shallow or localized excavations at the site. Pumping from multiple well points will likely be required for larger excavations and those extending below the groundwater level. The sumps or wells should be installed to remove water to a depth of at least 2 feet below the lowest elevation of the excavation, and should be installed and put into operation prior to commencing excavation. With regards to temporary dewatering, the contractor or his representative should determine the appropriate size, number, and location of sump pumps or wells. The project civil engineer should evaluate requirements for disposal of the resultant discharge.

#### 5.2.3 OSHA Soil Type

For use in the planning and construction of temporary excavations up to 10 feet in depth, an OSHA soil type "A" may be used for the native elastic silt (MH) encountered near the surface of the site. In the event groundwater seepage is observed within temporary excavations within this soil, the sidewalls should be flattened in accordance with OSHA soil type "C". Similarly, an OSHA soil type "C" should be used for the native silty sand (SM) encountered at depth in the borings.

#### 5.2.4 Utility Trenches

Temporary trench cuts should stand near vertical to depths of approximately 4 feet in the native, elastic silt (MH) encountered near the surface of the site. If groundwater seepage undermines the stability of the trench, or if sidewall caving is observed during excavation, the sidewalls should be flattened or shored. Depending on the time of year trench excavations occur, trench dewatering may be required in order to maintain dry working conditions. A discussion of dewatering of temporary excavations is presented in Section 5.2.2



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above. If groundwater is encountered, we recommend placing trench stabilization material at the base of the excavations. Trench stabilization material should be in conformance with Section 5.4.3.

#### 5.2.5 Excavations Near Foundations

Excavations near footings should not extend within a 1 horizontal to 1 vertical (1H:1V) plane projected out and down from the outside, bottom edge of the footings. In the event excavation needs to extend below the referenced plane, temporary shoring of the excavation and/or underpinning of the subject footing may be required. The geotechnical engineer should be consulted to review proposed excavation plans for this design case to provide specific recommendations.

### 5.3 **Wet Weather Considerations**

For planning purposes, the wet season should be considered to extend from late September to late June. It is our experience that dry weather working conditions should prevail between early July and mid-September. Notwithstanding the above, soil conditions should be evaluated in the field by the geotechnical engineer's representative at the initial stage of site preparation to determine whether the recommendations within this section should be incorporated into construction.

#### 5.3.1 Overview

Due to their fines content, the on-site silty soils (MH, SM) are susceptible to disturbance during wet weather. Trafficability of these soils may be difficult, and significant damage to subgrade soils could occur, if earthwork is undertaken without proper precautions at times when the exposed soils are more than a few percentage points above optimum moisture content. For wet weather construction, site preparation activities may need to be accomplished using track-mounted equipment, loading removed material onto trucks supported on granular haul roads, or other methods to limit soil disturbance. The geotechnical engineer's representative should evaluate the subgrade during excavation by probing rather than proof rolling. Soils that have been disturbed during site preparation activities, or soft or loose areas identified during probing, should be over-excavated to firm, unyielding subgrade, and replaced with imported granular structural fill in conformance with Section 5.4.2.

#### 5.3.2 Geotextile Separation Fabric

We recommend a geotextile separation fabric be placed to serve as a barrier between the prepared subgrade and granular fill/base rock in areas of repeated or heavy construction traffic. The geotextile fabric should meet the requirements presented in the current Oregon Department of Transportation (ODOT) Standard Specification for Construction (ODOT SSC), Section 02320.

#### 5.3.3 Granular Working Surfaces (Haul Roads & Staging Areas)

Haul roads subjected to repeated heavy, tire-mounted, construction traffic (e.g. dump trucks, concrete trucks, etc.) will require a minimum of 18 inches of imported granular material. For light staging areas, 12 inches of imported granular material is typically sufficient. Additional granular material or geo-grid reinforcement may be recommended based on site conditions and/or loading at the time of construction. The imported granular material should be in conformance with Section 5.4.2 and have less than 5 percent material passing the U.S. Standard No. 200 Sieve. The prepared subgrade should be covered with geotextile fabric (Section 5.3.2) prior to placement of the imported granular material. The imported granular material should be placed in a single lift (up to 24 inches deep) and compacted using a smooth-drum, non-vibratory roller until well-keyed.

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#### 5.3.4 Footing Subgrade Protection

A minimum of 3 inches of imported granular material (crushed rock) is recommended to protect fine-grained (silty), footing subgrades from foot traffic during inclement weather. The imported granular material should be in conformance with Section 5.4.2. The maximum particle size should be limited to 1 inch. The imported granular material should be placed in one lift over the prepared, undisturbed subgrade, and compacted using non-vibratory equipment until well keyed.

Surface water should not be allowed to collect in footing excavations. The excavations should be draped and/or provided with sumps to preclude water accumulation during inclement weather.

### 5.4 **Structural Fill**

The geotechnical engineer should be provided the opportunity to review all materials considered for use as structural fill (prior to placement). Samples of the proposed fill materials should be submitted to the geotechnical engineer a minimum of 5 business days prior their use on site<sup>12</sup>. The geotechnical engineer's representative should be contacted to evaluate compaction of structural fill as the material is being placed. Evaluation of compaction may take the form of in-place density tests and/or proof roll tests with suitable equipment. Structural fill should be evaluated at intervals not exceeding every 2 vertical feet as the fill is being placed.

#### 5.4.1 On-Site Soils – General Use

##### 5.4.1.1 Elastic Silt (MH), Silty Sand (SM)

Re-use of these soils as structural fill may be difficult because these soils are sensitive to small changes in moisture content and are difficult, if not impossible, to adequately compact during wet weather. We anticipate the moisture content of these soils will be higher than the optimum moisture content for satisfactory compaction. Therefore, moisture conditioning (drying) should be expected in order to achieve adequate compaction. If used as structural fill, these soils should be free of organic matter, debris, and particles larger than 4 inches. When used as structural fill, these soils should be placed in lifts with a maximum pre-compaction thickness of about 8 inches at moisture contents within –1 and +3 percent of optimum, and compacted to not less than 92 percent of the material's maximum dry density, as determined in general accordance with ASTM D1557 (Modified Proctor).

If the on-site materials cannot be properly moisture-conditioned and/or processed, we recommend using imported granular material for structural fill.

#### 5.4.2 Imported Granular Structural Fill – General Use

Imported granular structural fill should consist of angular pit or quarry run rock, crushed rock, or crushed gravel that is fairly well graded between coarse and fine particle sizes. The granular fill should contain no organic matter, debris, or particles larger than 4 inches, and have less than 5 percent material passing the U.S. Standard No. 200 Sieve. For fine-grading purposes, the maximum particle size should be limited to 1½ inches. The percentage of fines can be increased to 12 percent of the material passing the U.S. Standard No. 200 Sieve if placed during dry weather, and provided the fill material is moisture-conditioned, as necessary, for proper compaction. Imported granular fill material should be placed in lifts with a maximum thickness of about 12 inches, and compacted to not less than 95 percent of the material's maximum dry

<sup>12</sup> Laboratory testing for moisture density relationship (Proctor) is required. Tests for gradation may be required.

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density, as determined in general accordance with ASTM D1557 (Modified Proctor). Proper moisture conditioning and the use of vibratory equipment will facilitate compaction of these materials.

Granular fill materials with high percentages of particle sizes in excess of 1½ inches are considered non-moisture-density testable materials. As an alternative to conventional density testing, compaction of these materials should be evaluated by proof roll test observation (deflection tests), where accepted by the geotechnical engineer.

#### 5.4.3 Trench Base Stabilization Material

If groundwater is present at the base of utility excavations, trench base stabilization material should be placed. Trench base stabilization material should consist of a minimum of 1 foot of well-graded granular material with a maximum particle size of 4 inches and less than 5 percent material passing the U.S. Standard No. 4 Sieve. The material should be free of organic matter and other deleterious material, placed in one lift, and compacted until well-keyed.

#### 5.4.4 Trench Backfill Material

Trench backfill for the utility pipe base and pipe zone should consist of granular material as recommended by the utility pipe manufacturer. Trench backfill above the pipe zone should consist of well-graded granular material containing no organic matter or debris, have a maximum particle size of ¾ inch, and have less than 8 percent material passing the U.S. Standard No. 200 Sieve. As a guideline, trench backfill should be placed in maximum 12-inch-thick lifts. The earthwork contractor may elect to use alternative lift thicknesses based on their experience with specific equipment and fill material conditions during construction in order to achieve the required compaction. The following table presents recommended relative compaction percentages for utility trench backfill.

Backfill Zone	Recommended <u>Minimum</u> Relative Compaction	
	Structural Areas <sup>1,2</sup>	Landscaping Areas
Pipe Base and Within Pipe Zone	90% ASTM D1557 or pipe manufacturer's recommendation	85% ASTM D1557 or pipe manufacturer's recommendation
Above Pipe Zone	92% ASTM D1557	88% ASTM D1557
Within 3 Feet of Design Subgrade	95% ASTM D1557	90% ASTM D1557

<sup>1</sup> Includes proposed building, pavement areas, structural fill areas, exterior hardscaping, etc.  
<sup>2</sup> Or as specified by the local jurisdiction where located within the public right of way.

#### 5.4.5 Controlled Low-Strength Material (CLSM)

CLSM is a self-compacting, cementitious material that is typically considered when backfilling localized areas. CLSM is sometimes referred to as "controlled density fill" or CDF. Due to its flowable characteristics, CLSM typically can be placed in restricted-access excavations where placing and compacting fill is difficult. If chosen for use at this site, we recommend the CLSM be in conformance with Section 00442 of the most recent, ODOT SSC. The geotechnical engineer's representative should observe placement of the CLSM and obtain samples for compression testing in accordance with ASTM D4832. As a guideline, for each day's placement, two compressive strength specimens from the same CLSM sample should be tested. The results of the two individual compressive strength tests should be averaged to obtain the reported 28-day

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compressive strength. If CLSM is considered for use on this site, please contact the geotechnical engineer for site-specific and application-specific recommendations.

## 5.5 Shallow Foundations

### 5.5.1 Subgrade Preparation

Satisfactory subgrade support for shallow foundations can be obtained from the native, medium stiff to better elastic silt (MH), the native, medium dense to better silty sand (SM), or new structural fill that is properly placed and compacted on these materials during construction. These materials were first encountered at depths of about 5 feet bgs within our borings (B-1 and B-2) advanced in the vicinity of the building pad. The geotechnical engineer's representative should be contacted to observe subgrade conditions prior to placement of forms, reinforcement steel, or granular backfill (if required). If soft, loose, or otherwise unsuitable soils are encountered, they should be over-excavated as recommended by the geotechnical representative at the time of construction. The resulting over-excavation should be brought back to grade with imported granular structural fill in conformance with Section 5.4.2. The maximum particle size of over-excavation backfill should be limited to 1½ inches. All granular pads for footings should be constructed a minimum of 6 inches wider on each side of the footing for every vertical foot of over-excavation.

### 5.5.2 Minimum Footing Width & Embedment

Minimum footing widths should be in conformance with the current OSSC. As a guideline, CGT recommends individual spread footings have a minimum width of 24 inches. For one- to two-story, light-framed buildings, we recommend continuous wall footings have a minimum width of 12 and 15 inches, respectively. All footings should be founded at least 18 inches below the lowest, permanent adjacent grade to develop lateral capacity and for frost protection.

### 5.5.3 Bearing Pressure & Settlement

Footings founded as recommended above should be proportioned for a maximum allowable soil bearing pressure of 2,000 pounds per square foot (psf). This bearing pressure is a net bearing pressure, applies to the total of dead and long-term live loads, and may be increased by one-third when considering seismic or wind loads. For foundations founded as recommended above, total settlement of foundations is anticipated to be less than 1 inch. Differential settlements between adjacent columns and/or bearing walls should not exceed ½ inch. If an increased allowable soil bearing pressure is desired, the geotechnical engineer should be consulted.

### 5.5.4 Lateral Capacity

A maximum passive (equivalent fluid) earth pressure of 150 pounds per cubic foot (pcf) is recommended for design of footings cast neat into excavations in suitable native soil or confined by imported granular structural fill that is properly placed and compacted during construction. The recommended earth pressure was computed using a factor of safety of 1½, which is appropriate due to the amount of movement required to develop full passive resistance. In order to develop the above capacity, the following should be understood:

1. Concrete must be poured neat in excavations or the foundations must be backfilled with imported granular structural fill,
2. The adjacent grade must be level,
3. The static ground water level must remain below the base of the footings throughout the year.

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4. Adjacent floor slabs, pavements, or the upper 12-inch-depth of adjacent, unpaved areas should not be considered when calculating passive resistance.

An ultimate coefficient of friction equal to 0.35 may be used when calculating resistance to sliding for footings founded as described above. An ultimate coefficient of friction equal to 0.45 may be used when calculating resistance to sliding for footings founded on a minimum of 6 inches of imported granular structural fill (crushed rock) that is properly placed and compacted during construction.

#### 5.5.5 Subsurface Drainage

Recognizing the near-surface fine-grained (silty) soils encountered at this site, we recommend placing foundation drains at the exterior, base elevations of perimeter continuous wall footings. Foundation drains should consist of a minimum 4-inch diameter, perforated, PVC drainpipe wrapped with a non-woven geotextile filter fabric. The drains should be backfilled with a minimum of 2 cubic feet of open graded drain rock per lineal foot of pipe. The drain rock should also be encased in a geotextile fabric in order to provide separation from the surrounding fine-grained soils. Foundation drains should be positively sloped and should outlet to a suitable discharge point. The geotechnical engineer's representative should observe the drains prior to backfilling. Roof drains should not be tied into foundation drains.

### 5.6 **Rigid Retaining Walls**

#### 5.6.1 Footings

Retaining wall footings should be designed and constructed in conformance with the recommendations presented in Section 5.5, as applicable.

#### 5.6.2 Wall Drains

We recommend placing retaining wall drains<sup>13</sup> at the base elevation of the heel of retaining wall footings. Retaining wall drains should consist of a minimum 4-inch-diameter, perforated, HDPE (High Density Polyethylene) drainpipe wrapped with a non-woven geotextile filter fabric. The drains should be backfilled with a minimum of 2 cubic feet of open graded drain rock per lineal foot of pipe. The drain rock should be encased in a geotextile fabric in order to provide separation from the surrounding soils. Retaining wall drains should be positively sloped and should outlet to a suitable discharge point. The geotechnical engineer's representative should be contacted to observe the drains prior to backfilling. Roof or area drains should not be tied into retaining wall drains.

#### 5.6.3 Wall Backfill

Retaining walls should be backfilled with imported granular structural fill in conformance with Section 5.4.2 and contain less than 5 percent passing the U.S. Standard No. 200 Sieve. The backfill should be compacted to a minimum of 90 percent of the material's maximum dry density as determined in general accordance with ASTM D1557 (Modified Proctor). When placing fill behind walls, care must be taken to minimize undue lateral loads on the walls. Heavy compaction equipment should be kept at least "H" feet from the back of the walls, where "H" is the height of the wall. Light mechanical or hand tamping equipment should be used for compaction of backfill materials within "H" feet of the back of the walls.

<sup>13</sup> Building retaining walls that will be fully (or partially) constructed below the groundwater level, if any, should be waterproofed and designed to accommodate hydrostatic loading conditions. The geotechnical engineer should be contacted to provide supplemental recommendations for this design case, if warranted.

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#### 5.6.4 Design Parameters & Limitations

For rigid retaining walls founded, backfilled, and drained as recommended above, the following table presents parameters recommended for design.

**Table 3 Design Parameters for Rigid Retaining Walls**

Retaining Wall Condition	Modeled Backfill Condition	Static Equivalent Fluid Pressure (S <sub>A</sub> ) <sup>1</sup>	Seismic Equivalent Fluid Pressure (S <sub>AE</sub> ) <sup>1,2</sup>	Surcharge from Uniform Load, q, Acting on Backfill Behind Retaining Wall
Not Restrained from Rotation	Level (i=0)	28 pcf	38 pcf	0.22*q
Restrained from Rotation	Level (i=0)	50 pcf	52 pcf	0.38*q

<sup>1</sup> Refer to the attached Figure 4 for a graphical representation of static and seismic loading conditions. Seismic resultant force acts at 0.6H above the base of the wall.

<sup>2</sup> Seismic (dynamic) lateral loads were computed using the Mononobe-Okabe Equation as presented in the 1997 Federal Highway Administration (FHWA) design manual. Static and seismic equivalent fluid pressures are not additive.

The above design recommendations are based on the assumptions that:

- The walls consist of concrete cantilevered retaining walls ( $\beta = 0$  and  $\delta = 24$  degrees, see Figure 4).
- The walls are 10 feet or less in height.
- The backfill is drained and consists of imported granular structural fill ( $\phi = 38$  degrees).
- No point, line, or strip load surcharges are imposed behind the walls.
- The grade behind the wall is level, or sloping down and away from the wall, for a distance of 15 feet or more from the wall.
- The grade in front of the walls is level or ascending for a distance of at least 5 feet from the wall.

Re-evaluation of our recommendations will be required if the retaining wall design criteria for the project vary from these assumptions.

#### 5.6.5 Surcharge Loads

Where present, surcharges from adjacent site features (i.e. buildings, slabs, pavements, etc.) should be evaluated in design of retaining walls at the site. Methods for calculating lateral pressures on rigid retaining walls from strip, line, and vertical point loads are presented on the attached Figure 5.

### 5.7 Floor Slabs

#### 5.7.1 Subgrade Preparation

Satisfactory subgrade support for slabs constructed on grade, supporting up to 150 psf area loading, can be obtained from the native, medium stiff to better elastic silt (MH), the native, medium dense to better silty sand (SM), or new structural fill that is properly placed and compacted on these materials during construction. The geotechnical engineer's representative should be contacted to observe subgrade conditions prior to placement of structural fill or aggregate base. If soft, loose, or otherwise unsuitable soils are encountered, they should be over-excavated as recommended by the geotechnical representative at the time of

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construction. The resulting over-excavation should be brought back to grade with imported granular structural fill in conformance with Section 5.4.2.

#### 5.7.2 Crushed Rock Base

Concrete floor slabs should be supported on a minimum 6-inch-thick layer of crushed rock (base rock). Floor slab base rock should consist of well-graded granular material (crushed rock) containing no organic matter or debris, have a maximum particle size of  $\frac{3}{4}$  inch, and have less than 5 percent material passing the U.S. Standard No. 200 Sieve. Floor slab base rock should be placed in one lift and compacted to not less than 95 percent of the material's maximum dry density as determined in general accordance with ASTM D1557 (Modified Proctor). We recommend "choking" the surface of the base rock with sand just prior to concrete placement. Choking means the voids between the largest aggregate particles are filled with sand, but does not provide a layer of sand above the base rock. Choking the base rock surface reduces the lateral restraint on the bottom of the concrete during curing. Choking the base rock also reduces punctures in vapor retarding membranes due to foot traffic where such membranes are used.

#### 5.7.3 Design Considerations

For floor slabs constructed as recommended, an effective modulus of subgrade reaction of 150 pounds per cubic inch (pci) is recommended for the design of the floor slab. A higher effective modulus of subgrade reaction can be obtained by increasing the base rock thickness. Please contact the geotechnical engineer for additional recommendations if a higher modulus is desired. Floor slabs constructed as recommended will likely settle less than  $\frac{1}{2}$  inch. For general floor slab construction, slabs should be jointed around columns and walls to permit slabs and foundations to settle differentially.

#### 5.7.4 Subgrade Moisture Considerations

Liquid moisture and moisture vapor should be expected at the subgrade surface. The recommended crushed rock base is anticipated to provide protection against liquid moisture. Where moisture vapor emission through the slab must be minimized, e.g. impervious floor coverings, storage of moisture sensitive materials directly on the slab surface, etc., a vapor retarding membrane or vapor barrier below the slab should be considered. Factors such as cost, special considerations for construction, floor coverings, and end use suggest that the decision regarding a vapor retarding membrane or vapor barrier be made by the architect and owner.

If a vapor retarder or vapor barrier is placed below the slab, its location should be based on current American Concrete Institute (ACI) guidelines, ACI 302 Guide for Concrete Floor and Slab Construction. In some cases, this indicates placement of concrete directly on the vapor retarder or barrier. Please note that the placement of concrete directly on impervious membranes increases the risk of plastic shrinkage cracking and slab curling in the concrete. Construction practices to reduce or eliminate such risk, as described in ACI 302, should be employed during concrete placement.

### 5.8 Pavements

#### 5.8.1 Subgrade Preparation

Satisfactory subgrade support for pavements can be obtained from the native, medium stiff to better elastic silt (MH), the native, medium dense to better silty sand (SM), or new structural fill that is properly placed and compacted on these materials during construction. Pavement subgrade preparation should be in

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conformance with Section 5.1.3 of this report. Pavement subgrade surfaces should be crowned (or sloped) for proper drainage in accordance with specifications provided by the project civil engineer.

5.8.2 Traffic Classifications

Recognizing that traffic data has not been provided, CGT has considered four levels of traffic demand for review and design of pavement sections. We modeled the following four design cases (traffic levels) developed from the Asphalt Pavement Association of Oregon (APA0):

- *APA0 Level I (Very Light):* This design case considers typical average daily truck traffic (ADTT) of 1 per day over 20 years. Among others, examples under this loading consist of passenger car parking stalls, residential driveways, and seasonal recreational roads.
- *APA0 Level II (Light):* This design case considers typical ADTT of 2 to 7 per day over 20 years. Examples under this loading consist of residential streets and parking lots of less than 500 stalls.
- *APA0 Level III (Low Moderate):* This design case considers typical ADTT of 7 to 14 per day over 20 years. Among others, examples under this loading consist of urban minor collector streets and parking lots with more than 500 stalls.
- *APA0 Level IV (Moderate):* This design case considers typical ADTT of 14 to 35 per day over 20 years. Among others, examples under this loading consist of urban minor arterial streets and residential streets with bus routes.

We recommend the owner and design team review the traffic levels presented above and select those that most accurately represent anticipated daily truck traffic for select new pavements.

5.8.3 Asphalt Concrete Pavements

5.8.3.1 *Input Parameters*

Design of the asphalt concrete (AC) pavement sections presented below were based on the parameters presented in the following table, the American Association of State Highway and Transportation Officials (AASHTO) 1993 “Design of Pavement Structures” manual, and pavement design manuals presented by APA0 and ODOT<sup>14</sup>. If any of the items listed need revision, please contact us and we will reassess the provided design sections.

**Table 4 Input Parameters Used in AC Pavement Design**

Input Parameter	Design Value <sup>1</sup>	Input Parameter	Design Value <sup>1</sup>
Pavement Design Life	20 years	Resilient Modulus	Subgrade (Native Soils) <sup>4</sup> 5,000 psi
Annual Percent Growth	0 percent	Structural Coefficient <sup>2</sup>	Crushed Aggregate Base <sup>2</sup> 20,000 psi
Initial Serviceability <sup>2</sup>	4.2		Crushed Aggregate Base 0.10
Terminal Serviceability <sup>2</sup>	2.5		Asphalt 0.42
Reliability <sup>2</sup>	75 percent	Vehicle Traffic <sup>4</sup>	APA0 Level I (Very Light) Less than 10,000
Standard Deviation <sup>2</sup>	0.49	(range in ESAL <sup>5</sup> )	APA0 Level II (Light) Less than 50,000
Drainage Factor <sup>3</sup>	1.0		APA0 Level III (Low Moderate) Less than 100,000
---	---		APA0 Level IV (Moderate) Less than 250,000

<sup>1</sup> If any of the above parameters are incorrect, please contact us so that we may revise our recommendations, if warranted.

<sup>2</sup> Value based on guidelines presented in the ODOT Pavement Design Guide.

<sup>3</sup> Assumes good drainage away from pavement, base, and subgrade is achieved by proper crowning of subgrades.

<sup>14</sup> Oregon Department of Transportation (ODOT) Pavement Design Guide, January 2019.



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<sup>4</sup> Values based on experience with similar soils in the region.

<sup>5</sup> ESAL = Total 18-Kip equivalent single axle load. Traffic levels taken from Table 3.1 of APAO manual. If actual traffic levels will be above those identified above, the geotechnical engineer should be consulted.

### 5.8.3.2 Recommended Minimum Sections

The following table presents the minimum AC pavement sections for various traffic loads indicated in the preceding table, based on the referenced AASHTO procedures.

**Table 5 Recommended Minimum AC Pavement Sections**

Material	APAO Traffic Loading			
	Level I	Level II	Level III	Level IV
Asphalt Pavement (inches)	3	3½	4	4½
Crushed Aggregate Base (inches) <sup>1</sup>	6	8	10	11
Subgrade Soils	Prepared in conformance with Section 5.8.1 of this report.			

<sup>1</sup> Thickness shown assumes dry weather construction. A granular sub-base section and/or a geotextile separation fabric may be required in wet conditions in order to support construction traffic and protect the subgrade. Refer to Section 5.3 for additional discussion.

### 5.8.3.3 AC Pavement Materials

**Aggregate Base:** We recommend pavement aggregate base consist of dense-graded aggregate in conformance with Section 02630.10 of the most recent ODOT SSC, with the following additional considerations. We recommend the material consist of crushed rock or gravel, have a maximum particle size of 1½ inches, and have less than 5 percent material passing the U.S. Standard No. 200 Sieve. Aggregate base should be compacted to not less than 95 percent of the material's maximum dry density as determined in general accordance with ASTM D1557 (Modified Proctor).

**Asphalt Concrete:** We recommend asphalt pavement consist of Level 2, ½-inch, dense-graded AC in conformance with the most recent ODOT SSC. Asphalt pavement should be compacted to at least 91 percent of the material's theoretical maximum density as determined in general accordance with ASTM D2041 (Rice Specific Gravity).

## 5.8.4 Rigid (Concrete) Pavements

### 5.8.4.1 Input Parameters

Design of the rigid (Portland Cement Concrete, PCC) pavement sections presented below was based on the parameters presented in the following table and the referenced AASHTO design manual. If any of the items listed need revision, please contact us and we will reassess the provided design sections. Jointing, reinforcement, and surface finish should be performed in accordance with the project civil engineer, architect, and owner requirements.

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**Table 6 Input Parameters Used in PCC Pavement Design**

Parameter / Discussion	Design Value	
Subgrade Modulus (k-value)	150 pci	
Standard Deviation <sup>1</sup>	0.39	
Load Transfer Devices incorporated?	Yes; Load Transfer Coefficient = 3.2	
Minimum Concrete Modulus of Rupture	600 psi	
Concrete Elastic Modulus	5.0 x 10 <sup>6</sup> psi	
Minimum Air-Entrained Concrete Compressive Strength	4,000 psi	
Vehicle Traffic <sup>2</sup> (range in ESAL)	APAO Level I (Very Light)	Less than 10,000
	APAO Level II (Light)	Less than 50,000
	APAO Level III (Low Moderate)	Less than 100,000
	APAO Level IV (Moderate)	Less than 250,000

<sup>1</sup> Value based on guidelines presented in the ODOT Pavement Design Guide.  
<sup>2</sup> ESAL = Total 18-Kip equivalent single axle load. If actual traffic levels will be above those identified above, the geotechnical engineer should be consulted.

#### 5.8.4.2 Recommended Minimum Sections

The following table presents the recommended minimum concrete pavement sections based on the referenced AASHTO procedures.

**Table 7 Recommended Minimum PCC Pavement Sections**

Material	APAO Traffic Loading			
	Level I	Level II	Level III	Level IV
Portland Cement Concrete, PCC <sup>1</sup> (inches)	5	5½	6	7
All-Weather Base <sup>2,3</sup> (inches)	4	4	4	4
Subgrade Soils	Prepared in conformance with Section 5.7.1 of this report			

<sup>1</sup> Concrete strength and other properties should be in conformance with Table 6 above.  
<sup>2</sup> All-weather base (base rock) should be a minimum of 4 inches thick.  
<sup>3</sup> Thickness shown assumes dry weather construction. A granular sub-base section and/or a geotextile separation fabric may be required in wet conditions in order to support construction traffic and protect the subgrade. Refer to Section 5.3 for additional discussion.

#### 5.8.4.3 PCC Pavement Materials

All-Weather Base: We recommend all-weather base consist of dense-graded aggregate in conformance with Section 02630.10 of the most recent ODOT SSC, with the following additional considerations. We recommend the material consist have a maximum particle size of ¾-inch and have less than 5 percent material passing the U.S. Standard No. 200 Sieve. Aggregate base should be compacted to not less than 95 percent of the material's maximum dry density as determined in general accordance with ASTM D1557 (Modified Proctor).

PCC Pavement: Portland cement concrete (PCC) pavement should be in conformance with Section 02001 of the most recent ODOT SSC and meet the properties detailed in Table 6 above.

Ron Tonkin Gran Turismo Lamborghini Dealership  
Wilsonville, Oregon  
CGT Project Number G2306033  
December 27, 2023

## 5.9 Additional Considerations

### 5.9.1 Drainage

Subsurface drains should be connected to the nearest storm drain or other suitable discharge point. Paved surfaces and grading near or adjacent to the building should be sloped to drain away from the building. Surface water from paved surfaces and open spaces should be collected and routed to a suitable discharge point. Surface water should not be directed into foundation drains, retaining wall drains, or onto site slopes.

### 5.9.2 Expansive Potential

The near surface native soils consist mostly of moderate plasticity elastic silt soils. Based on our experience with similar soils in the vicinity of the site, these soils are not considered to be susceptible to appreciable movements from changes in moisture content. Accordingly, no special considerations are required to mitigate expansive potential of the near surface soils at the site.

## 6.0 RECOMMENDED ADDITIONAL SERVICES

### 6.1 Design Review

Geotechnical design review is of paramount importance. We recommend the geotechnical design review take place prior to releasing bid packets to contractors.

### 6.2 Observation of Construction

Satisfactory earthwork, foundation, floor slab, and pavement performance depends to a large degree on the quality of construction. Sufficient observation of the contractor's activities is a key part of determining that the work is completed in accordance with the construction drawings and specifications. Subsurface conditions observed during construction should be compared with those encountered during subsurface explorations, and recognition of changed conditions often requires experience. We recommend that qualified personnel visit the site with sufficient frequency to detect whether subsurface conditions change significantly from those observed to date and anticipated in this report. We recommend geotechnical engineer's representative attend a pre-construction meeting coordinated by the contractor and/or developer. The project geotechnical engineer's representative should provide observations and/or testing of at least the following earthwork elements during construction:

- Site Stripping and Grubbing
- Subgrade Preparation for Shallow Foundations, Retaining Walls, Structural Fills, Floor Slabs, and Pavements
- Compaction of Structural Fill, Retaining Wall Backfill, and Utility Trench Backfill
- Compaction of Base Rock for Floor Slabs and Pavements
- Compaction of Asphalt Concrete for Pavements

It is imperative that the owner and/or contractor request earthwork observations and testing at a frequency sufficient to allow the geotechnical engineer to provide a final letter of compliance for the earthwork activities.

Ron Tonkin Gran Turismo Lamborghini Dealership  
Wilsonville, Oregon  
CGT Project Number G2306033  
December 27, 2023

## 7.0 LIMITATIONS

We have prepared this report for use by the owner/developer and other members of the design and construction team for the proposed development. The opinions and recommendations contained within this report are forwarded to assist in the planning and design process and are not intended to be, nor should they be construed as, a warranty of subsurface conditions.

We have made observations based on our explorations that indicate the soil conditions at only those specific locations and only to the depths penetrated. These observations do not necessarily reflect soil types, strata thickness, or water level variations that may exist between or away from our explorations. If subsurface conditions vary from those encountered in our site explorations, CGT should be alerted to the change in conditions so that we may provide additional geotechnical recommendations, if necessary. Observation by experienced geotechnical personnel should be considered an integral part of the construction process.

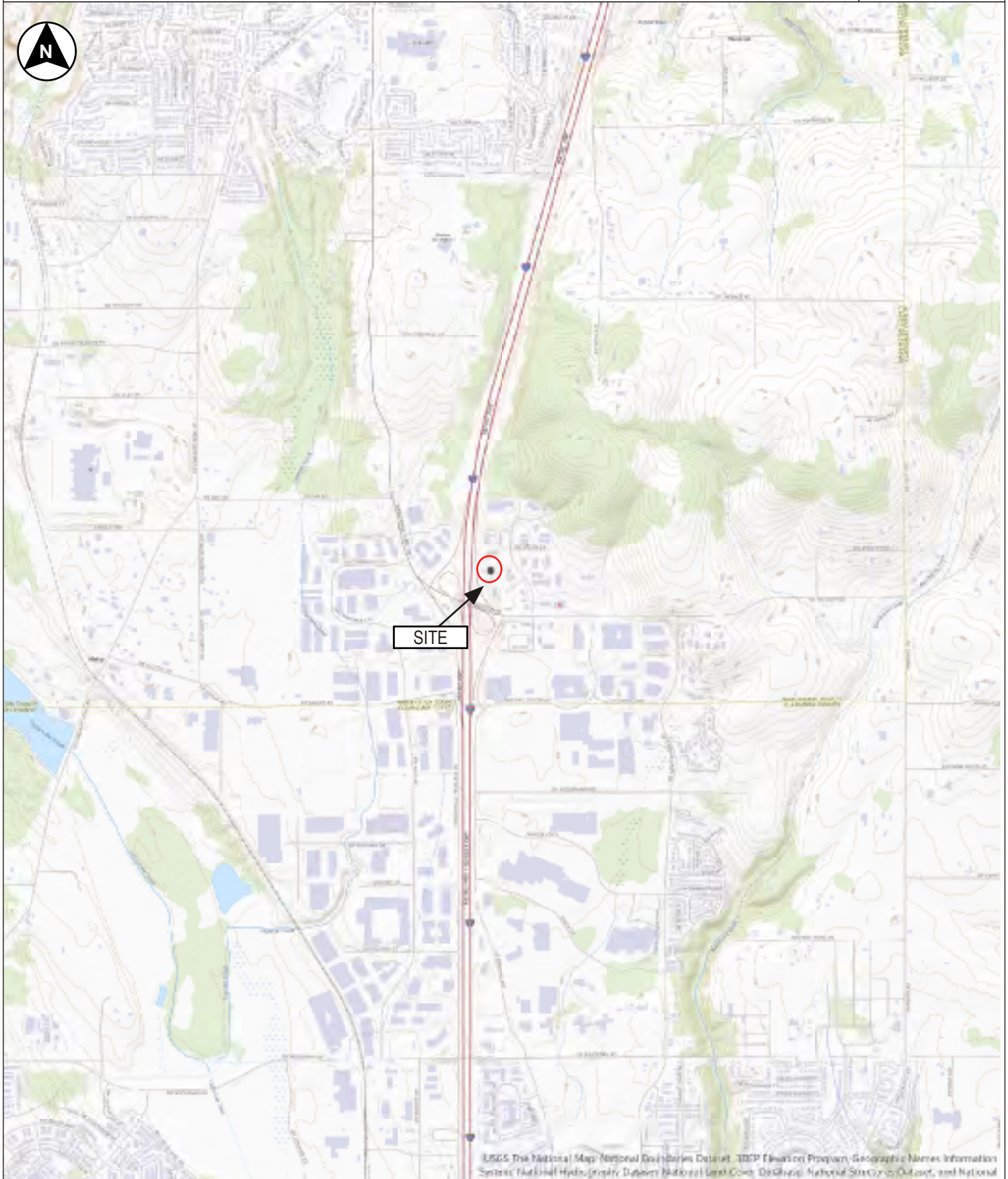
The owner/developer is responsible for ensuring that the project designers and contractors implement our recommendations. When the design has been finalized, prior to releasing bid packets to contractors, we recommend that the design drawings and specifications be reviewed by our firm to see that our recommendations have been interpreted and implemented as intended. If design changes are made, we request that we be retained to review our conclusions and recommendations and to provide a written modification or verification. Design review and construction phase testing and observation services are beyond the scope of our current assignment, but will be provided for an additional fee.

The scope of our services does not include services related to construction safety precautions, and our recommendations are not intended to direct the contractor's methods, techniques, sequences, or procedures, except as specifically described in our report for consideration in design.

Geotechnical engineering and the geologic sciences are characterized by a degree of uncertainty. Professional judgments presented in this report are based on our understanding of the proposed construction, familiarity with similar projects in the area, and on general experience. Within the limitations of scope, schedule, and budget, our services have been executed in accordance with the generally accepted practices in this area at the time this report was prepared; no warranty, expressed or implied, is made. This report is subject to review and should not be relied upon after a period of three years.

**RON TONKIN GRAN TURISMO LAMBORGHINI DEALERSHIP - WILSONVILLE, OREGON**  
**Project Number G2306033**

**FIGURE** Item 2.  
**Site Location**



USGS Topographic base map created with The National Map, 2020, at <https://viewer.nationalmap.gov/advanced-viewer/>

Township 3 South, Range 1 West, Section 2, Willamette Meridian

Latitude: 45.337419° North  
Longitude: 122.767954° West

1 Inch = 2,000 feet



# RON TONKIN GRAN TURISMO LAMBORGHINI DEALERSHIP - WILSONVILLE, OREGON

Project Number G2306033

FIGURE 2  
Site Plan



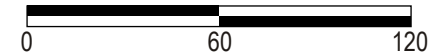
Drafted by: BG

### LEGEND

B-1 (12') Hollow-stem auger boring. Depth to groundwater shown in (').

Orientation of site photographs shown on Figure 3

1 Inch = 60 Feet



NOTES: Drawing based on sheet A-101, "Site Plan", produced by Axis Design Group on 10/04/2023 and 2021 aerial imagery, provided by Wilsonville Maps, [www.wilsonvillemaps.com](http://www.wilsonvillemaps.com), accessed December 2, 2023. All locations are approximate



Photograph 1



Photograph 2



Photograph 3



Photograph 4

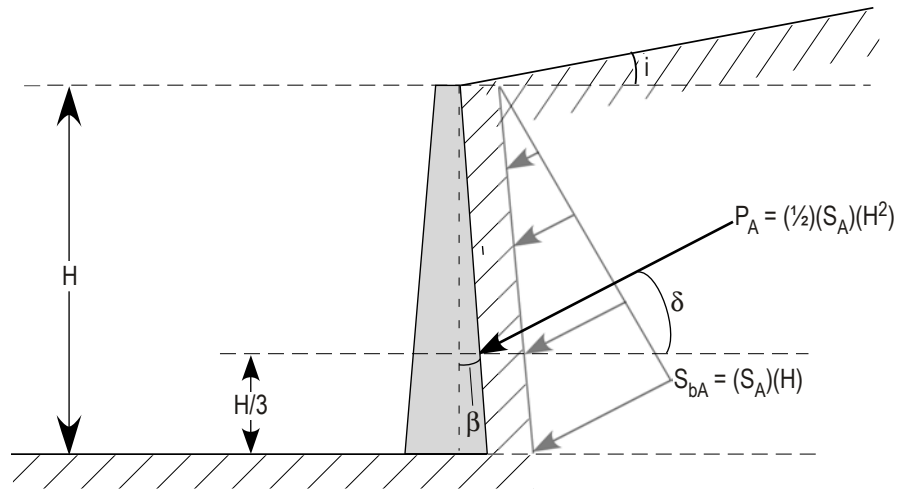


Drafted by: MDI

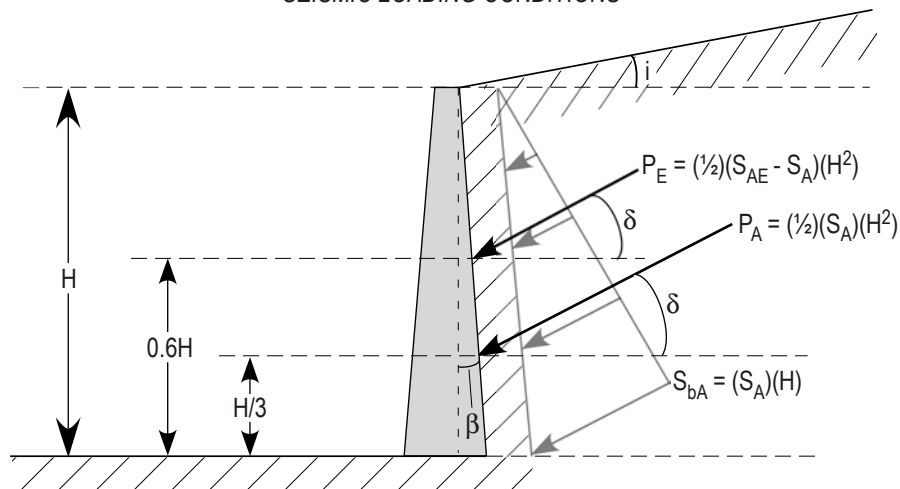
See Figure 2 for approximate photograph locations and directions. Photographs were taken at the time of our fieldwork.

ACTIVE LATERAL PRESSURE DISTRIBUTION

STATIC LOADING CONDITIONS



SEISMIC LOADING CONDITIONS



LEGEND

$S_A$  = Active lateral equivalent fluid pressure (lb/ft<sup>3</sup>)\*

$S_{bA}$  = Active lateral earth pressure (static) at the bottom of wall (lb/ft<sup>3</sup>)

$S_{AE}$  = Active total (static + seismic) equivalent fluid pressure (lb/ft<sup>3</sup>)\*

$i$  = Slope of backfill, relative to horizontal (degrees)\*\*

$\beta$  = Slope of back of wall, relative to vertical (degrees)\*\*

$P_A$  = Static active thrust force acting at  $H/3$  from bottom of retaining wall (lb/ft)

$P_E$  = Dynamic active thrust force acting at  $0.6H$  from bottom of retaining wall (lb/ft)

$\delta$  = Angle from normal of back of wall (degrees). Based on friction developing between wall and backfill\*\*

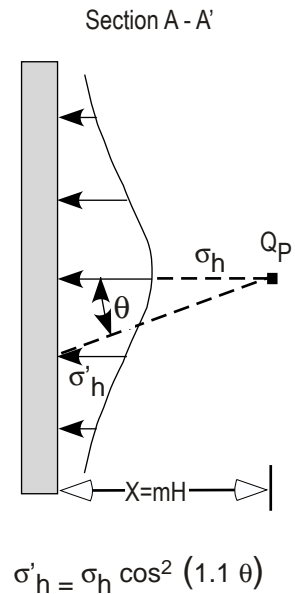
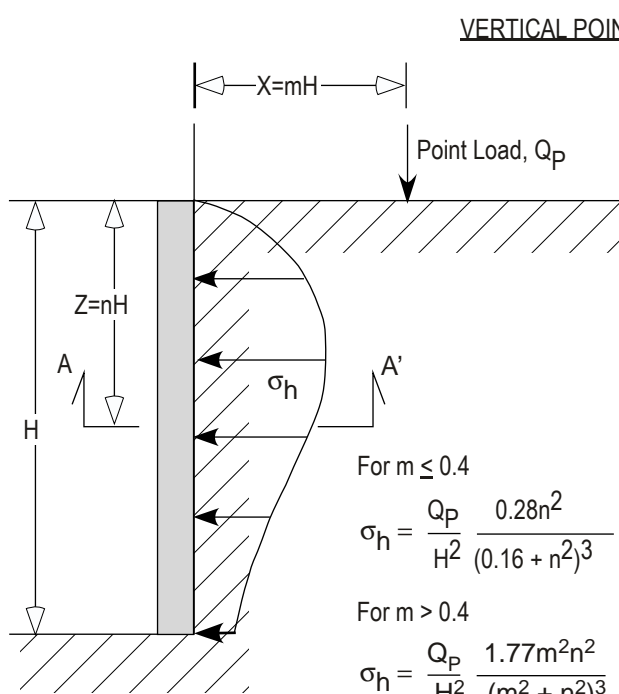
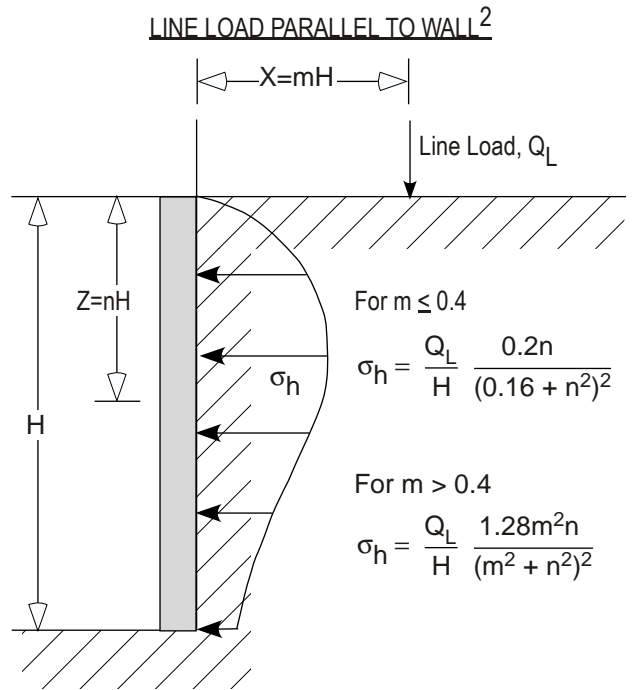
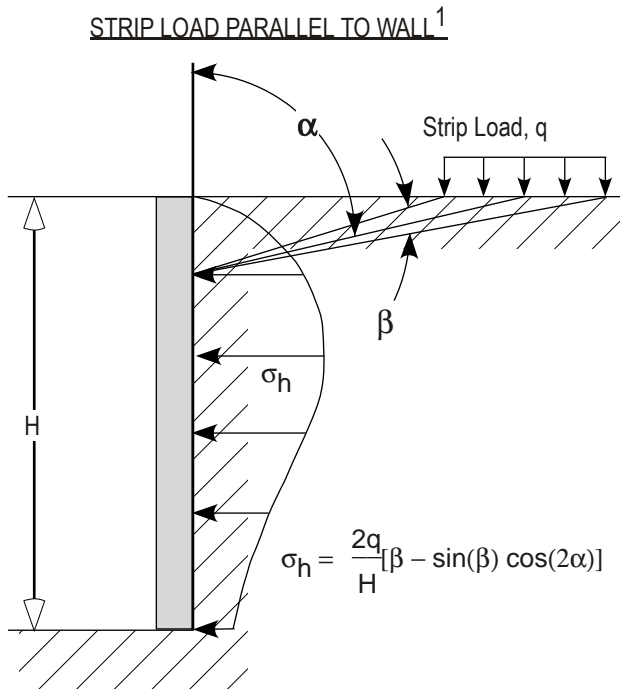
\*Refer to report text for calculated values    \*\*Refer to report text for modeled/assumed values



Notes

1. Uniform pressure distribution of seismic loading is based on empirical evaluations [Sherif et al, 1982 and Whitman, 1990].
2. Placement of seismic resultant force at  $0.6H$  is based on wall behavior and model test results [Whitman, 1990].





Notes: 1. Das, Principles of Geotechnical Engineering, 1990 Edition.  
 2. NAVFAC Design Manual 7.06.

Refer to the referenced design manuals for additional guidance. Contact CGT if there are any questions with modeling surcharge

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Tigard Office (503) 684-3460



## Appendix A: Subsurface Investigation and Laboratory Testing

**Ron Tonkin Gran Turismo Lamborghini Dealership  
Lot South of 25195 SW Parkway Avenue  
Wilsonville, Oregon**

**CGT Project Number G2306033**

December 27, 2023

*Prepared For:*

Celia Tonkin  
Ron Tonkin Gran Turismo  
25300 SW Parkway Avenue  
Wilsonville, Oregon 97070

*Prepared by*  
**Carlson Geotechnical**

Exploration Key.....	Figure A1
Soil Classification.....	Figure A2
Drilled Boring Logs .....	Figures A3 – A7

## **A.1.0 SUBSURFACE INVESTIGATION**

Our field investigation consisted of five drilled borings completed on December 4, 2023. The exploration locations are shown on the Site Plan, attached to the geotechnical report as Figure 2. The exploration locations shown therein were determined based on measurements from existing site features (trees, pavements, etc.) and are approximate. Surface elevations indicated on the logs were estimated based on the topographic contours (by others) shown on the topographic survey provided by our client, and are approximate. The attached figures detail the exploration methods (Figure A1), soil classification criteria (Figure A2), and present detailed logs of the explorations (Figures A3 through A7), as discussed below.

### **A.1.1 Drilled Borings**

CGT observed the advancement of five drilled borings (B-1 through B-5) at the site using a B58 track-mounted drill rig provided and operated by our subcontractor, PLI Systems of Hillsboro, Oregon. The borings were advanced using the hollow-stem auger drilling technique to depths ranging from approximately 6½ to 26½ feet below ground surface (bgs). Upon completion, the borings were backfilled with granular bentonite. Drilling wastes (cuttings and drilling fluids) were left onsite.

### **A.1.2 In-Situ Testing**

#### **A.1.2.1 Standard Penetration Tests (SPTs)**

SPTs were conducted within the borings using a split-spoon sampler in general accordance with ASTM D1586. The SPTs were conducted at 2½- to 5-foot intervals to the termination depths of the borings. The SPT is described on the attached Exploration Key, Figure A1.

### **A.1.3 Material Classification & Sampling**

Soil samples were obtained at selected intervals in the borings using the referenced split-spoon (SPT) sampler and thin-walled, steel (Shelby) tube samplers detailed on Figure A1. A qualified member of CGT's geological staff collected the samples and logged the soils in general accordance with the Visual-Manual Procedure (ASTM D2488). An explanation of this classification system is attached as Figure A2. The SPT samples were stored in sealable plastic bags and the Shelby tube samples were sealed with caps and tape and transported to our soils laboratory for further examination and testing. Our geotechnical staff visually examined all samples in order to refine the initial field classifications.

### **A.1.4 Subsurface Conditions**

Subsurface conditions are summarized in Section 2.3 of the geotechnical report. Detailed logs of the explorations are presented on the attached exploration logs, Figures A3 through A7.

## **A.2.0 LABORATORY TESTING**

Laboratory testing was performed on samples collected in the field to refine our initial field classifications and determine in-situ parameters. Laboratory testing included the following:

- Twelve moisture content determinations (ASTM D2216).
- Three percentage passing the U.S. Standard No. 200 Sieve tests (ASTM D1140).
- Three Atterberg limits (plasticity) tests (ASTM D4318).

Results of the laboratory tests are shown on the exploration logs.



Atterberg limits (plasticity) test results (ASTM D4318): PL = Plastic Limit, LL = Liquid Limit, and MC= Moisture Content (ASTM D2216)

□ FINES CONTENT (%) Percentage passing the U.S. Standard No. 200 Sieve (ASTM D1140)

**SAMPLING**

 GRAB

Grab sample

 BULK

Bulk sample

 SPT

**Standard Penetration Test (SPT)** consists of driving a 2-inch, outside-diameter, split-spoon sampler into the undisturbed formation with repeated blows of a 140-pound, hammer falling a vertical distance of 30 inches (ASTM D1586). The number of blows (N-value) required to drive the sampler the last 12 inches of an 18-inch sample interval is used to characterize the soil consistency or relative density. The drill rig was equipped with a cat-head or automatic hammer to conduct the SPTs. The observed N-values, hammer efficiency, and  $N_{60}$  are noted on the boring logs.

 MC

**Modified California** sampling consists of 3-inch, outside-diameter, split-spoon sampler (ASTM G3550) driven similarly to the SPT sampling method described above. A sampler diameter correction factor of 0.44 is applied to calculate the equivalent SPT  $N_{60}$  value per Lacroix and Horn, 1973.

 CORE

**Rock Coring** interval

 SH

**Shelby Tube** is a 3-inch, inner-diameter, thin-walled, steel tube push sampler (ASTM D1587) used to collect relatively undisturbed samples of fine-grained soils.

WDCP

**Wildcat Dynamic Cone Penetrometer (WDCP)** test consists of driving 1.1-inch diameter, steel rods with a 1.4-inch diameter, cone tip into the ground using a 35-pound drop hammer with a 15-inch free-fall height. The number of blows required to drive the steel rods is recorded for each 10 centimeters (3.94 inches) of penetration. The blow count for each interval is then converted to the corresponding SPT  $N_{60}$  values.

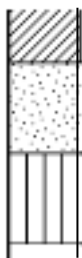
DCP

**Dynamic Cone Penetrometer (DCP)** test consists of driving a 20-millimeter diameter, hardened steel cone on 16-millimeter diameter steel rods into the ground using a 10-kilogram drop hammer with a 460-millimeter free-fall height. The depth of penetration in millimeters is recorded for each drop of the hammer.

POCKET PEN. (tsf)

**Pocket Penetrometer** test is a hand-held instrument that provides an approximation of the unconfined compressive strength in tons per square foot (tsf) of cohesive, fine-grained soils.

**CONTACTS**



Observed (measured) contact between soil or rock units.

Inferred (approximate) contact between soil or rock units.

Transitional (gradational) contact between soil or rock units.

**ADDITIONAL NOTATIONS**

*Italics* Notes drilling action or digging effort

{ Braces } Interpretation of material origin/geologic formation (e.g. { Base Rock } or { Columbia River Basalt })



*All measurements are approximate.*





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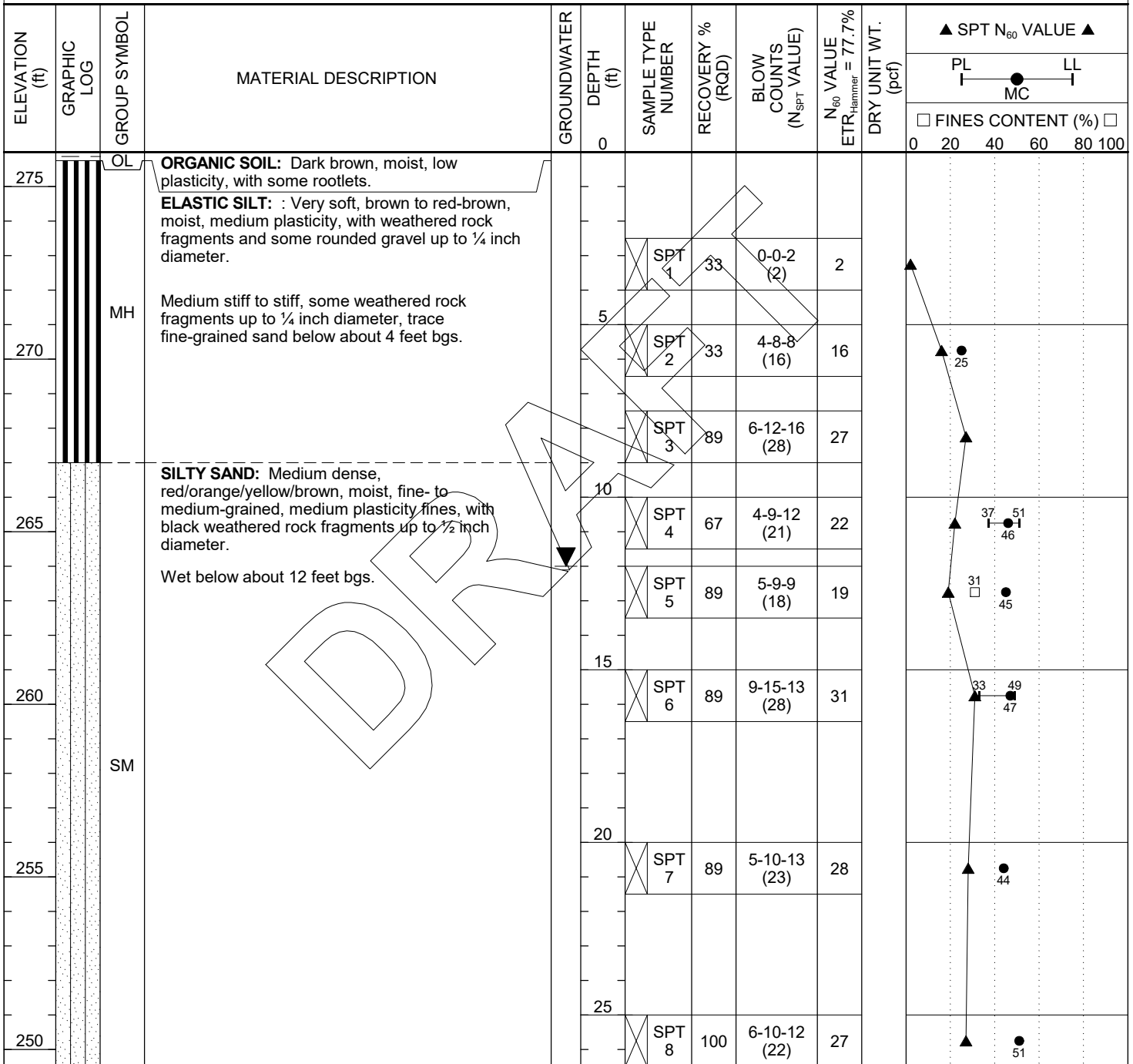
# FIGURE A3

Item 2.

## Boring B-1

PAGE 1 OF 1

<b>CLIENT</b> Ron Tonkin Gran Turismo - Celia Tonkin	<b>PROJECT NAME</b> Ron Tonkin Gran Turismo Lamborghini Dealership
<b>PROJECT NUMBER</b> G2306033	<b>PROJECT LOCATION</b> South of 25195 SW Parkway Ave. - Wilsonville, OR
<b>DATE STARTED</b> 12/4/23 <b>GROUND ELEVATION</b> 276 ft	<b>ELEVATION DATUM</b> From Survey Map Provided by Client
<b>WEATHER</b> Rain, 57F <b>SURFACE</b> Shrubs	<b>LOGGED BY</b> BJG <b>REVIEWED BY</b> BMW
<b>DRILLING CONTRACTOR</b> PLI Systems, Inc.	<b>SEEPAGE</b> ---
<b>EQUIPMENT</b> B58 Track Mounted Drill Rig	<b>GROUNDWATER DURING DRILLING</b> ---
<b>DRILLING METHOD</b> Hollow Stem 4¼-inch ID Auger	<b>GROUNDWATER 4 HOURS AFTER DRILLING</b> 12.0 ft / El. 264.0 ft



- Boring terminated at 26½ feet bgs.
- Groundwater observed at about 12 feet bgs.
- No caving observed.
- Boring backfilled with granular bentonite upon completion.

CGT BOREHOLE G2306033.GPJ 12/27/23 DRAFTED BY: MDI



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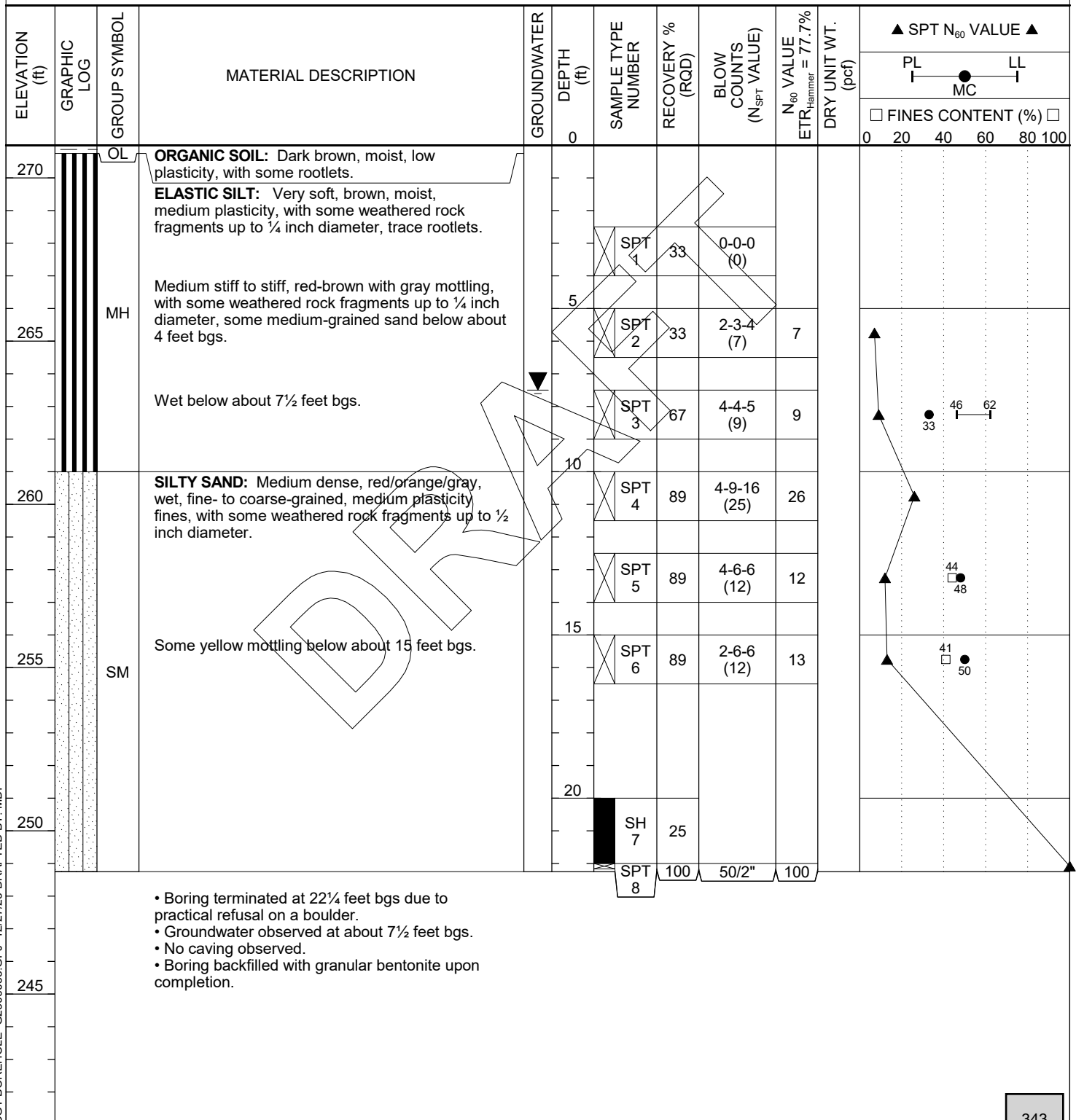
# FIGURE A4

Item 2.

## Boring B-2

PAGE 1 OF 1

<b>CLIENT</b> Ron Tonkin Gran Turismo - Celia Tonkin	<b>PROJECT NAME</b> Ron Tonkin Gran Turismo Lamborghini Dealership
<b>PROJECT NUMBER</b> G2306033	<b>PROJECT LOCATION</b> South of 25195 SW Parkway Ave. - Wilsonville, OR
<b>DATE STARTED</b> 12/4/23	<b>GROUND ELEVATION</b> 271 ft
<b>WEATHER</b> Rain, 58F	<b>SURFACE</b> Grass
<b>DRILLING CONTRACTOR</b> PLI Systems, Inc.	<b>SEEPAGE</b> ---
<b>EQUIPMENT</b> B58 Track Mounted Drill Rig	<b>GROUNDWATER DURING DRILLING</b> ---
<b>DRILLING METHOD</b> Hollow Stem 4¼-inch ID Auger	<b>GROUNDWATER 2 HOURS AFTER DRILLING</b> 7.5 ft / El. 263.5 ft



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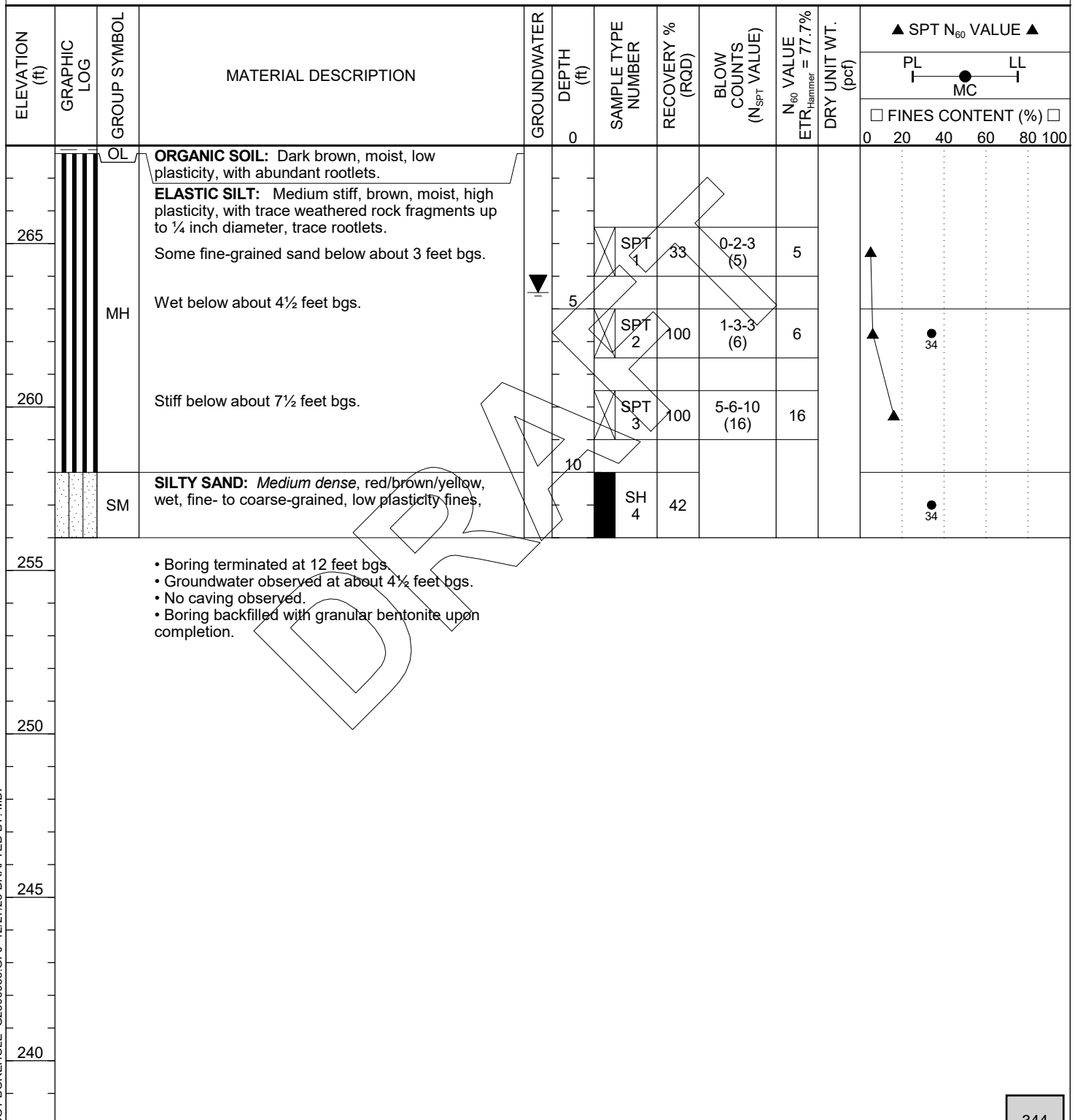
**FIGURE A5**

Item 2.

**Boring B-3**

PAGE 1 OF 1

<b>CLIENT</b> Ron Tonkin Gran Turismo - Celia Tonkin	<b>PROJECT NAME</b> Ron Tonkin Gran Turismo Lamborghini Dealership
<b>PROJECT NUMBER</b> G2306033	<b>PROJECT LOCATION</b> South of 25195 SW Parkway Ave. - Wilsonville, OR
<b>DATE STARTED</b> 12/4/23 <b>GROUND ELEVATION</b> 268 ft	<b>ELEVATION DATUM</b> From Survey Map Provided by Client
<b>WEATHER</b> Rain, 58F <b>SURFACE</b> Grass	<b>LOGGED BY</b> BJB <b>REVIEWED BY</b> BMW
<b>DRILLING CONTRACTOR</b> PLI Systems, Inc.	<b>SEEPAGE</b> ---
<b>EQUIPMENT</b> B58 Track Mounted Drill Rig	<b>GROUNDWATER DURING DRILLING</b> ---
<b>DRILLING METHOD</b> Hollow Stem 4¼-inch ID Auger	<b>GROUNDWATER 1 HOURS AFTER DRILLING</b> 4.5 ft / El. 263.5 ft



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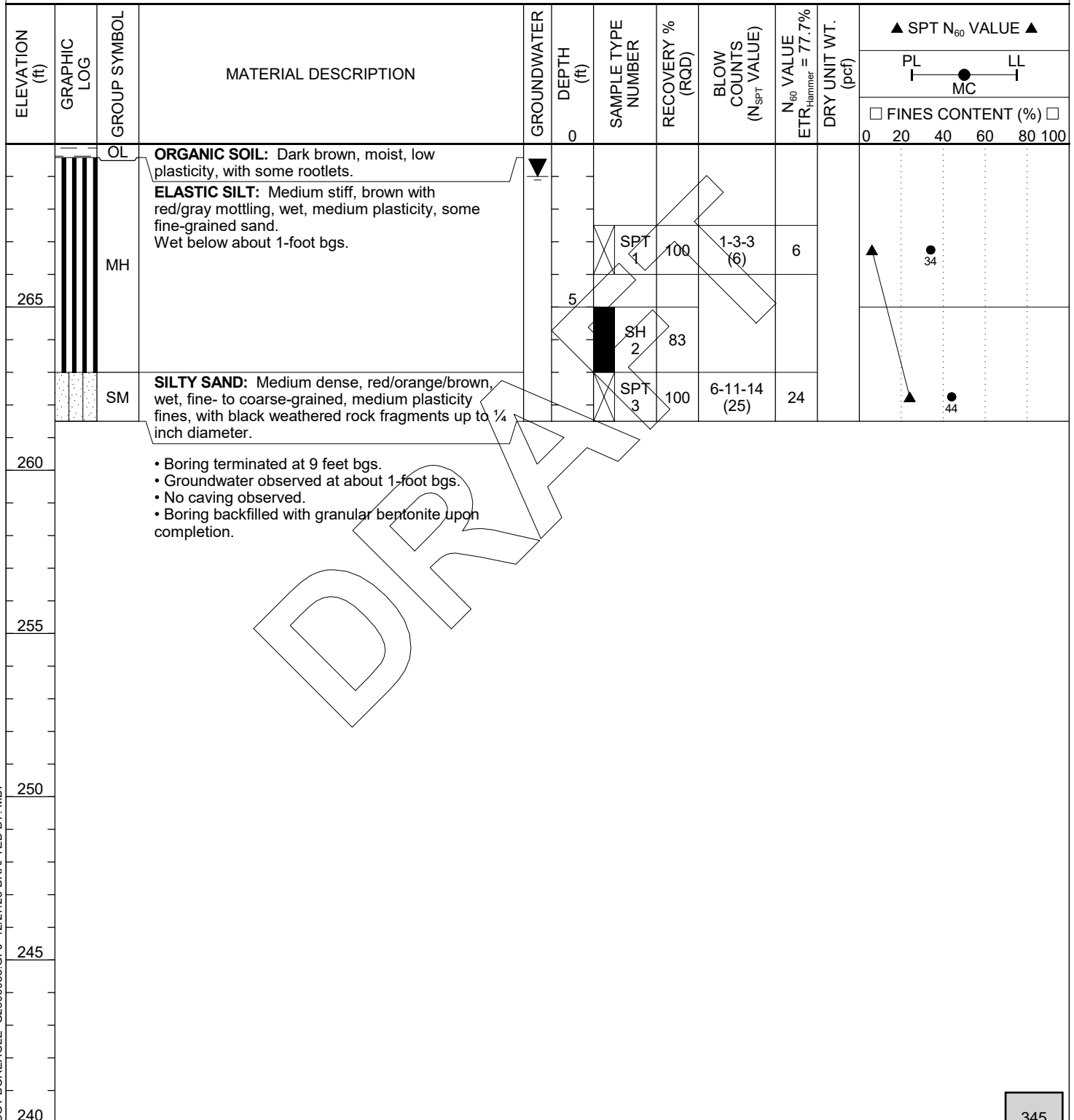
# FIGURE A6

Item 2.

## Boring B-4

PAGE 1 OF 1

<b>CLIENT</b> Ron Tonkin Gran Turismo - Celia Tonkin	<b>PROJECT NAME</b> Ron Tonkin Gran Turismo Lamborghini Dealership
<b>PROJECT NUMBER</b> G2306033	<b>PROJECT LOCATION</b> South of 25195 SW Parkway Ave. - Wilsonville, OR
<b>DATE STARTED</b> 12/4/23 <b>GROUND ELEVATION</b> 270 ft	<b>ELEVATION DATUM</b> From Survey Map Provided by Client
<b>WEATHER</b> Rain, 58F <b>SURFACE</b> Grass	<b>LOGGED BY</b> BJG <b>REVIEWED BY</b> BMW
<b>DRILLING CONTRACTOR</b> PLI Systems, Inc.	<b>SEEPAGE</b> ---
<b>EQUIPMENT</b> B58 Track Mounted Drill Rig	<b>GROUNDWATER DURING DRILLING</b> ---
<b>DRILLING METHOD</b> Hollow Stem 4¼-inch ID Auger	<b>GROUNDWATER .5 HOURS AFTER DRILLING</b> 1.0 ft / El. 269.0 ft



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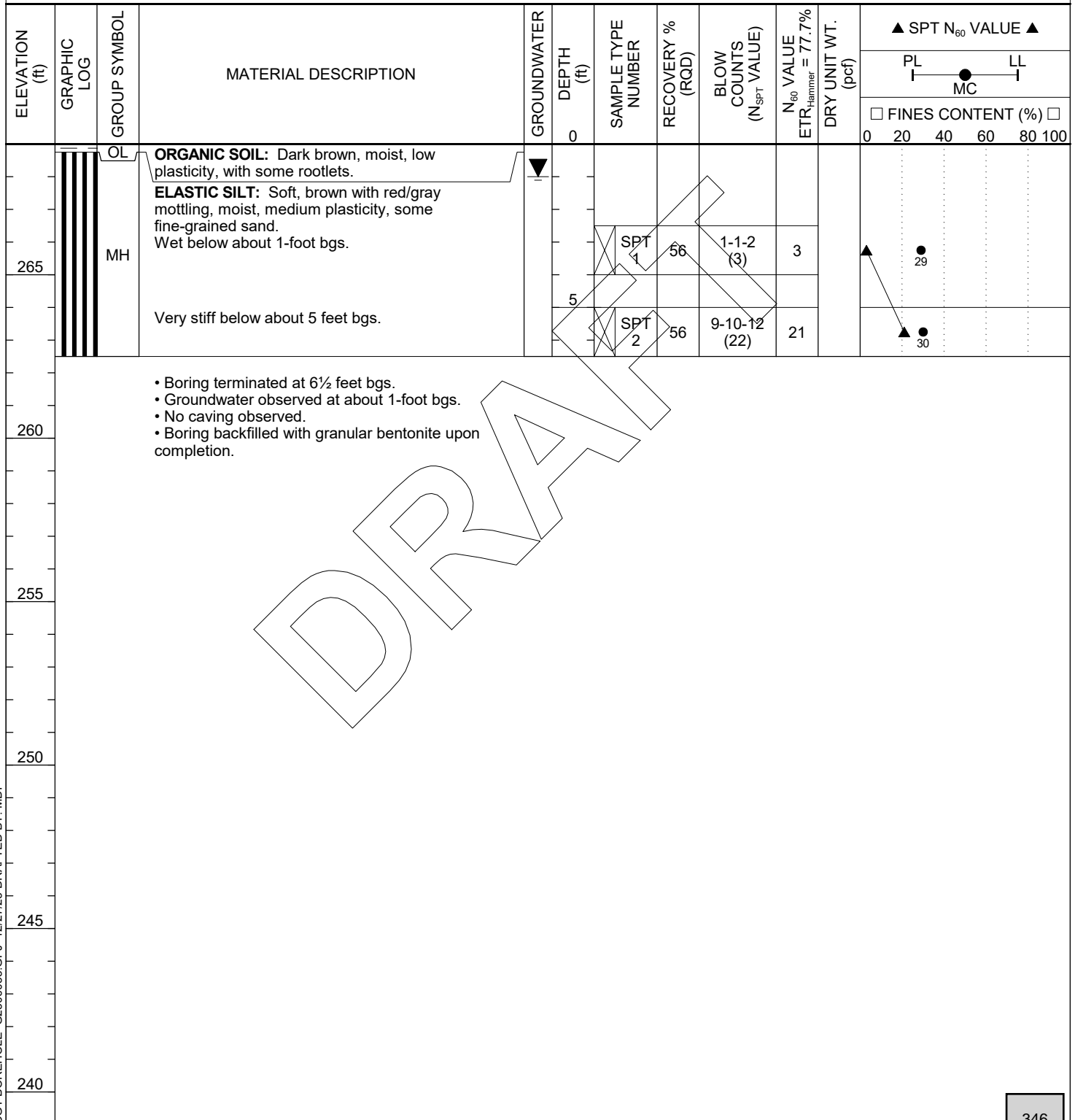
# FIGURE A7

Item 2.

## Boring B-5

PAGE 1 OF 1

<b>CLIENT</b> Ron Tonkin Gran Turismo - Celia Tonkin	<b>PROJECT NAME</b> Ron Tonkin Gran Turismo Lamborghini Dealership
<b>PROJECT NUMBER</b> G2306033	<b>PROJECT LOCATION</b> South of 25195 SW Parkway Ave. - Wilsonville, OR
<b>DATE STARTED</b> 12/4/23 <b>GROUND ELEVATION</b> 269 ft	<b>ELEVATION DATUM</b> From Survey Map Provided by Client
<b>WEATHER</b> Rain, 58F <b>SURFACE</b> Grass	<b>LOGGED BY</b> BJG <b>REVIEWED BY</b> BMW
<b>DRILLING CONTRACTOR</b> PLI Systems, Inc.	<b>SEEPAGE</b> ---
<b>EQUIPMENT</b> B58 Track Mounted Drill Rig	<b>GROUNDWATER DURING DRILLING</b> ---
<b>DRILLING METHOD</b> Hollow Stem 4¼-inch ID Auger	<b>GROUNDWATER .5 HOURS AFTER DRILLING</b> 1.0 ft / El. 268.0 ft



CGT BOREHOLE G2306033.GPJ 12/27/23 DRAFTED BY: MDI




# APPENDIX F – Downstream Analysis Support

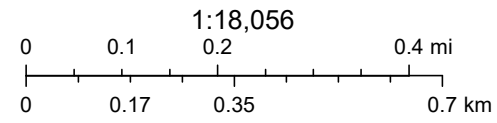


# Stormwater Sub-Basins



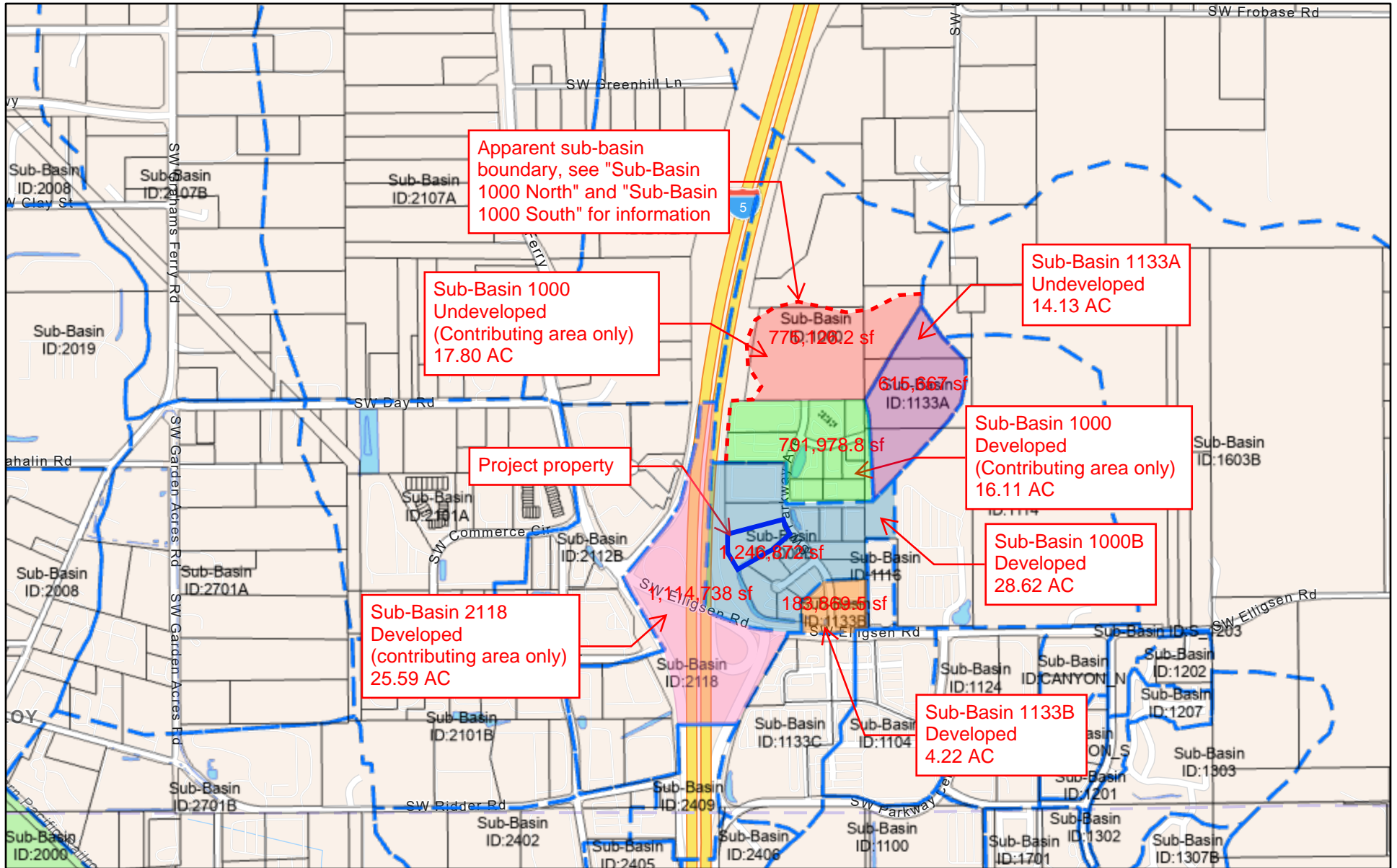
June 11, 2024

-  RLIS Taxlots
-  Stormwater Subbasins OMS
-  Stormwater Basins OMS



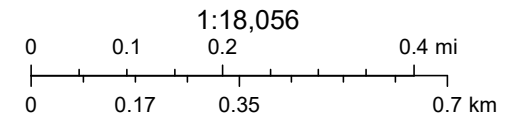
Esri Community Maps Contributors, Oregon Metro, Oregon State Parks, State of Oregon GEO, Esri, TomTom, Garmin, SafeGraph, GeoTechnology

# Stormwater Sub-Basins

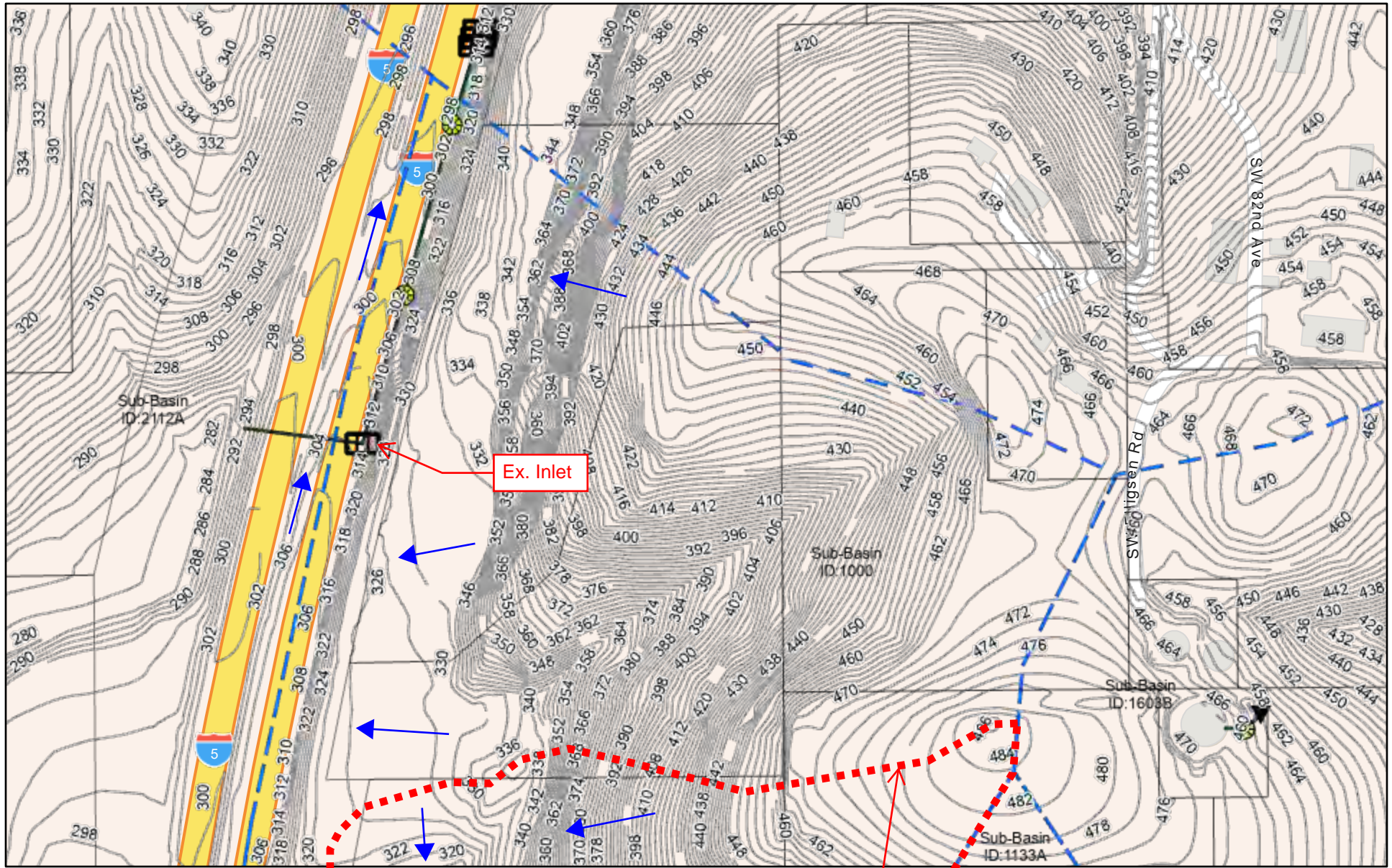


June 11, 2024

- RLIS Taxlots
- Stormwater Subbasins OMS
- Stormwater Basins OMS

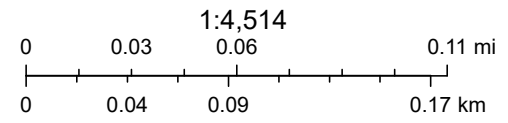


# Sub-Basin 1000 North



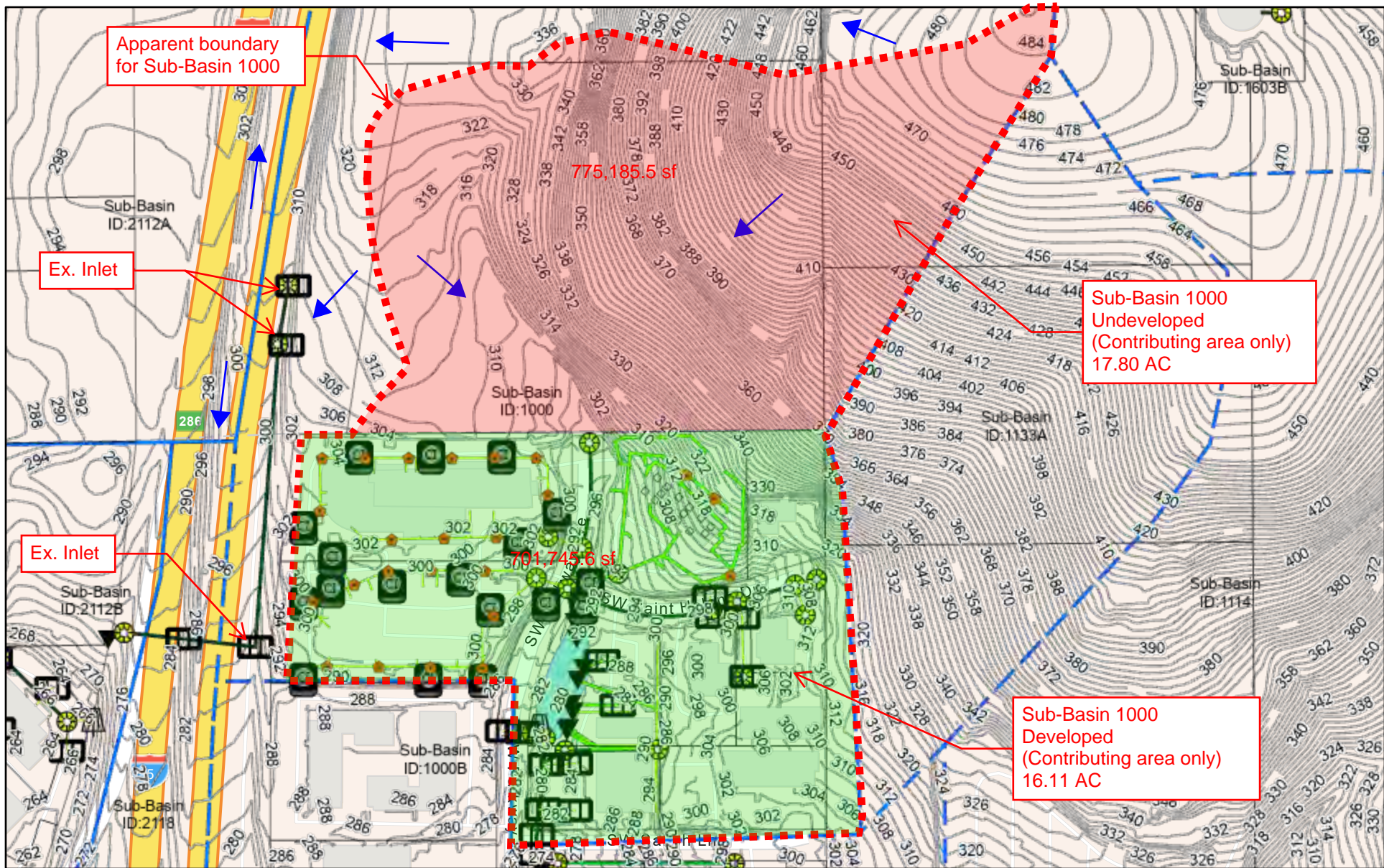
June 12, 2024

- RLIS Taxlots
- Stormwater Inlets OMS
- Catchbasin
- Stormwater Manholes OMS
- Stormwater Outlets OMS
- Stormwater Mainline OMS
- Public, Active
- Stormwater Subbasins OMS
- 2FT Contours



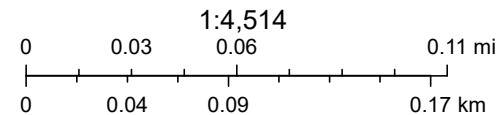
Apparent boundary for Sub-Basin 1000 (see "Sub-Basin 1000 South" for continuation)

# Sub-Basin 1000 South



June 12, 2024

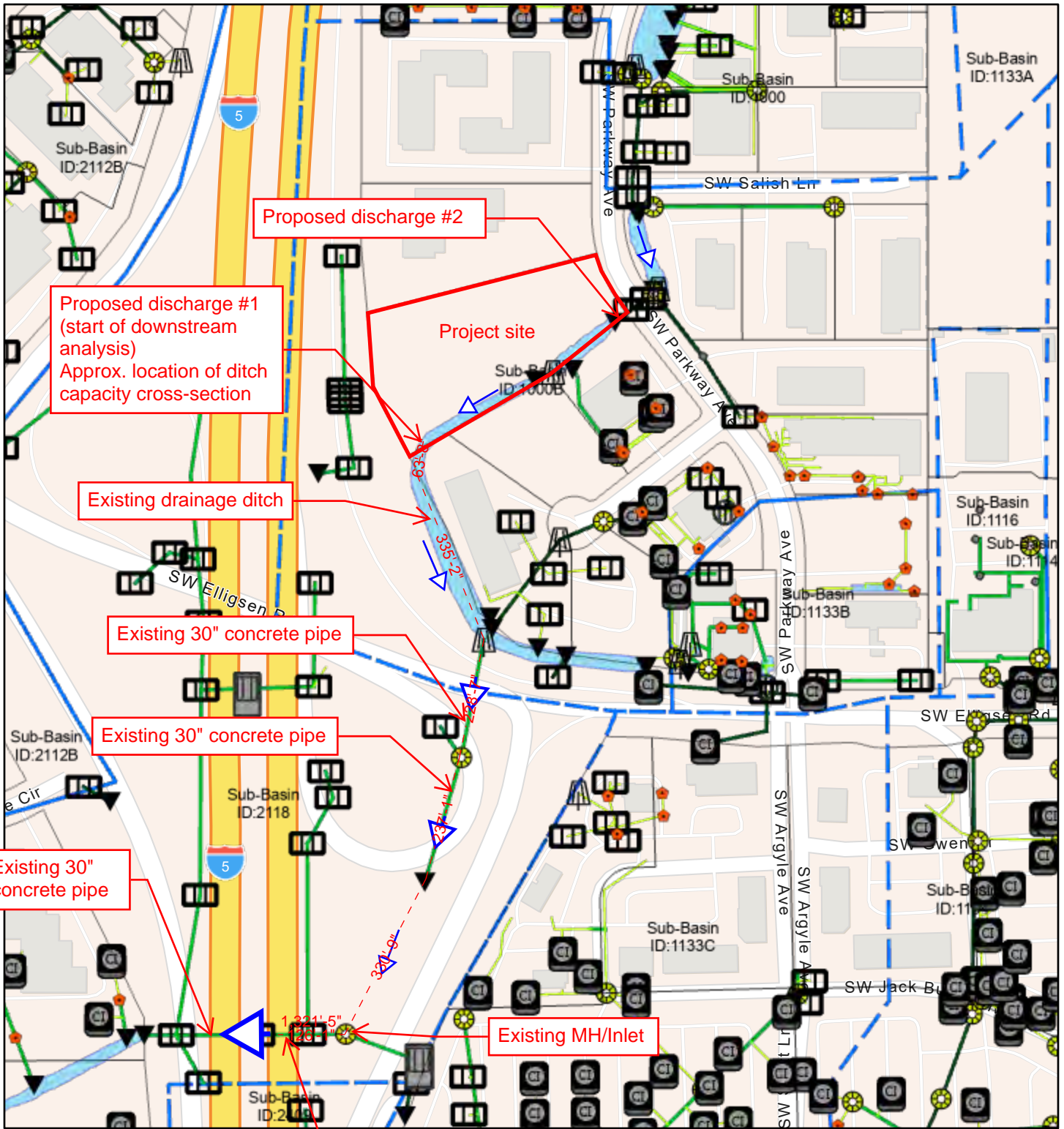
- RLIS Taxlots
- Stormwater Cleanouts OMS
- Stormwater Inlets OMS
- Catchbasin
- Curb Inlet
- Other Design
- Stormwater Manholes OMS
- Stormwater Outlets OMS
- Stormwater Laterals OMS
- Stormwater Mainline OMS
- Public, Active
- Private, Active
- Stormwater Basins OMS
- Stormwater Subbasins OMS
- 2FT Contours



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# Storm System Map

Item 2.

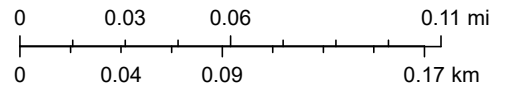


June 13, 2024

End of downstream analysis (1/4 mile)

1:4,514

- |                          |                         |                          |
|--------------------------|-------------------------|--------------------------|
| RLIS Taxlots             | Ditch Inlet             | Stormwater Laterals OMS  |
| Stormwater Cleanouts OMS | Other Design            | Stormwater Mainline OMS  |
| Stormwater Inlets OMS    | Stormwater Manholes OMS | Public, Active           |
| Area Drain               | Stormwater Outlets OMS  | Private, Active          |
| Catchbasin               | Stormwater Basins OMS   | Stormwater Subbasins OMS |
| Curb Inlet               | Stormwater Culverts OMS |                          |



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# Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2024

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SBUH Runoff	13.44	2	474	188,679	-----	-----	-----	Sub-Basin 1000 Developed
2	SBUH Runoff	23.88	2	474	335,195	-----	-----	-----	Sub-Basin 1000B
3	SBUH Runoff	3.521	2	474	49,424	-----	-----	-----	Sub-Basin 1133B
4	SBUH Runoff	21.35	2	474	299,707	-----	-----	-----	Sub-Basin 2118
5	SBUH Runoff	8.874	2	480	161,156	-----	-----	-----	Sub-Basin 1000 & 1133A Undevelope
6	Combine	45.84	2	476	685,029	1, 2, 5	-----	-----	Combined Ditch
7	Combine	70.66	2	476	1,034,160	1, 2, 3, 4, 5,	-----	-----	Combined ODOT Pipe

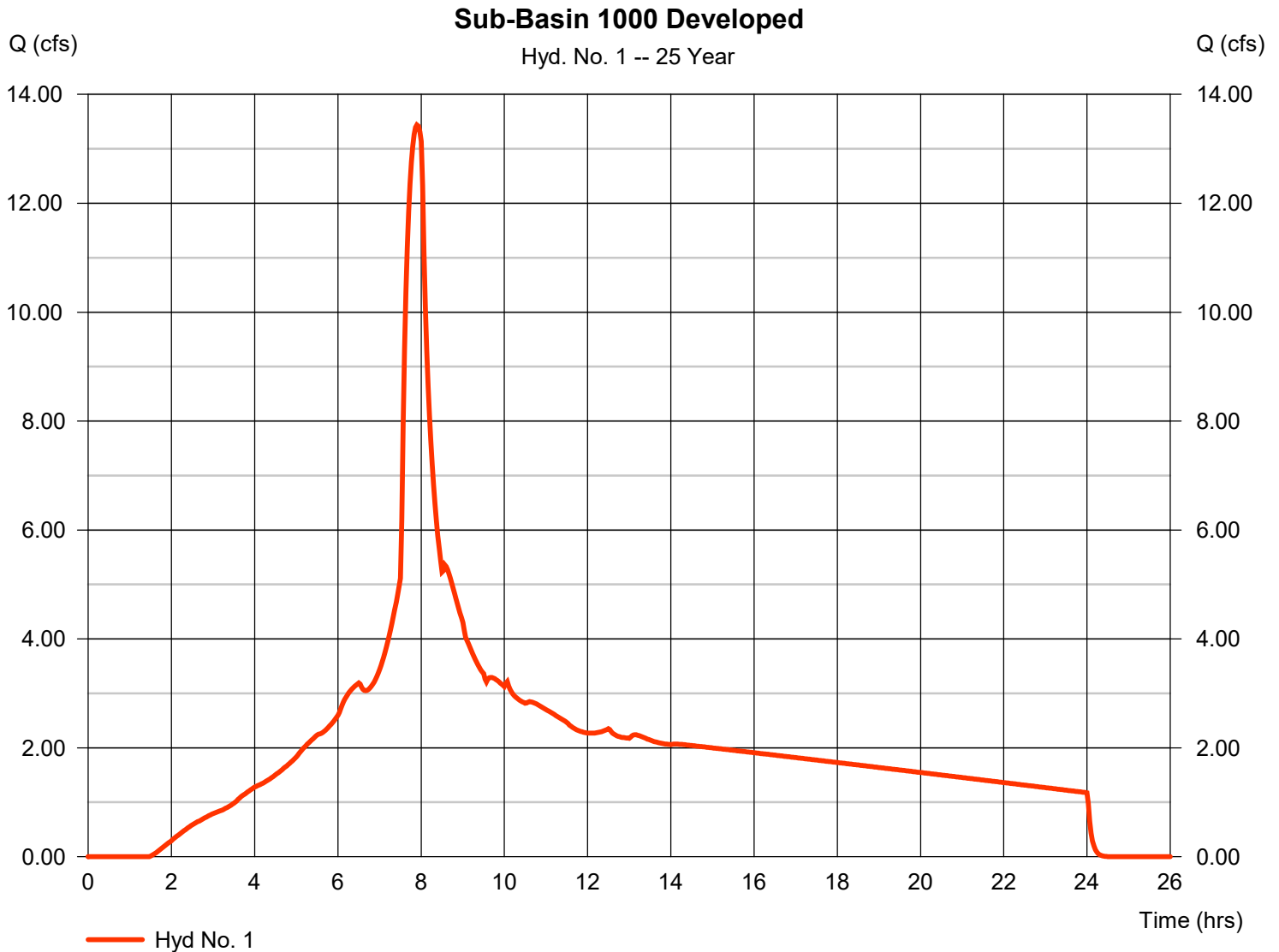
# Hydrograph Report

## Hyd. No. 1

Sub-Basin 1000 Developed

Hydrograph type	= SBUH Runoff	Peak discharge	= 13.44 cfs
Storm frequency	= 25 yrs	Time to peak	= 7.90 hrs
Time interval	= 2 min	Hyd. volume	= 188,679 cuft
Drainage area	= 16.110 ac	Curve number	= 94*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= n/a

\* Composite (Area/CN) = [(13.690 x 98) + (2.420 x 74)] / 16.110



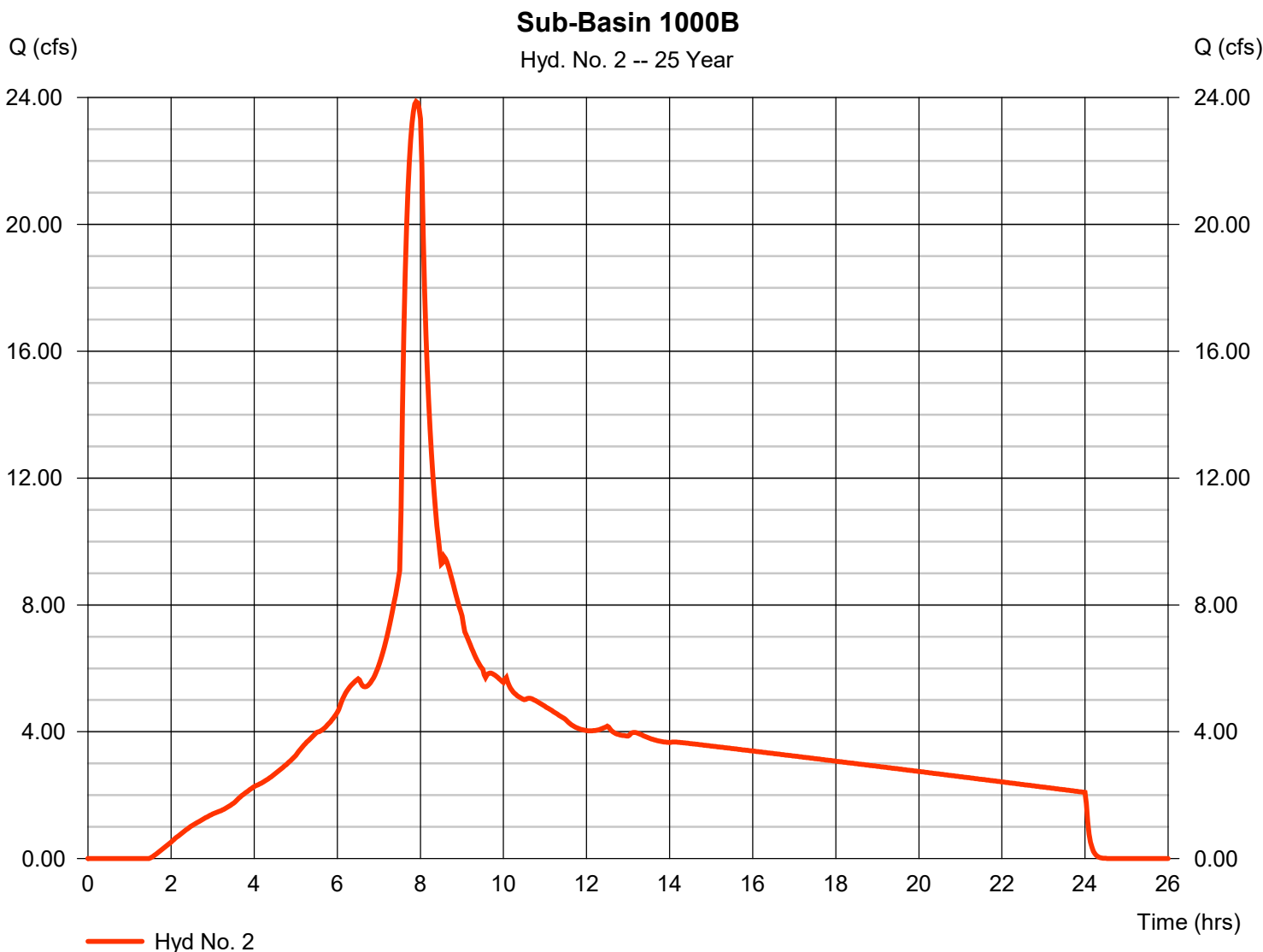
# Hydrograph Report

## Hyd. No. 2

Sub-Basin 1000B

Hydrograph type	= SBUH Runoff	Peak discharge	= 23.88 cfs
Storm frequency	= 25 yrs	Time to peak	= 7.90 hrs
Time interval	= 2 min	Hyd. volume	= 335,195 cuft
Drainage area	= 28.620 ac	Curve number	= 94*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= n/a

\* Composite (Area/CN) = [(24.330 x 98) + (4.290 x 74)] / 28.620



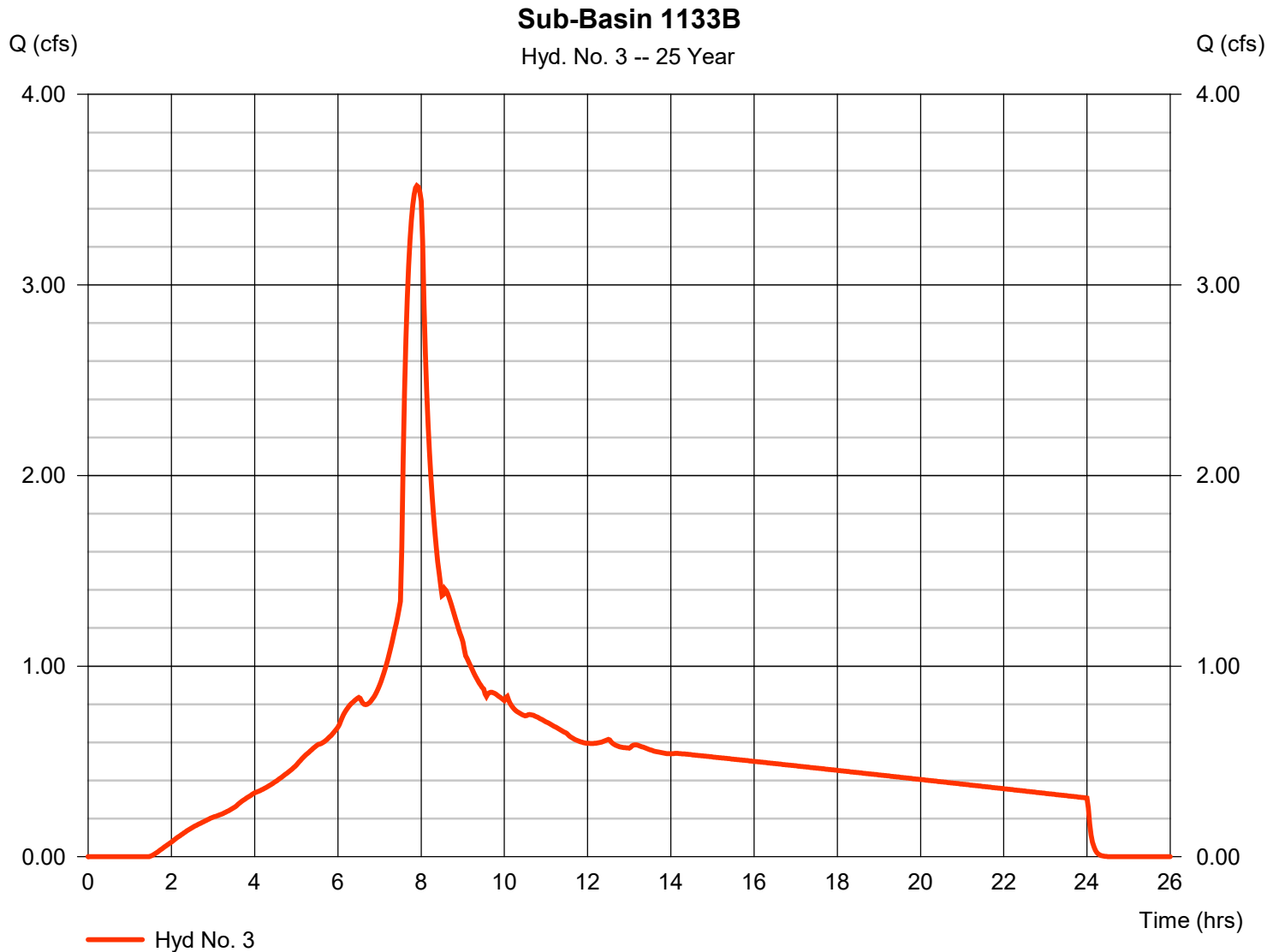
# Hydrograph Report

## Hyd. No. 3

Sub-Basin 1133B

Hydrograph type	= SBUH Runoff	Peak discharge	= 3.521 cfs
Storm frequency	= 25 yrs	Time to peak	= 7.90 hrs
Time interval	= 2 min	Hyd. volume	= 49,424 cuft
Drainage area	= 4.220 ac	Curve number	= 94*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= n/a

\* Composite (Area/CN) = [(3.590 x 98) + (0.630 x 74)] / 4.220



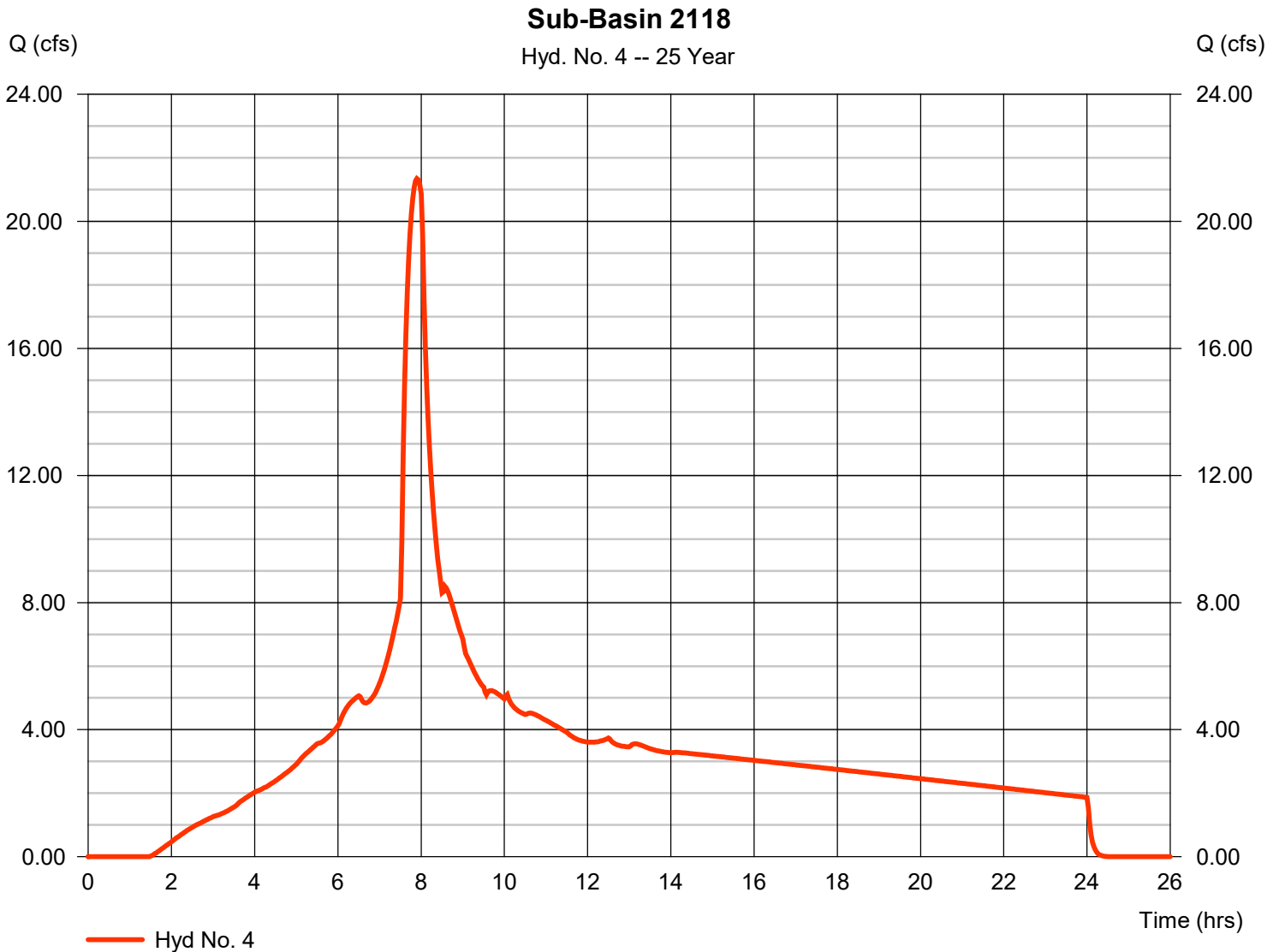
# Hydrograph Report

## Hyd. No. 4

Sub-Basin 2118

Hydrograph type	= SBUH Runoff	Peak discharge	= 21.35 cfs
Storm frequency	= 25 yrs	Time to peak	= 7.90 hrs
Time interval	= 2 min	Hyd. volume	= 299,707 cuft
Drainage area	= 25.590 ac	Curve number	= 94*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= n/a

\* Composite (Area/CN) = [(21.750 x 98) + (3.840 x 74)] / 25.590



# Hydrograph Report

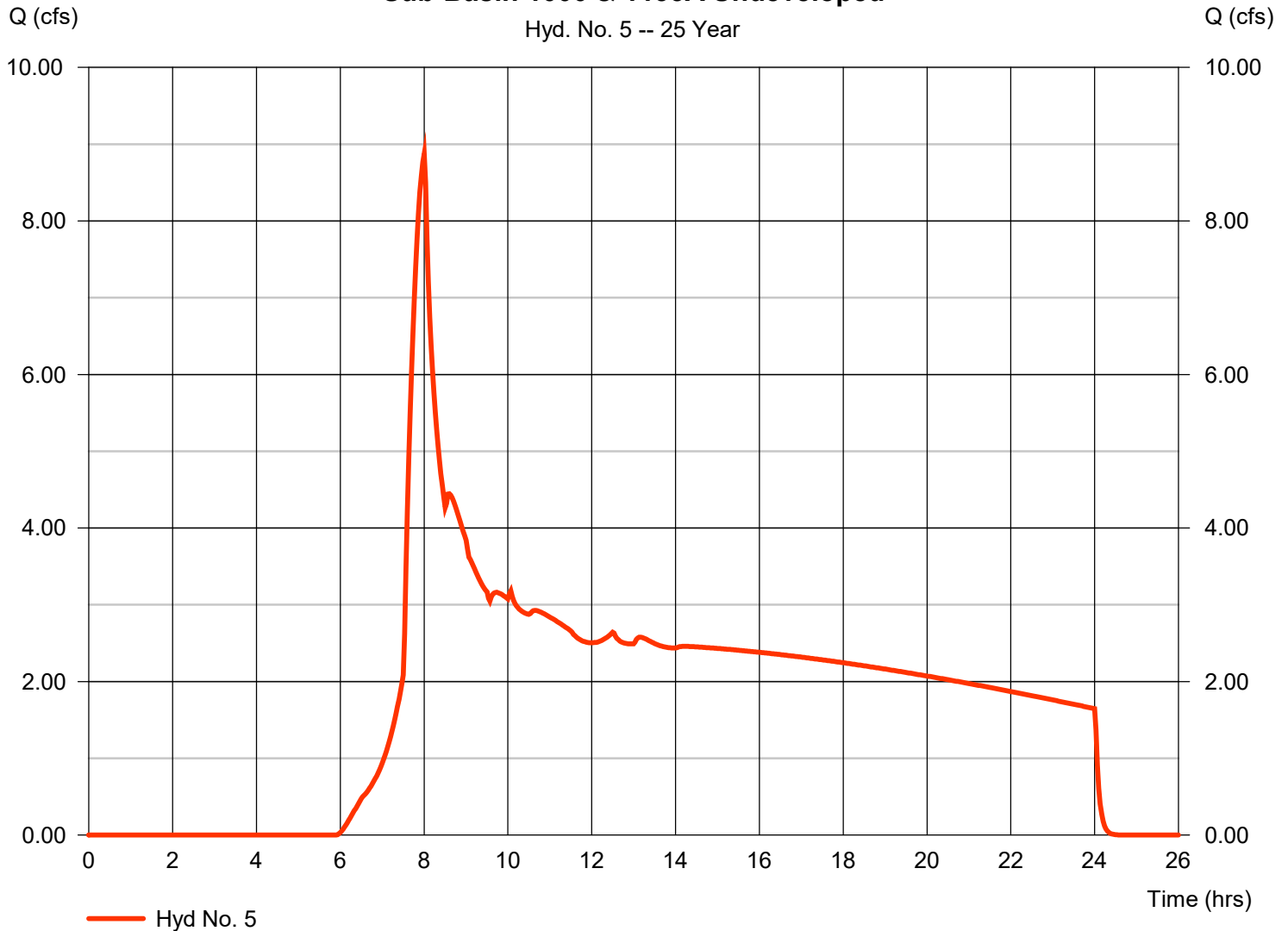
## Hyd. No. 5

Sub-Basin 1000 & 1133A Undeveloped

Hydrograph type = SBUH Runoff  
Storm frequency = 25 yrs  
Time interval = 2 min  
Drainage area = 31.930 ac  
Basin Slope = 0.0 %  
Tc method = User  
Total precip. = 3.90 in  
Storm duration = 24 hrs

Peak discharge = 8.874 cfs  
Time to peak = 8.00 hrs  
Hyd. volume = 161,156 cuft  
Curve number = 72  
Hydraulic length = 0 ft  
Time of conc. (Tc) = 5.00 min  
Distribution = Type IA  
Shape factor = n/a

### Sub-Basin 1000 & 1133A Undeveloped



# Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2024

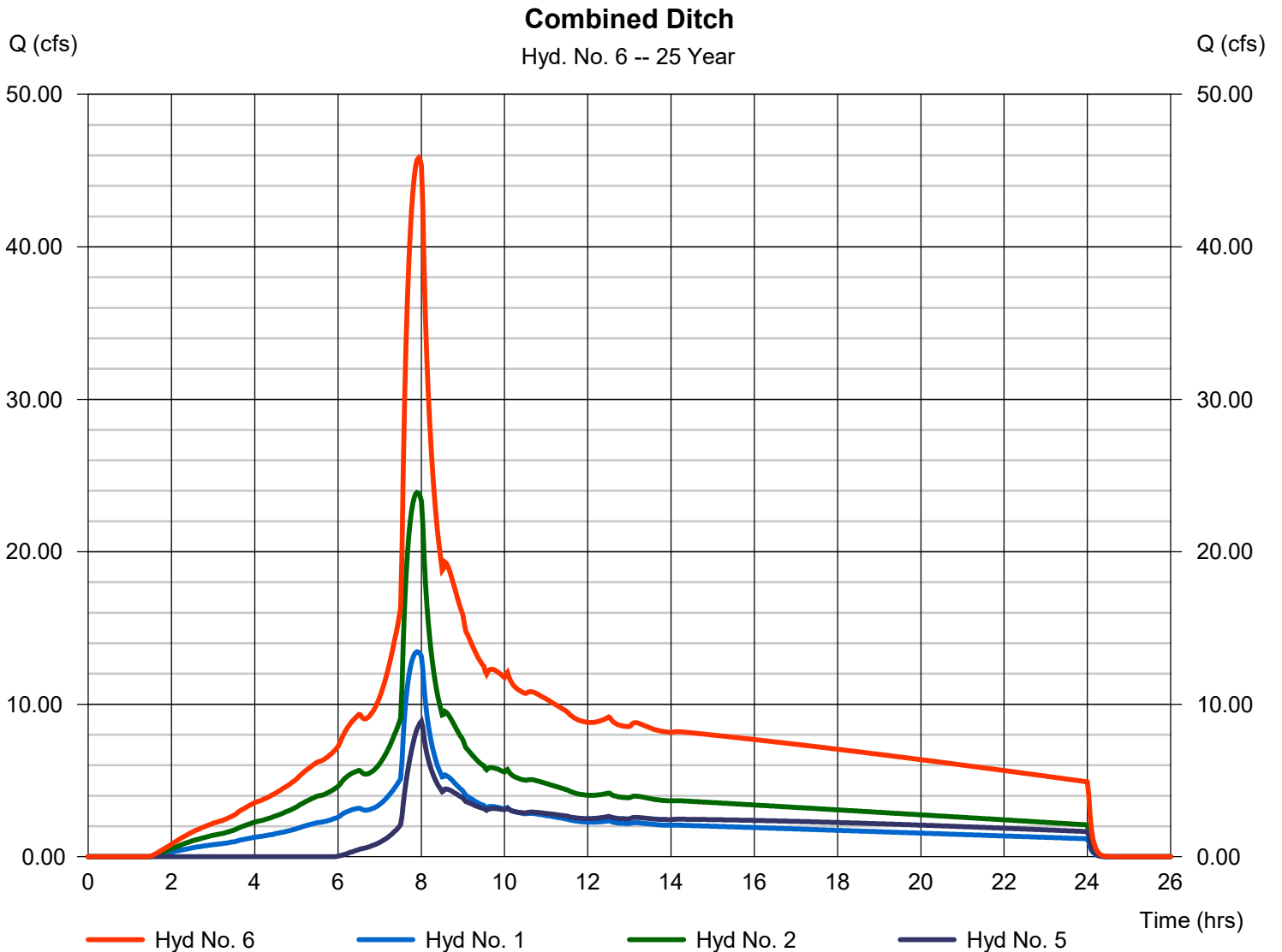
Friday, 06 / 14 / 2024

## Hyd. No. 6

Combined Ditch

Hydrograph type = Combine  
Storm frequency = 25 yrs  
Time interval = 2 min  
Inflow hyds. = 1, 2, 5

Peak discharge = 45.84 cfs  
Time to peak = 7.93 hrs  
Hyd. volume = 685,029 cuft  
Contrib. drain. area = 76.660 ac



# Hydrograph Report

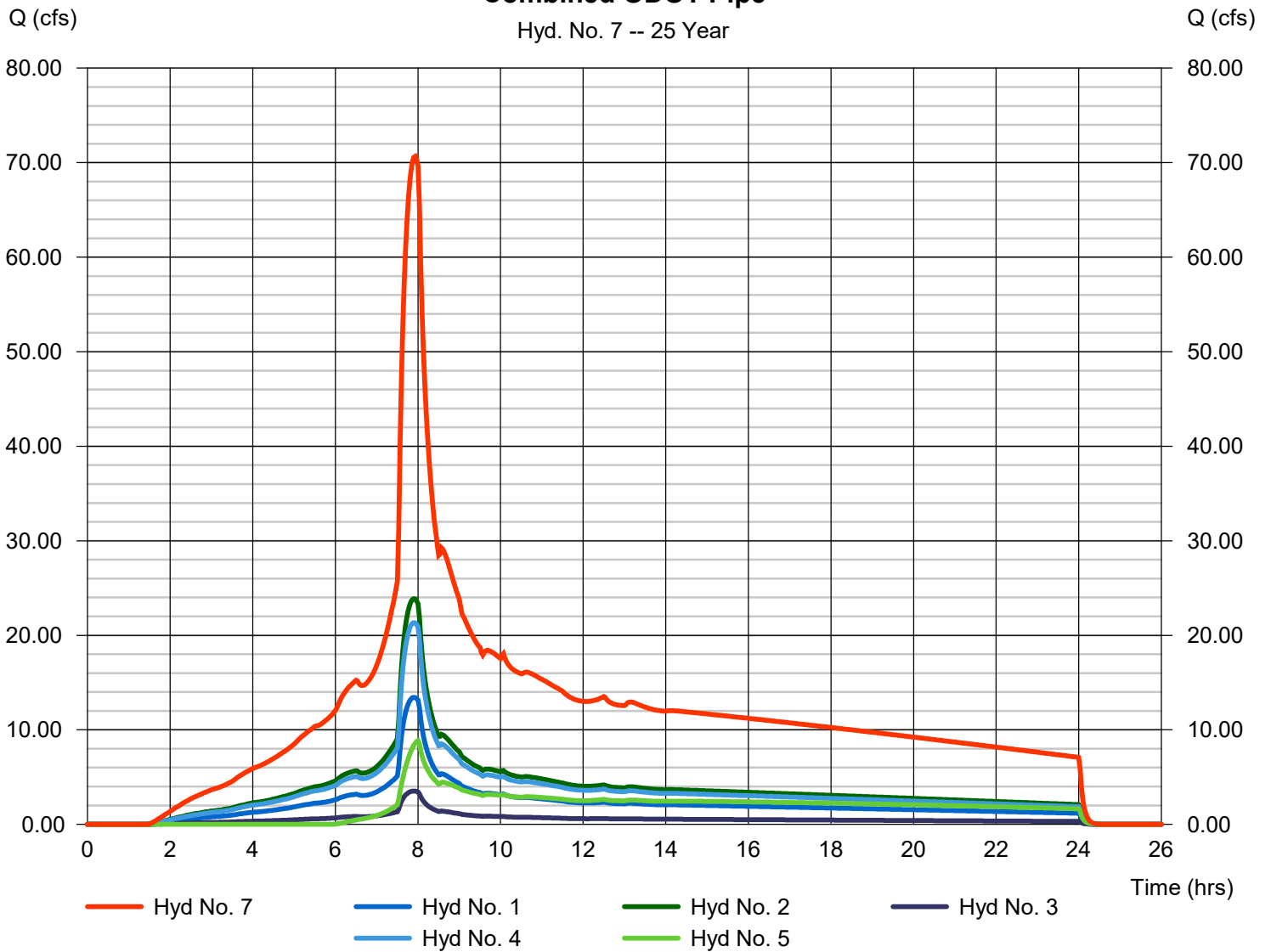
## Hyd. No. 7

Combined ODOT Pipe

Hydrograph type	= Combine	Peak discharge	= 70.66 cfs
Storm frequency	= 25 yrs	Time to peak	= 7.93 hrs
Time interval	= 2 min	Hyd. volume	= 1,034,160 cuft
Inflow hyds.	= 1, 2, 3, 4, 5	Contrib. drain. area	= 106.470 ac

### Combined ODOT Pipe

Hyd. No. 7 -- 25 Year





# Hydraflow Rainfall Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2024

Friday, 06 / 14 / 2024

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	0.0000	0.0000	0.0000	-----
2	69.8703	13.1000	0.8658	-----
3	0.0000	0.0000	0.0000	-----
5	79.2597	14.6000	0.8369	-----
10	88.2351	15.5000	0.8279	-----
25	102.6072	16.5000	0.8217	-----
50	114.8193	17.2000	0.8199	-----
100	127.1596	17.8000	0.8186	-----

File name: SampleFHA.idf

**Intensity = B / (Tc + D)^E**

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5.69	4.61	3.89	3.38	2.99	2.69	2.44	2.24	2.07	1.93	1.81	1.70
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.57	5.43	4.65	4.08	3.65	3.30	3.02	2.79	2.59	2.42	2.27	2.15
10	7.24	6.04	5.21	4.59	4.12	3.74	3.43	3.17	2.95	2.77	2.60	2.46
25	8.25	6.95	6.03	5.34	4.80	4.38	4.02	3.73	3.48	3.26	3.07	2.91
50	9.04	7.65	6.66	5.92	5.34	4.87	4.49	4.16	3.88	3.65	3.44	3.25
100	9.83	8.36	7.30	6.50	5.87	5.36	4.94	4.59	4.29	4.03	3.80	3.60

Tc = time in minutes. Values may exceed 60.

Axis Design Group)\ADG-122 (Wilsonville Lamborghini)\ADG122-DOCS\Reports\Stormwater\Hydraflow\Wilsonville.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	0.83	2.40	1.20	2.90	3.40	3.90	0.00	4.40
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 2-2a** Runoff curve numbers for urban areas <sup>1/</sup>

Cover description	Average percent impervious area <sup>2/</sup>	Curve numbers for hydrologic soil group			
		A	B	C	D
<b>Fully developed urban areas (vegetation established)</b>					
Open space (lawns, parks, golf courses, cemeteries, etc.) <sup>3/</sup> :					
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) <sup>4/</sup> .....					
		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) <sup>5/</sup> .....

		77	86	91	94
--	--	----	----	----	----

Idle lands (CN's are determined using cover types  
similar to those in table 2-2c).

<sup>1</sup> Average runoff condition, and  $I_a = 0.2S$ .

<sup>2</sup> 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.

<sup>3</sup> CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

<sup>4</sup> 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.

<sup>5</sup> 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.

**Table 2-2c** Runoff curve numbers for other agricultural lands <sup>1/</sup>

Cover description	Hydrologic condition	Curve numbers for hydrologic soil group			
		A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. <sup>2/</sup>	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. <sup>3/</sup>	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30 <sup>4/</sup>	48	65	73
Woods—grass combination (orchard or tree farm). <sup>5/</sup>	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. <sup>6/</sup>	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30 <sup>4/</sup>	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

<sup>1</sup> Average runoff condition, and  $I_a = 0.2S$ .

<sup>2</sup> **Poor:** <50% ground cover or heavily grazed with no mulch.

**Fair:** 50 to 75% ground cover and not heavily grazed.

**Good:** > 75% ground cover and lightly or only occasionally grazed.

<sup>3</sup> **Poor:** <50% ground cover.

**Fair:** 50 to 75% ground cover.

**Good:** >75% ground cover.

<sup>4</sup> Actual curve number is less than 30; use CN = 30 for runoff computations.

<sup>5</sup> CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

<sup>6</sup> **Poor:** Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.

**Fair:** Woods are grazed but not burned, and some forest litter covers the soil.

**Good:** Woods are protected from grazing, and litter and brush adequately cover the soil.

# Channel Report

Item 2.

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Friday, Jun 14 2024

## Conveyance Ditch (SW Property Corner)

### Trapezoidal

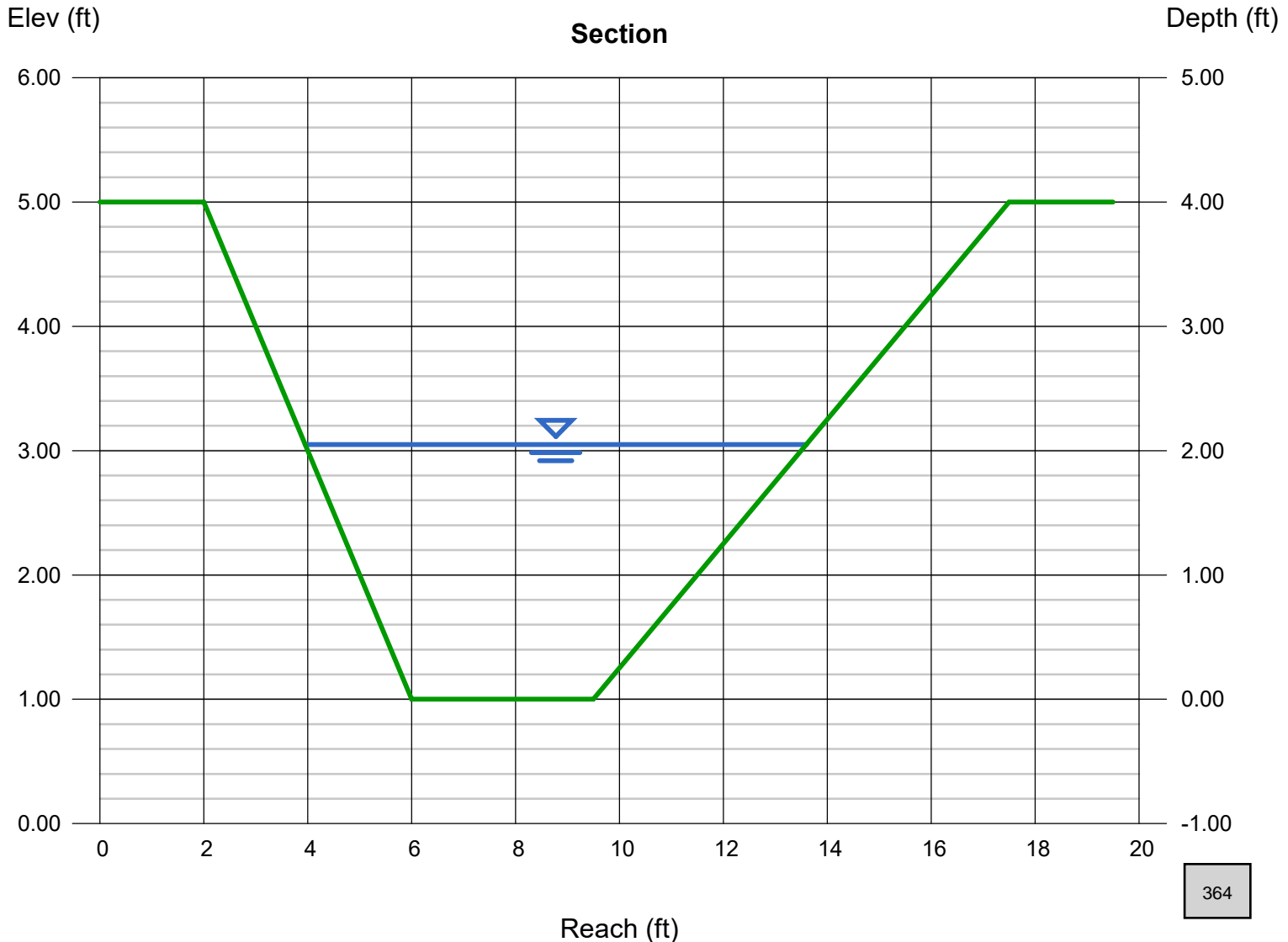
Bottom Width (ft) = 3.50  
Side Slopes (z:1) = 1.00, 2.00  
Total Depth (ft) = 4.00  
Invert Elev (ft) = 1.00  
Slope (%) = 1.00  
N-Value = 0.050

### Highlighted

Depth (ft) = 2.05  
Q (cfs) = 45.84  
Area (sqft) = 13.48  
Velocity (ft/s) = 3.40  
Wetted Perim (ft) = 10.98  
Crit Depth, Yc (ft) = 1.42  
Top Width (ft) = 9.65  
EGL (ft) = 2.23

### Calculations

Compute by: Known Q  
Known Q (cfs) = 45.84



# Wilsonville Tonkin Lamborghini

## Pipe Conveyance Calculations - Downstream Analysis

Prepared by Harper Houf Peterson Righellis Inc.

Job No. ADG-122

June 2024

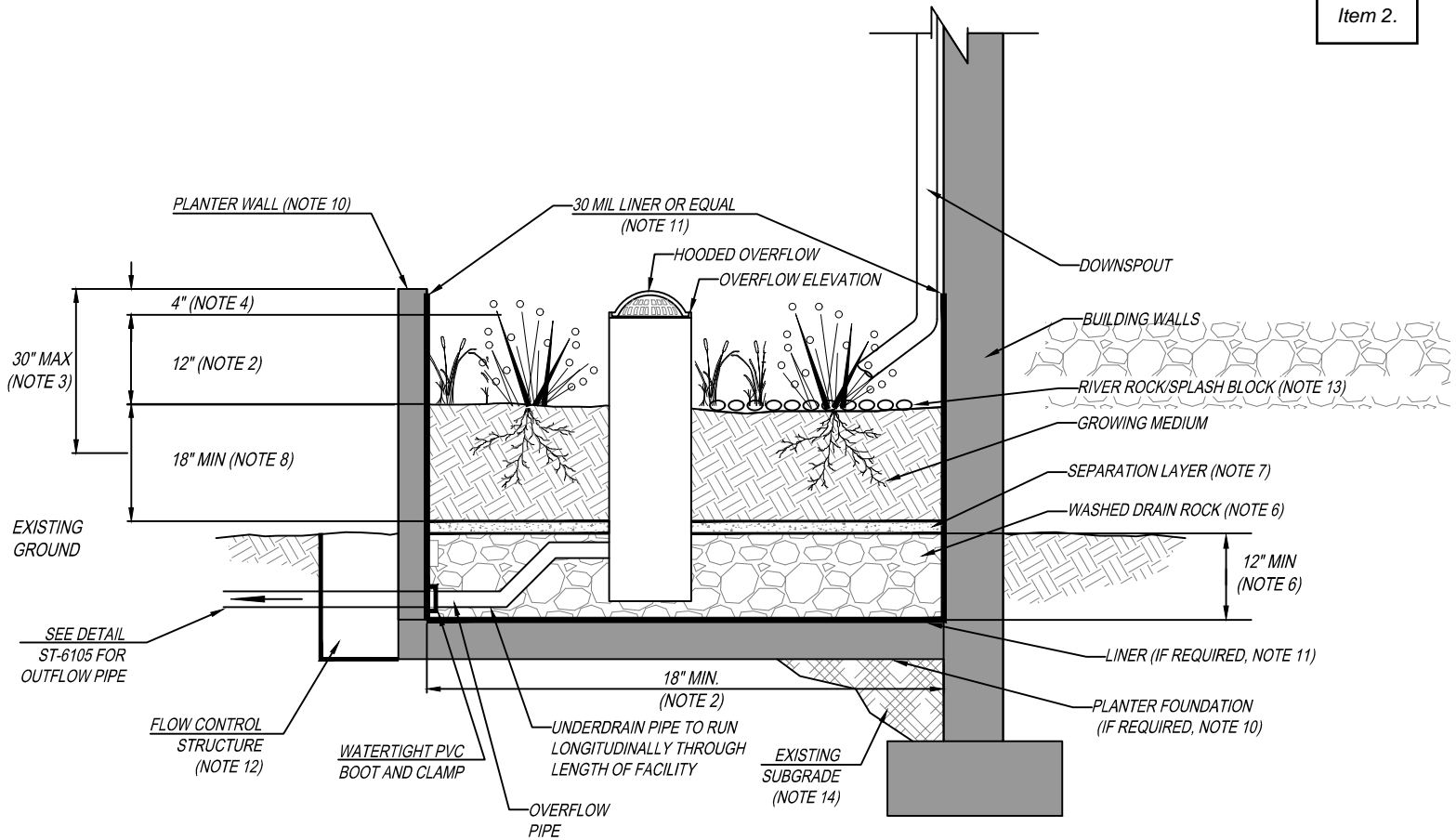
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Pipe Segment	Upstream Basin	Pipe Size (in)	Area (sf)	Per. (ft)	N (→)	Q25 (1) (cfs)	Slope (%)	Q <sub>CAPACITY</sub> (cfs)	Velocity Full (fps)	Capacity Met?
<b>Pipe Conveyance</b>										
1	ODOT Pipe under Hwy 5	30	4.91	7.85	0.013	70.66	1.00%	41.03	8.36	NO

(1) Q25 peak flow information provided from Hydraflow Hydrographs program

# APPENDIX G – Operation & Maintenance - Storm Facilities





**GENERAL NOTES:**

1. **PROVIDE PROTECTION** FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION. WRAP UNDER-DRAIN IN FILTER FABRIC TO REDUCE TRANSPORT OF FINES.
2. **DIMENSIONS:**  
 -WIDTH: 18" MINIMUM  
 -DEPTH OF PLANTER (FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION): 12"  
 -SLOPE OF PLANTER: 0.5% OR LESS
3. **HEIGHT/SETBACK**  
 -PLANTERS SHALL BE LESS THAN 30" IN HEIGHT ABOVE SURROUNDING AREA  
 -PLANTERS SHALL BE MINIMUM OF 5 FEET FROM PROPERTY LINE
4. **OVERFLOW:**  
 -INLET ELEVATION SHALL ALLOW FOR 4" OF FREEBOARD, MINIMUM  
 -PROTECT FROM DEBRIS AND SEDIMENT WITH STRAINER OR GRATE
5. **PIPING:**  
 -PERFORATED UNDER-DRAIN PIPING: SHALL RUN LONGITUDINALLY THROUGH LENGTH OF FACILITY, 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 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.
6. **DRAIN ROCK:**  
 -SIZE FOR FLOW-THROUGH PLANTER: 1 1/2" - 3/4" WASHED  
 -DEPTH: 12" MINIMUM
7. **SEPARATION** BETWEEN DRAIN ROCK AND GROWING MEDIUM: SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE.
8. **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.
9. **VEGETATION:** FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
10. **PLANTER FOUNDATION AND WALLS:**  
 -MATERIALS SHALL BE 4" REINFORCED CONCRETE, STONE, BRICK, OR OTHER DURABLE MATERIAL.  
 -CONCRETE, BRICK, OR STONE WALLS SHALL BE INCLUDED ON FOUNDATION PLANS.  
 -INSTALL INVERTED CURB AS NEEDED BETWEEN PLANTER AND ROAD SUBGRADE.  
 -SUBMIT RETAINING WALL DESIGN IN ACCORDANCE WITH APPLICABLE STRUCTURAL CODES FOR REVIEW AND APPROVAL.
11. **WATERPROOF LINER (IF REQUIRED):**  
 -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.
12. **FLOW CONTROL** STRUCTURE. SEE DETAIL ST-6105.
13. **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.
14. **SEASONAL HIGH GROUNDWATER SEPARATION:**  
 --SEPARATION DISTANCE AS REQUIRED BY THE CITY.

**Stormwater Planter - Filtration**

CITY OF  
WILSONVILLE

DRAWING NUMBER: ST-6005

DRAWN BY: SR

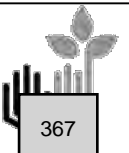
SCALE: N.T.S.

FILE NAME: ST-6005.DWG

APPROVED BY: NK

DATE: 4/16/18

PUBLIC WORKS STANDARDS



## Stormwater Planters Operations & Maintenance Plan

What to Look For	What to Do
<b>Structural Components</b> , including inlets and outlets/overflows, shall freely convey stormwater.	
Clogged inlets or outlets	-Remove sediment and debris from catch basins, trench drains and curb inlets and pipes to maintain at least 50% conveyance capacity at all times.
Cracked Drain Pipes	-Repair/seal cracks. Replace when repair is insufficient.
Check Dams	-Maintain 4 to 10 inch deep rock check dams at design intervals.
<b>Vegetation</b>	
Dead or strained vegetation	-Replant per original planting plan, or substitute from Appendix A. -Irrigate as needed. Mulch banks annually. DO NOT apply fertilizers, herbicides, or pesticides.
Tall Grass and Vegetation	-Cut back grass and prune overgrowth 1-2 times per year. Remove cuttings
Weeds	-Manually remove weeds. Remove all plant debris.
<b>Growing/Filter Medium</b> , including soil and gravels, shall sustain healthy plant cover and infiltrate within 72 hours.	
Gullies	-Fill, lightly compact, and plant vegetation to disperse flow.
Erosion	-Replace splash blocks or inlet gravel/rock.
Slope Slippage	-Stabilize 3:1 slopes/banks with plantings from Appendix A
Ponding	-Rake, till, or amend to restore infiltration rate.

### Annual Maintenance Schedule:

*Summer.* Make any structural repairs. Improve filter medium as needed. Clear drain. Irrigate as needed.

*Fall.* Replant exposed soil and replace dead plants. Remove sediment and plant debris.

*Winter.* Monitor infiltration/flow-through rates. Clear inlets and outlets/overflows to maintain conveyance.

*Spring.* Remove sediment and plant debris. Replant exposed soil and replace dead plants. Mulch.

*All seasons.* Weed as necessary.

*Maintenance Records:* Record date, description, and contractor (if applicable) for all structural repairs, landscape maintenance, and facility cleanout activities. Keep work orders and invoices on file and make available upon request of the inspector.

*Access:* Maintain ingress/egress to design standards.

*Infiltration/Flow Control:* All facilities shall drain within 72 hours. Record time/date, weather, and site conditions when ponding occurs.

*Pollution Prevention:* All sites shall implement best management practices to prevent hazardous or solid wastes or excessive oil and sediment from contaminating stormwater. Contact \_\_\_\_\_ for immediate assistance responding to spills. Record time/date, weather, and site conditions if site activities contaminate stormwater.

*Vectors (Mosquitoes & Rodents):* Stormwater facilities shall not harbor mosquito larvae or rats that pose a threat to public health or that undermine the facility structure. Monitor standing water for small wiggling sticks perpendicular to the water's surface. Note holes/burrows in and around facilities. Call Clackamas County Vector Control for immediate assistance to eradicate vectors. Record time/date, weather, and site conditions when vector activity observed.

### Stormwater Planter O & M Plan

DRAWING NUMBER: ST-6015

DRAWN BY: SR

SCALE: N.T.S.

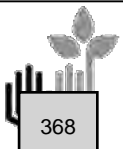
FILE NAME: ST-6015.DWG

APPROVED BY: NK

DATE: 10/8/14

CITY OF  
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## STORMWATER FACILITIES OPERATIONS AND MAINTENANCE CHECKLIST

<b>Problem</b>	<b>Frequency</b>	<b>Trigger</b>	<b>Preferred Condition</b>
<i>Sediment Accumulation in Treatment Area</i>	<i>Monthly from November through April Annually Required</i>	<i>Sediment depth exceeds 3 inches</i>	<i>Sediment removed from vegetated treatment area: level side to side and drains freely toward outlet; no standing water within 24 hours of any major storm (1" in 24 hours)</i>
<i>Erosion Scouring</i>	<i>Monthly from November through April Annually Required</i>	<i>Monthly from November through April Annually Required</i>	<i>Repair ruts or bare areas by filling with topsoil during dry season; regrade and replant large bare areas.</i>
<i>Standing Water</i>	<i>Monthly from November through April and after any major storm (1 inch in 24 hours)</i>	<i>Standing water in the planter between storms that does not drain freely</i>	<i>Remove sediment or trash blockages; improve end to end grade so there is no standing water 24 hours after any major storm (1 inch in 24 hours)</i>
<i>Flow not Distributed Evenly</i>	<i>Monthly from November through April Annually Required</i>	<i>Flows unevenly distributed through planter width due to uneven or clogged flow spreader</i>	<i>Level the spreader and clean so that flows spread evenly over entire planter width</i>
<i>Settlement/ Misalignment</i>	<i>Annually Required</i>	<i>Failure of planters has created safety, function, or design problem</i>	<i>Planter replaced or repaired to design standards</i>
<i>Constant Baseflow</i>	<i>Monthly from November through April Annually Required</i>	<i>Small, continual flow of water through the planter even after weeks without rain; planter bottom has an eroded, muddy channel</i>	<i>Add a low-flow pea gravel drain the length of the planter or bypass the baseflow around the planter</i>
<i>Vegetation</i>	<i>Monthly from November through April Annually Required</i>	<i>Vegetation blocking more than 10% of the inlet pipe opening</i>	<i>No vegetation blocking the inlet pipe opening</i>
<i>Poor Vegetation Coverage</i>	<i>Monthly Annually Required</i>	<i>Grass or other vegetation is sparse, or bare in more than 10% of the planter area</i>	<i>Determine cause of poor growth and correct the condition; replant with plants (per Appendix A) as needed to meet facility standards</i>
<i>Invasive Vegetation</i>	<i>Monthly Annually Required</i>	<i>No invasive vegetation is planted or permitted to remain</i>	<i>no invasive vegetation present; remove excessive weeds. Control if complete eradication is not feasible</i>
<i>Rodents</i>	<i>Monthly Annually Required</i>	<i>Evidence of rodents or rodent damage</i>	<i>No rodents; functioning facility</i>
<i>Insects</i>	<i>Annually Required</i>	<i>Insects such as wasps and hornets that interfere with maintenance activities</i>	<i>Harmful Insects removed</i>
<i>Trash and Debris</i>	<i>Monthly and after any major storm (1 inch in 24 hours) Annually Required</i>	<i>Visual evidence of trash, debris or dumping</i>	<i>Trash and Debris removed from facility</i>
<i>Contamination and Pollution</i>	<i>Monthly from November through April Annually Required</i>	<i>Any evidence of oil, gasoline, contamination or other pollutants</i>	<i>No contaminants or pollutants present; coordinate removal/cleanup with local water quality response agency</i>
<i>Obstructed Inlet/Outlet</i>	<i>Monthly and after any major storm event (1 inch in 24 hours) Annually Required</i>	<i>Inlet/outlet areas clogged with sediment, vegetation or debris</i>	<i>Clear inlet and outlet; obstructions removed</i>
<i>Excessive Shading</i>	<i>Monthly from November through April Annually Required</i>	<i>Vegetation growth is poor because unlight does not reach planter</i>	<i>Trim over-hanging limbs and/or remove brushy vegetation as needed</i>
<i>Vegetation</i>	<i>Monthly from November through April Annually Required</i>	<i>Specified or approved grass grows so tall that it competes with shrubs and/or becomes a fire danger</i>	<i>String trim non-wetland grasses to 4 inch to 6 inch and remove clippings; protect woody vegetation</i>

### Stormwater Facilities Operations & Maintenance Checklist

DRAWING NUMBER: ST-6115

DRAWN BY: SR

SCALE: N.T.S.

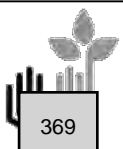
FILE NAME: ST-6115.DWG

APPROVED BY: NK

DATE: 10/3/14

CITY OF  
WILSONVILLE

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# Significant Resource Impact Report Tonkin Lamborghini Dealership Wilsonville, Oregon

(Section 2DA, Township 3 South, Range 1 West, Tax Lot 1000)

**Prepared for**

Tonkin Lamborghini Dealership  
c/o Kendra Kozak  
**Axis Design Group**  
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**Prepared by**

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Wilsonville, Oregon 97070  
(503) 570-0800

PHS Project Number: 7943

**April 30, 2024**



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## 1.0 INTRODUCTION

Pacific Habitat Services, Inc. (PHS) has prepared this Significant Resource Impact Report (SRIR) for development to an existing property on SW Parkway Avenue, in Wilsonville, Oregon (Tax Map 3S102DA Tax Lot 1000). Tonkin Lamborghini endeavors to construct a new Lamborghini dealership on the site. A resource is mapped on the City of Wilsonville's Significant Resources Overlay Zone (SROZ) in the center of the property; therefore, a SRIR is required. The format follows the pertinent sections of the City of Wilsonville's Planning and Land Development Ordinance for a Standard SRIR (Section 4.139.05-06). For ease of review by the City of Wilsonville, key portions of the ordinance language are included (*italicized*), followed by specific responses to the requirements.

Figures 1, 2, and 3 show the general topography, tax lot map, and soils for the site, respectively. Figure 4 shows the existing site conditions. Figure 5 show the site development plan, 5A shows the tree removal plan, Figure 6 shows the mitigation plan, Figure 7 shows the Metro Title 3 boundaries on the site, Figure 8 is the Local Wetland Inventory Map, and Figure 9 shows the Metro Title 13 boundaries. All Figures are in Appendix A.

## 2.0 CITY DEVELOPMENT CODE

### SECTION 4.139.06 SIGNIFICANT RESOURCE IMPACT REPORT (SRIR) AND REVIEW CRITERIA

*(.02) Application Requirements for a Standard SRIR. The following requirements must be prepared and submitted as part of the SRIR evaluation for any development not included in paragraph A above:*

*A. A Site Development Permit Application must be submitted in compliance with the Planning and Land Development Ordinance.*

A Site Development Permit Application is being submitted for this project in compliance with the Planning and Land Development Ordinance.

*B. The SRIR shall be conducted and prepared by a natural resource professional knowledgeable and qualified to complete such a report.*

The SRIR was prepared by Pacific Habitat Services, Inc. (PHS). PHS provides a wide range of services to the public and private sector, ranging from natural resource assessments to environmental design and construction. PHS offers professional expertise in the disciplines of wetland science, wildlife biology, hydrology, soil science, environmental toxicology, botany, and environmental planning.

*C. The qualifications of the person or persons preparing each element of the analysis shall be included with the SRIR.*

Joe Thompson is a Professional Wetland Scientist (PWS) with Pacific Habitat Services, Inc. (PHS) and has been a permanent member of the staff since 2016. Joe has over 22 years of experience on a variety of wildlife, National Environmental Policy Act (NEPA) and wetland related studies, including: biological assessments, special status wildlife and rare plant surveys, wetland delineations, wetland permitting, functional assessments, and compensatory mitigation.

John van Staveren is a Senior Professional Wetland Scientist (SPWS) with PHS and has been a permanent member of PHS since 1995. John has over 36 years of experience as a natural resource professional performing a wide range of wetland, botanical, wildlife, Endangered Species Act and NEPA studies and overseeing the work of PHS' staff.

**D. The SRIR shall include the following:**

**1. Physical Analysis. The analysis shall include, at a minimum:**

**a. Soil types;**

The Natural Resources Conservation Services (NRCS) mapped soils within the tax lot include Briedwell silt loam, 0 to 7 percent slopes, Wapato silty clay loam, and Woodburn silt loam, 3 to 7 percent slopes. The Wapato silty clay loam soil is considered hydric based on the Natural Resources hydric soils list, and the Briedwell and Woodburn soils are considered partially hydric with inclusions. Figure 3 summarizes mapped locations of the soils within the site.

**b. Geology;**

The site is adjacent to the east side of Interstate 5 (I-5), and approximately 3.1 miles north of the Willamette River. The USGS DOGAMI<sup>1</sup> Digital Map describes the geology of the site as belonging to the Terrane Group: Quaternary Surficial Deposits; the Formation: Alluvial Deposits; and the Rock Type: Mixed Grain Sediments, which are described as:

*“Deposits of unconsolidated sediments. Includes alluvium, colluvium, river and coastal terrace, landslide, glacial, eolian, beach, lacustrine, playa and pluvial lake deposits, and outburst flood deposits left by the Missoula and Bonneville floods.”*

Elevations in the site range from approximately 270 feet National Geodetic Vertical Datum (NGVD) in the wetland in the center of the property, to approximately 280 feet NGVD at the western property boundary.

**c. Hydrology of the site;**

There are two obvious sources of hydrology for the site: precipitation and a large unnamed drainageway that runs the length of the project site's southern boundary. The drainageway flows to the southwest and after exiting the site passes under I-5 to the west; eventually it enters a tributary of Seely Ditch (Coffee Lake Creek). There are three wetlands on the site: Wetland A (0.64 ac), Wetland B (0.12 ac), and Wetland Ditch 1 (0.06 ac). Their Cowardin and Hydrogeomorphic classifications and hydrological characteristics are discussed below.

**Wetland A**

The source of hydrology for Wetland A (0.64 ac) is precipitation, which forms wetlands due the poor drainage of the underlying Wapato Silty Clay Loam soils.

<sup>1</sup> USGS: United State Geological Survey; DOGAMI: Department of Geology and Mineral Industries

### **Wetland B and Wetland Ditch 1**

Wetland B (0.06 acre) and Wetland Ditch 1 (0.04 acre) are two segments of a historically channelized drainageway that conveys seasonal runoff from nearby hills, draining west under I-5 to ultimately join Coffee Lake Creek/Seely Ditch. The eastern segment of this drainageway (Wetland B) has a floodplain within a broad ravine that strongly exhibits wetland characteristics, and as such is distinguished from the western channel segment (Wetland Ditch 1).

According to the Oregon Explorer interactive web mapping service, and the local FEMA flood insurance rate mapping (FIRM), no 100-year floodplain is mapped within the site.

- d. Outline of any existing features including, but not limited to, structures, decks, areas previously disturbed, and existing utility locations;*

The site is currently undeveloped.

- e. Location of any wetlands or water bodies on the site and the location of the stream centerline and top-of-bank.*

PHS determined the location of wetlands within the study area based on the presence of wetland hydrology, hydric soils, and hydrophytic vegetation. This approach is in accordance with the Routine On-site Determination, as described in the Corps of Engineers Wetland Delineation Manual, Wetlands Research Program Technical Report Y-87-1 (“The 1987 Manual”) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, May 2010). The study area was delineated on December 13, 2016. A concurrence letter from the Department of State Lands (DSL) was issued on June 14, 2019. The DSL concurrence letter is included in Appendix B.

The entire study area was investigated for the presence of wetlands or other waters. A prominent centrally located wetland (Wetland A) was delineated based on relatively abrupt hydric to non-hydric soil transitions, active hydrologic indicators (including shallow inundation, near surface water tables and saturation, and oxidized rhizospheres), and presence of hydrophytic vegetation. In addition, a large unnamed drainageway (Wetland B and Wetland Ditch 1) was conveying surface water flows along its length, while supporting hydrophytic vegetation along the majority of its length.

### **Wetland A**

Wetland A is approximately 0.64 acres in size and is located on gently sloping to essentially flat ground that extends across much of the southern half of the project site. A portion of its southern boundary is contiguous with the top of bank of a ditch (Wetland Ditch 1), which is located along the southern boundary of the site. Its elongated shape roughly falls within the NRCS-mapped swath of poorly drained, hydric Wapato soils, which typically can retain water near the surface more effectively than well-drained soils in the surrounding area.

Wetland A’s Cowardin class is Palustrine Emergent, Saturated/Semipermanent/ Seasonal (PEMY) wetland, while the Hydrogeomorphic (HGM) class is Slope-Flats, due to its landscape position encompassing the site’s lower slopes and nearly level terrace along the channelized stream.

Vegetation within Wetland A is predominantly herbaceous, with the exception of a few scattered black cottonwood (*Populus balsamifera*, FAC), English hawthorn (*Crataegus monogyna*, FAC), and resprouting Himalayan blackberry (*Rubus armeniacus*, FAC) canes. Much of the wetland-upland boundary was previously dominated by Himalayan blackberry thickets. Common herbaceous species include soft rush (*Juncus effusus*, FACW), reed canarygrass (*Phalaris arundinacea*, FACW), common velvetgrass (*Holcus lanatus*, FAC), tall fescue (*Schedonorus arundinaceus*, FAC), and creeping bentgrass (*Agrostis stolonifera*, FAC). Species encountered along the upland edge include woody species such as black locust and Himalayan blackberry, and herbaceous species such as tall fescue and Queen Anne's lace (*Daucus carota*, FACU).

The soils within Wetland A meet the redox dark surface hydric soil indicator. As previously mentioned, its hydrology is likely driven primarily by direct precipitation onto poorly drained soils, although some stormwater sheetflow may also be generated from the parking lot to the north. Shallow inundation, along with near surface water tables, saturation, and oxidized rhizospheres were all in evidence at the time of sampling.

### **Wetland B**

Wetland B (0.06 acre) is one segment of a historically channelized drainageway that conveys seasonal runoff from nearby hills, draining west under I-5 to ultimately join Coffee Lake Creek/Seely Ditch. This segment of the drainageway receives stormwater inputs from a 24-inch culvert from under SW Parkway Avenue and out flows through a 24-inch culvert to Wetland Ditch 1 (described below). Wetland B has a floodplain within a broad ravine that strongly exhibits wetland characteristics, and as such is distinguished from the western channel segment (Wetland Ditch 1). Wetland B's Cowardin class is Palustrine Emergent to Scrub-Shrub, Saturated/Semipermanent/ Seasonal (PSSY/PEMY) wetland, while the HGM class is Riverine Flow-Through (RFT), due to its directional flows within a shallow ravine, with both inlet and outlet culverts.

Vegetation within Wetland B is predominantly herbaceous in the lowest elevations, transitioning to a mix of herbaceous and woody species higher on the banks. Common herbaceous species include reed canarygrass, bittersweet nightshade (*Solanum dulcamara*, FAC), and common cattail. In addition, some Hooker's willow (*Salix hookeriana*, FACW) is scattered along the lower banks. Species encountered along the upland edge includes woody species such as Douglas fir, red alder (*Alnus rubra*, FAC), and Himalayan blackberry; herbaceous cover, where present, is primarily comprised of pasture and turf grasses such as tall fescue, bentgrasses, and bluegrasses (*Poa* spp., FAC), etc.

The soils within Wetland B typically meet either the loamy gleyed matrix or redox dark surface hydric soil indicators. Its hydrology is primarily driven by seasonally high stormwater inputs from the offsite catchment area, which, as noted above, is directed into Wetland B by a 24-inch culvert from under SW Parkway Avenue. Groundwater discharges into the ravine from adjacent uplands can be expected as well. Shallow inundation, along with near surface water tables, saturation, and oxidized rhizospheres were all in evidence at the time of sampling.

### **Wetland Ditch 1 (tributary to Coffee Lake Creek)**

Wetland Ditch 1 (0.04) receives direct flows from Wetland B via a 24-inch culvert; the flows are confined to a relatively narrow, incised channel that runs the remaining length of TL 1000 to its southwest corner and beyond. The ditch has a silt bottom typically less than 10 feet wide; the bottom is sparsely vegetated with water starwort (*Callitriche sp.*, OBL), while such species as reed canarygrass and soft rush are found along its banks. Its Cowardin class is PEMY wetland, while the Hydrogeomorphic (HGM) class is Riverine Flow Through.

- f. Within the area proposed to be disturbed, the location, size and species of all trees that are more than six (6) inches DBH. Trees outside the area proposed to be disturbed may be individually shown or shown as drip line with an indication of species type or types;*

Arborist Todd Prager performed a tree inventory that includes all trees on the site that are within the proposed development and its vicinity. Figure 5A shows the existing trees in the vicinity of the development as well as those that will be removed; the trees are depicted as either conifer or deciduous. Trees that that will be removed are given a reference number and their species, diameter at breast height, and mitigation criteria are shown in Appendix C. A tree removal permit will be prepared as part of the Site Development Permit Application.

- g. A property survey together with topography shown by contour lines prepared at two-foot vertical intervals. Five-foot vertical intervals may be allowed for steep sloped areas. An Oregon Registered Land Surveyor or Civil Engineer shall prepare the survey.*

Figure 5 shows the development as provided in plans by Axis Design Group. Slopes measurements were calculated at several areas adjacent to the wetland to display slope variation and gradients below 25% (Figure 4).

- h. The location of the SROZ and Impact Area boundaries;*

Figure 4 shows the location of the refined SROZ and Impact Area boundaries within the property. Figure 5 shows the location of the refined SROZ and Impact Area boundaries within the project development area. The refined boundary is based upon a wetland delineation conducted by PHS, which differs somewhat from the City's existing SROZ boundary. While the existing boundaries were based on a wetland determination drawn onto aerial photographs with limited ground truthing in 1998, the new boundaries are based on field documented, flagged and surveyed wetland boundaries conducted in 2016. This is the reason for the submittal of this SRIR and request for map verification.

As stated above, the delineation methodology followed the 1987 Corps of Engineers *Wetlands Delineation Manual, Technical Report Y-87-1*, and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* which is recognized by both the DSL and the Corps. DSL issued a concurrence letter of the 2016 delineation in 2019.

- i. A minimum of three slope cross-section measurements transecting the site, equally spaced at no more than 100-foot increments. The measurements should be made perpendicular to the stream;*

Slope measurements calculations adjacent to Wetlands A, B, and Wetland Ditch 1 are shown on Figure 4, which includes more than three measurements less than 100-foot increments. The measurements were made perpendicular to the wetland boundaries.



- j. A map that delineates the Metro UGMFP Title 3 Water Quality Resource Area boundary (using Metro Title 3 field observed standards);*

Figure 7 depicts the Metro UGMFP Title 3 land, which was mapped based on drainage areas upslope and riparian corridors. As described in Section (.02)(h) above, field investigations (including a formal wetland delineation) have refined these boundaries. Title 3 applies to: (1) Development in Water Quality Resource and Flood Management Areas and (2) Development which may cause temporary or permanent erosion on any property within the Metro Boundary. Metro's Water Quality performance standards will be met by: (A) Providing a vegetated corridor to separate Protected Water Features from development; (B) Maintaining or reducing stream temperatures; (C) Maintaining natural stream corridors; (D) Minimizing erosion, nutrient and pollutant loading into water; (E) Filtering, infiltration and natural water purification; and (F) Stabilizing slopes to prevent erosion and contributing to sedimentation of water features.

- k. A map that delineates the Goal 5 safe harbor boundary (using the standards found within the Oregon Administrative Rule OAR 660-23(1996));*

A Goal 5 safe harbor boundary of 50 feet has been applied to Wetlands A, B, and Wetland Ditch 1 (Figures 4, 5, 5A, and 6). This boundary is equal to the SROZ boundary. According to OAR 660-23-0090(5), safe harbor buffers are applied to the following criteria: (a) Along all streams with average annual stream flow greater than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 75 feet upland from the top of each bank; (b) Along all lakes, and fish-bearing streams with average annual stream flow less than 1,000 cfs, the riparian corridor boundary shall be 50 feet from the top of bank; (c) Where the riparian corridor includes all or portions of a significant wetland as set out in OAR 660-023-0100, the standard distance to the riparian corridor boundary shall be measured from, and include, the upland edge of the wetland; (d) In areas where the top of each bank is not clearly defined, or where the predominant terrain consists of steep cliffs, local governments shall apply OAR 660-023-0030 rather than apply the safe harbor provisions of this section. The 50-foot safe harbor boundary was applied based on the DSL concurred boundaries of Wetlands A and B.

- l. The existing site significant resource conditions shall be determined and identified by a natural resource professional; and*

A resource assessment was conducted by Fishman Environmental Services (FES) at the site in 1998 (Local Wetland Inventory (LWI), which confirmed that the project area includes locally significant wetlands (LSW) and has a rating of High for Wildlife and Water Quality. The LWI shows a LSW wetland in the approximate location of Wetlands A, B, and Wetland Ditch 1. The LSW wetlands are designated as 1.12 on the LWI (Figure 8).

The LWI for Wilsonville assessed these wetland groups for the following significance criteria:

- 1) Wetlands that score the highest rank for any of the four ecological functions addressed by OFWAM or equivalent: Diverse wildlife habitat, intact fish habitat, intact water quality, or intact hydrologic control.
- 2) Wetlands that are rated in the second highest functional category for water quality, and that occur within ¼ mile of a water quality-limited stream listed by DEQ.
- 3) Contain one or more rare/uncommon wetland plant communities in Oregon.
- 4) Inhabited by any species listed by the federal or state government as a sensitive, threatened, or endangered species in Oregon.

- 5) Wetland rates in the second highest functional category for fish habitat, and has a surface water connection to a stream segment that is mapped by ODFW as habitat for “indigenous anadromous salmonids”.
- 6) Optional criterion: Wetland represents a locally unique plant community.
- 7) Optional criterion: Wetland rates in highest category for education potential and there is documented use for educational purposes by a school or organization.

**Summary of overall significance findings by FES in 1998:**

**Wetland 1.12 (PHS Wetlands A and B):** (LWI: 1.12, Unit SD-NT-E)

Wetlands A and B are both included in LWI 1.12 because the small upland area separating Wetlands A and B was not distinguishable using the sampling methodologies of the LWI, which are less precise than those of the wetland delineation. The OFWAM data sheet states that the wetland

*“Provides diverse wildlife habitat and has intact water quality functions; hydrologic control functions are degraded, and fish habitat is not applicable. Has the potential for educational uses; it is not appropriate for recreation.”*

OFWAM sheets are provide in Appendix D.

PHS concurs with the previous assessment that LWI Wetland 1.12 (Wetlands A and B) is a locally significant wetland; however, wetlands within the site are not visible or accessible by the public and therefore would not provide recreational or educational benefits. They do, however, provide foraging and reproductive habitat for resident and migratory birds as well as small mammals such as gophers, ground squirrels, rats, and mice as well as amphibians, reptiles, and insects. Because the wetland is surrounded by busy roadways including the I-5 Freeway and other development, mammals with large home ranges such as coyotes, bobcats, and deer are precluded.

**Wetland Ditch 1 (tributary to Seely Creek)**

Wetland Ditch 1 is not included in the LWI, nor is it listed as a locally significant wetland. It is a hand-dug ditch and although it is state and federally jurisdictional, it does not possess high wildlife habitat, water quality, or educational benefits.

*m. Current photos of site conditions shall be provided to supplement the above information.*

Wetland delineation fieldwork was completed on December 13, 2016. Photos from the delineation report and the DSL concurrence letter are provided in Appendix B. See Figure 4 for photo locations.

2. *The analysis shall include development recommendations including grading procedures, soil erosion control measures, slope stabilization measures, and methods of mitigating hydrologic impacts. For projects that affect possible wetlands, a copy of the Local Wetland Inventory (LWI) map pertaining to the site shall be provided. Notice of the proposal shall be given to the Oregon Division of State Lands and the Army Corps of Engineers.*

The development will not result in wetland impacts. Grading procedures will follow proper erosion control measures, including the placement of sediment fencing around wetland boundaries, inlet protection around all stormwater inlets, and a construction entrance to reduce dust and tracking within and outside of the work area. Inlet protection will reduce the transport of sediment into storm

pipes, the construction entrance will include subgrade reinforcement geotextile fabric to prevent infiltration or transport of sediment, and sediment fencing will consist of filter fabric material mounted to 2-foot posts around wetlands to mitigate the potential for sedimentation from the construction areas.

The proposed project will also conform to City of Wilsonville's stormwater standards and will feature an offsite stormwater facility and two stormwater planters onsite with bioswales that will be planted with native vegetation and will treat runoff from the proposed impervious surfaces before they are permitted to enter wetlands or waters.

Figure 8 displays the LWI map pertaining to the site.

No impacts to state or federally jurisdictional waters are proposed (Figure 5), therefore no notification will be sent to DSL or the Army Corps of Engineers. The Wetland Delineation Concurrence is included in Appendix B.

- 3. Ecological Analysis. The Ecological Analysis shall include a map, using the Physical Analysis map as a base, showing the delineated boundaries and coverage of wetlands, riparian corridors, and wildlife habitat resources identified on the site.**

Figure 4 shows the delineated boundaries and coverage of wetland resources within the project area as well as the SROZ boundary, slope measurements calculations adjacent to Wetlands A and B, and the SR Impact Area. Figure 9 shows Metro's map of Regionally Significant Habitat (under Title 13), the site includes the following habitat classifications:

- HCA Value: High. As previously stated, the OFWAM performed by Fishman Associates rates the wetland in the center of the study area (1.12; Wetlands A and B) as high for wildlife and water quality.
  - a. ***Wetland boundaries shall be delineated using the method currently accepted by the Oregon Division of State Lands and the US Army Corps of Engineers. Riparian boundaries shall be delineated using the riparian corridor descriptions in this ordinance. Boundaries of mapped Goal 5 wildlife habitat shall be verified by field observation.***

PHS delineated the limits of the wetlands on the site based on the presence of wetland hydrology, hydric soils, and hydrophytic vegetation, in accordance with the Routine On-site Determination, as described in the *Corps of Engineers Wetland Delineation Manual, Wetlands Research Program Technical Report Y-87-1* ("The 1987 Manual") and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*. As stated previously, concurrence for the mapped wetland boundaries was received from DSL in 2019 (Appendix B).

Figure 9 depicts the Goal 5 Wildlife Habitat of the project site, which was classified during the LWI as Riparian Wildlife Habitat Class 1, and its boundaries are based on the LWI performed by Fishman Environmental Services. PHS concurs that the site meets this criteria, particularly in terms of value to the remaining wildlife habitat within the City; however, the quality of the wildlife is diminished because the site is surrounded by development and vehicular traffic as well as intrusion by humans and their pets.

- b. The analysis shall include an inventory that lists and describes the native and ornamental dominant and sub-dominant groundcover, shrub and tree species occurring on the site and wildlife observed during at least one site visit (specify date). The report shall also include recommended measures for minimizing the adverse impacts of the proposed development on unique and/or significant features of the ecosystem. The analysis shall include a report that discusses the ecological functions and values of the SROZ area, discussing each parameter listed below. The discussion shall be based on actual field observations and data obtained by a natural resource professional.

### Vegetation and Wildlife Species

Table 1 summarizes vegetation occurring on the site during the delineation field work completed on December 13, 2016. Table 2 contains wildlife species that are assumed to potentially occupy the site; however, focused or general surveys for wildlife were not conducted. Although the site's wetlands could provide some habitat for common amphibians, reptiles, and small mammals, no rare species are likely to be present due to its high percentage of invasive and non-native vegetation, frequent intrusions by humans and pets, and fragmentation. The site is surrounded by the I-5, busy streets, and commercial development. Trees – both native and non-native provide nesting habitat for a variety of resident and migratory bird species. Mature trees and shrubs, both within and along the boundaries of the wetland provide cooling, which benefits water quality and inputs of allochthonous material, which is necessary for food webs and soil development.

**Table 1. Non-Comprehensive List of Vegetation Observed within the Project Area**

Scientific Name	Common Name	Non-Native or Ornamental
<b>TREES</b>		
<i>Acer platanoides</i>	Norway maple	X
<i>Agrostis stolonifera</i>	Creeping bentgrass	X
<i>Alnus rubra</i>	red alder	
<i>Cedrus deodara</i>	Deodar cedar	X
<i>Crataegus monogyna</i>	English hawthorn	X
<i>Malus domestica</i>	Domestic apple	X
<i>Pinus sp.</i>	Pine	
<i>Populus balsamifera</i>	balsam poplar	
<i>Prunus avium</i>	sweet cherry	X
<i>Pseudotsuga menziesii</i>	Douglas' fir	
<i>Quercus garryana</i>	Oregon white oak	
<i>Quercus rubra</i>	red oak	X
<i>Robinia pseudoacacia</i>	black locust	X
<i>Salix sp.</i>	willow	
<i>Picea sp.</i>	spruce	
<b>SHRUBS</b>		
<i>Crataegus monogyna</i>	English hawthorn	X
<i>Rosa sp.</i>	wild rose	
<i>Rubus armeniacus</i>	Himalayan blackberry	X
<i>Rubus ursinus</i>	trailing blackberry	

Scientific Name	Common Name	Non-Native or Ornamental
<b>HERBS</b>		
<i>Agrostis capillaris</i>	colonial bentgrass	X
<i>Bromus spp.</i>	brome grasses	X
<i>Daucus carota</i>	Queen Anne's lace	X
<i>Epilobium ciliatum</i>	slender willow herb	
<i>Festuca rubra</i>	Red fescue	
<i>Holcus lanatus</i>	common velvet grass	X
<i>Hypochaeris radicata</i>	spotted cat's ear	X
<i>Jacobaea vulgaris</i>	stinking willie	X
<i>Juncus effusus</i>	Common rush	
<i>Leucanthemum vulgare</i>	ox-eye daisy	X
<i>Lotus corniculatus</i>	bird's-foot trefoil	X
<i>Plantago lanceolata</i>	English plantain	X
<i>Phalaris arundinacea</i>	reed canarygrass	X
<i>Poa pratensis</i>	bluegrass	X
<i>Prunella vulgaris</i>	Selfheal	X
<i>Rumex acetosella</i>	sheep sorrel	X
<i>Schedonorus arundinaceus</i>	tall fescue	
<i>Senecio jacobeeae</i>	Common ragwort	X
<i>Solanum dulcamara</i>	Bittersweet nightshade	X
<i>Taraxacum officinale</i>	dandelion	X
<i>Vicia tetrasperma</i>	vetch	X

**Table 2. Non-Comprehensive List of Wildlife Species Potentially within the Project Area\***

Common Name	Scientific Name
<b>MAMMALS</b>	
Deer mouse	<i>Peromyscus maniculatus</i>
Eastern fox squirrel	<i>Sciurus niger</i>
Raccoon	<i>Procyon lotor</i>
Western gray squirrel	<i>Sciurus griseus</i>
<b>BIRDS</b>	
American crow	<i>Corvus brachyrhynchos</i>
American kestrel	<i>Falco sparverius</i>
American goldfinch	<i>Carduelis tristis</i>
American robin	<i>Turdus migratorius</i>
Barn swallow	<i>Hirundo rustica</i>
Bewick's wren	<i>Thryomanes bewickii</i>
Black-capped chickadee	<i>Parus atricapillus</i>
Black-headed grosbeak	<i>Pheucitus melanocephalus</i>

<b>Common Name</b>	<b>Scientific Name</b>
Brewer's blackbird	<i>Euphagus cyanocephalus</i>
Brown creeper	<i>Certhia americana</i>
Bushtit	<i>Psaliparus minimus</i>
Cedar waxwing	<i>Bombycilla cedrorum</i>
Chestnut-backed chickadee	<i>Parus rufescens</i>
Cooper's hawk	<i>Accipiter cooperii</i>
Dark-eyed junco	<i>Junco hyemalis</i>
Downy woodpecker	<i>Picoides pubescens</i>
European starling*	<i>Sturnus vulgaris</i>
Fox sparrow	<i>Passerella iliaca</i>
Golden-crowned kinglet	<i>Regulus satrapa</i>
Golden-crowned sparrow	<i>Zonotrichia atricapilla</i>
Great-horned owl	<i>Bubo virginianus</i>
Hairy woodpecker	<i>Picoides villosus</i>
Hermit thrush	<i>Catharus guttatus</i>
House finch	<i>Carpodacus mexicanus</i>
House sparrow	<i>Passer domesticus</i>
House wren	<i>Troglodytes aedon</i>
Lesser goldfinch	<i>Carduelis psaltria</i>
Mourning dove	<i>Zenaida macroura</i>
Northern flicker	<i>Colaptes auratus</i>
Orange-crowned warbler	<i>Vermivora celata</i>
Red-breasted nuthatch	<i>Sitta canadensis</i>
Red-breasted sapsucker	<i>Sphyrapicus ruber</i>
Red tailed hawk	<i>Buteo jamaicensis</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Ring-necked pheasant	<i>Phasianus colchicus</i>
Ruby-crowned kinglet	<i>Regulus calendula</i>
Rufous hummingbird	<i>Selasphorus rufus</i>
Savannah sparrow	<i>Passerculus sandwichensis</i>
Song sparrow	<i>Melospiza melodia</i>
Spotted towhee	<i>Pipilo erythrophthalmus</i>
Steller's jay	<i>Cyanocitta stelleri</i>
Swainson's thrush	<i>Catharus ustulatus</i>
Tree swallow	<i>Tachycineta bicolor</i>
Turkey vulture	<i>Cathartes aura</i>
Varied thrush	<i>Ixoreus naevius</i>
Violet green swallow	<i>Tachycineta thalassina</i>
Western screech owl	<i>Otus kennicottii</i>

Common Name	Scientific Name
Western scrub jay	<i>Aphelocoma coerulescens</i>
Western tanager	<i>Piranga ludoviciana</i>
Western wood pewee	<i>Contopus sordidulus</i>
White crowned sparrow	<i>Zonotricha leucophrys</i>
Winter wren	<i>Troglodytes</i>
<b>AMPHIBIANS</b>	
Pacific treefrog	<i>Hyla regilla</i>
<b>REPTILES</b>	
Common garter snake	<i>Thamnophis sirtalis</i>

\*These species are assumed to potentially occupy the habitats of the site due to its suitability for foraging, nesting, or cover. Focused or general surveys for wildlife were not conducted.

**Impacts to unique or significant features of the ecosystem**

As depicted in the Site Plan (Figure 5), the proposed development will impact 7,147 sf / 0.16 ac of the City of Wilsonville SR Impact Area and 97 sf/ 0.002 acres of the SROZ boundary. The development will also result in the unavoidable removal of seven native trees.

**Ecological Functions and Values** of the resources are discussed below.

- c. *Wetlands (based on evaluation criteria in the Oregon Freshwater Wetlands Assessment Methodology (OFWAM), Oregon Division of State Lands)*
  - i. *wildlife habitat diversity*
  - ii. *fish habitat*
  - iii. *water quality protection*
  - iv. *hydrologic control*

Wetlands A and B came in as significant through an OFWAM assessment conducted by FES in 1998. Per that assessment Wetlands A and B are part of LWI Wetland 1.12. Wetland Ditch 1 is not identified in the LWI or OFWAM.

**Wildlife Habitat**

According to the OFWAM summary sheets, the wetlands provide diverse wildlife habitat; however, it should be noted that the wooded habitat is very small and fragmented so that it does not have a multi-layered or contiguous canopy. Interstate 5, busy streets, commercial buildings, and human intrusion restrict the site to small and medium sized mammals such as raccoons (*Procyon lotor*), striped skunks (*Memphitis memphitis*), fox squirrels (*Sciurus niger*), and mice (*Peromyscus* spp.). The habitat is also unlikely to provide nesting opportunities for large raptors, although they may on occasion hunt on the site for songbirds and small mammals. Acorn woodpeckers (*Melanerpes formicivorus*), American robins (*Turdus migratorius*), dark-eyed juncos (*Junco hyemalis*), black-capped chickadee (*Poecile atricapillus*), and spotted towhees (*Pipilo maculatus*) are native avian species that may nest in trees and shrubs within and adjacent to the wetland. Pacific tree frogs (*Pseudacris regilla*), and rough-skinned newts (*Taricha granulosa*) may forage and breed in ponded areas within the wetland during winter and spring.

### Fisheries Habitat

The OFWAM summary sheet described the wetland's fish habitat as non-existent. Water passes through and leaves the wetlands via small culverts that are not designed for fish passage.

### Water Quality Protection

The OFWAM summary sheet states that the water quality (pollutant removal) functions of LWI Wetland 1.12 are intact. Stormwater entering the wetlands is trapped for long periods in the wetland, which has dense vegetation that is highly beneficial for pollutant removal. The heavy clay Wapato silty clay loam soils are also highly beneficial for pollutant removal.

### Hydrologic Control

The OFWAM summary sheet states that LWI Wetland 1.12 has intact water quality functions, but hydrological control is degraded and therefore, fish habitat is not applicable. This may be due to culverts that are not passable for fish.

The wetland receives hydrology as direct precipitation and runoff as well as overflow from the ditch.

- d. **Wildlife Habitat (includes riparian corridors and upland forested areas)**
  - i. **wildlife habitat diversity**
  - ii. **water quality protection**
  - iii. **ecological integrity**
  - iv. **connectivity**
  - v. **uniqueness**

According to the OFWAM data sheet, wildlife habitat is of high quality, although as stated previously, it is small and fragmented as well as inaccessible for many larger terrestrial species. The plant community includes a tree layer mostly composed of native species, including Douglas' fir, balsam poplar, and Oregon oak, although non-native species are dominant in the shrub layer and include Himalayan blackberry and English hawthorn. The herbaceous layer is also dominated by grasses and forbs of European or Asian origin and includes bent grasses, bromes, and stinking willy. These species support a modest variety of resident and migratory avian species, small mammals, reptiles, and amphibians. Wetland 1.12 actively treats runoff from the adjacent developed areas to improve downstream water quality.

- e. **Riparian Corridors**
  - Stream-riparian ecosystems:**
    - i. **Presence and abundance of Large Woody Debris (LWD) in and adjacent to stream**
    - ii. **Tree/shrub canopy stream shade production (water temperature and aquatic plant growth control)**
    - iii. **Erosion and sediment control by riparian vegetation**
    - iv. **Water quality protection by riparian vegetation**
    - v. **River-floodplain ecosystem (Willamette River)**
    - vi. **Presence of functional floodplain (inundated annually)**
    - vii. **Type and condition of functional floodplain vegetation**
    - viii. **Use of river-floodplain by ESA-listed species**
    - ix. **Role as wildlife corridor connecting significant wildlife habitat areas**

Wetland Ditch 1 has a physical connection via culverts to Seely Ditch, which is west of the site.



Presence and abundance of Large Woody Debris (LWD) in and adjacent to stream

Wetland Ditch 1 is a small riverine system and there are some small to medium pieces of debris in the ditch, although there is no fish habitat, due mainly to restricted access by non-fish-friendly culverts.

Tree/shrub canopy stream shade production (water temperature and aquatic plant growth control)

Overall tree and shrub canopy within the site is not well-developed; however, there is some shade cover for the wetland and Wetland Ditch 1, which may benefit temperatures and aquatic plant growth control.

Erosion and sediment control by riparian vegetation

The forest vegetation of the site may have a very slight beneficial effect of limiting the potential for erosion by slowing the velocity of waters and trapping sediments that would otherwise leave the site and end up in offsite Seely Ditch.

Water quality protection by riparian vegetation

The site's dense and healthy vegetation provides treatment of waters collected from unvegetated upslope areas that would otherwise enter offsite Seely Ditch untreated.

River-floodplain ecosystem (Willamette River)

Wetlands A, B, and Wetland Ditch 1 as well as adjacent vegetated upland areas within the site provide treatment of upslope runoff, which benefits the Willamette River's floodplain ecosystem.

Presence of functional floodplain (inundated annually)

The wetlands of the study area are partially inundated during winter and spring of each year. Wetlands are largely the function of runoff from adjacent impervious surfaces and direct precipitation that accumulated within the concave topography and infiltration is slowed by the poorly drained Wapato silt loam soils. There may also be a seasonally high water table. The site is not located in FEMA's 100-year floodplain.

Type and condition of functional floodplain vegetation; Use of river-floodplain by ESA-listed species

The site lies well outside of the floodplain, which is associated with Coffee Lake Creek, over one mile west of the study area. The dominant vegetation of the site is a mix of deciduous and conifer trees with fragmented shrub and herbaceous layers. The wetlands and the adjacent upland vegetation of the site are beneficial to the water quality of Seely Ditch and the Willamette River floodplain ecosystem. There are no known listed ESA species at this site, and none were observed at the time of the delineation.

Role as wildlife corridor connecting significant wildlife habitat areas

This habitat has low value as a connecting wildlife corridor, since it is surrounded by I-5, busy streets and commercial developments.

4. **Mitigation and Enhancement Proposal.** *The applicant must propose a Significant Resource mitigation and enhancement plan as part of the SRIR. The mitigation and enhancement shall increase the natural values and quality of the remaining Significant Resource lands located on the site or other location as approved by the City. The mitigation and enhancement proposal shall conform to the mitigation standards identified in this Section.*

As depicted on the Proposed Site Development Plan (Figure 5), the proposed project will impact 97 square feet (0.002 acres) within the Safe Harbor / SROZ and 7,147 square feet (0.16 acres) of the City of Wilsonville SR Impact Area (Area of Limited Conflicting Use). Also 33 trees will be removed, of these, 22 trees are non-native and include five sweet cherries, one Norway maple, one English hawthorn, five unidentified pines, One deodar cedar, two red oaks, and seven black locusts. Removal of the 22 non-native trees do not require mitigation.

The remaining seven trees to be removed are natives and include 6 balsam poplars and 2 Douglas’ firs, which will require mitigation. The arborist tree assessment is found in Appendix C.

The requirements for tree replacement are found in Section 4.139 of the City of Wilsonville SROZ ordinance, which bases the required number of tree and shrub plantings on the size of removed trees. Table 3 depicts the number of trees in each size category, the required number of trees and shrubs to be replanted per category, and the total number of trees and shrubs to be replanted. Based on the DBH of the native trees, a total of 20 native trees and 39 shrubs will need to be planted. Section 4.139.07 specifies that native trees and shrubs shall be planted at a rate of five (5) trees and twenty-five (25) shrubs per every 500 square feet of disturbance within the SROZ.

**Table 3. Mitigation Requirements for Native Tree Removal**

Native Trees Proposed for Removal		Replacement Per-Tree		Total Replacement	
Quantity	DBH (inches)	Trees	Shrubs	Trees	Shrubs
3	6-12	2	3	6	9
3	Over 12-18	3	6	9	18
1	Over 18-24	5	12	5	12
0	Over 24-30	7	18	0	0
0	Over 30	10	30	0	0
<b>TOTALS</b>	<b>7</b>			<b>20</b>	<b>39</b>

This activity will improve the function of the remaining SROZ and protected resource by replacing invasive trees and shrubs with native conifer and deciduous trees, shrubs, and herbaceous plants that will provide greater wildlife benefits and protection for the wetland resources than those that are present.

5. ***Waiver of Documentation: The Planning Director may waive the requirement that an SRIR be prepared where the required information has already been made available to the City, or may waive certain provisions where the Director determines that the information is not necessary to review the application. Such waivers may be appropriate for small-scale developments and shall be processed under Administrative Review. Where such waivers are granted by the Planning Director, the Director shall clearly indicate the reasons for doing so in the record, citing the relevant information relied upon in reaching the decision.***

Not applicable. An SRIR is required by the City.

- (.03) ***SRIR Review Criteria. In addition to the normal Site Development Permit Application requirements as stated in the Planning and Land Development Ordinance, the following standards shall apply to the issuance of permits requiring an SRIR. The SRIR must demonstrate how these standards are met in a manner that meets the purposes of this Section.***

- A. ***Except as specifically authorized by this code, development shall be permitted only within the Area of Limited Conflicting Use (see definition) found within the SROZ;***

The proposed development includes impact to 7,147 square feet (0.16 acres) of the City of Wilsonville's SR Impact Area (Area of Limited Conflicting Use) and 97 square feet (0.002 acres) within the Safe Harbor / SROZ). Development within the SROZ includes 97 sf / 0.002 ac of non-exempt encroachment, including a new building and parking area. The remaining encroachments are exempt per Section 4.139.04 of the SROZ ordinance, which states:

***A request for exemption shall be consistent with the submittal requirements listed under Section 4.139.06(.01)(B – I), as applicable to the exempt use and activity. [Added by Ord. # 674 11/16/09].***

- (.05) ***Operation, maintenance, and repair of irrigation and drainage ditches, constructed ponds, wastewater facilities, stormwater detention or retention facilities, and water facilities consistent with the Stormwater Master Plan or the Comprehensive Plan.***

- (.15) ***Developments that propose a minor encroachment into the Significant Resource Overlay Zone. The purpose of this adjustment would be to allow for minor encroachments of impervious surfaces such as accessory buildings, eave overhangs, building appurtenances, building access and exiting requirements or other similar feature. The total adjustment shall not exceed 120 square feet in cumulative area.***

- B. ***Except as specifically authorized by this code, no development is permitted within Metro's Urban Growth Management Functional Plan Title 3 Water Quality Resource Areas boundary;***

As stated previously, the encroachments into the SROZ include less than 120 sf for non-exempt activities including building construction and parking. Other encroachments into the SROZ consist of fire lane, non-impervious landscaping and stormwater treatment and therefore are exempt.

- C. ***No more than five (5) percent of the Area of Limited Conflicting Use (see definition) located on a property may be impacted by a development proposal. On properties that are large enough to include Areas of Limited Conflicting Use on both sides of a waterway, no more than five (5) percent of the Area of Limited Conflicting Use on each side of the riparian corridor may be impacted by a development proposal. This condition is cumulative to any successive development proposals on the subject property such that the total impact on the property shall not exceed five (5) percent;***

The Area of Limited Conflicting Use comprises 35,187 sf / 0.81 ac of the study area, of which approximately 97 square feet / 0.002 ac of the Area of Limited Conflicting Use onsite will be impacted to facilitate the construction of new parking areas and water quality control. The total non-exempt impacts comprise 0.38 percent of the Area of Limited Conflicting Use.

***D. Mitigation of the area to be impacted shall be consistent with Section 4.139.06 of this code and shall occur in accordance with the provisions of this Section;***

As described previously, for impacts to 97 sf / 0.002 ac of impacts to the SROZ and the removal of seven native trees, the applicant proposes to restore 2,000 sf / 0.05 ac of degraded upland habitat within the remaining SROZ and 2,000 sf / 0.05 ac of degraded wetland habitat (Figure 6). The applicant will remove invasive and non-native species including Himalayan and cut-leaf blackberry and holly and plant a total of 20 native trees and 39 native shrubs, which per the SROZ ordinance will more than offset the loss of riparian function associated with the proposed impacts to the existing habitat as well as to the wetland. A mitigation plan showing the location of the proposed mitigation and a proposed plant list is included in Figure 6.

The mitigation plan will adhere to the requirements of Section 4.139.07 (.02)E of the of the SROZ ordinance and be designed to replace lost or impacted functions by enhancement of existing resources on, or off the impact site, or creation of new resource areas by implementing the following measures:

- Replacement trees and shrubs shall be at least one gallon in size and shall be at least twelve (12) inches in height.
- Trees shall be planted between eight (8) and twelve (12) feet on center, and shrubs shall be planted between four (4) and five (5) feet on center, or clustered in single species groups of no more than four (4) plants, with each cluster planted between eight (8) and ten (10) feet on center. When planting near existing trees, the drip line of the existing tree shall be the starting point for plant spacing measurements.
- Shrubs shall consist of at least two (2) different species. If five (5) trees or more are planted, then no more than fifty (50) percent of the trees may be of the same genus.
- Invasive non-native or noxious vegetation shall be removed within the mitigation area prior to planting and shall be removed or controlled for five (5) years following the date that the mitigation planting is completed.
- Mulch shall be applied around new plantings at a minimum of three inches in depth and eighteen inches in diameter. Browse protection shall be installed on trees and shrubs. Mulching and browse protection shall be maintained during the two-year plant establishment period.
- Trees and shrubs that die shall be replaced in kind to the extent necessary to ensure that a minimum of eighty (80) percent of the trees and shrubs initially required shall remain alive on the fifth anniversary of the date that the mitigation planting is completed.

***E. The impact on the Significant Resource is minimized by limiting the degree or magnitude of the action, by using appropriate technology or by taking affirmative steps to avoid, reduce or mitigate impacts;***

The applicant designed the proposed project to avoid impacts to jurisdictional wetlands and to ensure that only permitted activities (i.e. the water quality swales, landscaping, and < 120 sf of non-exempt permanent impacts) were constructed in the SROZ.

- F. The impacts to the Significant Resources will be rectified by restoring, rehabilitating, or creating enhanced resource values within the “replacement area” (see definitions) on the site or, where mitigation is not practical on-site, mitigation may occur in another location approved by the City;*

As stated previously, the proposed mitigation plan includes replacement trees and shrubs in accordance with the provisions in the SROZ Ordinance. The proposed replacement area consists of a portion of the western portion of the wetland and SROZ and will improve the overall wetland and riparian functions.

- G. Non-structural fill used within the SROZ area shall primarily consist of natural materials similar to the soil types found on the site;*

Landscaping will be constructed per the City of Wilsonville standards using native soil material and native plants.

- H. The amount of fill used shall be the minimum required to practically achieve the project purpose;*

No fill will be placed in jurisdictional wetlands and fill placed in the SROZ is the minimum amount needed to meet the minimum requirements for construction of the proposed business, which includes exempt components including fire access, stormwater facilities, and native landscaping.

- I. Other than measures taken to minimize turbidity during construction, stream turbidity shall not be significantly increased by any proposed development or alteration of the site;*

Stormwater will be treated prior to leaving the construction site and is not anticipated to increase turbidity during construction due to appropriate erosion and sediment control measures, including silt fencing, therefore, no untreated runoff will be allowed to enter the wetlands and turbidity in the ditch is not anticipated to increase as a result of the project.

- J. Appropriate federal and state permits shall be obtained prior to the initiation of any activities regulated by the U.S. Army Corps of Engineers and the Oregon Division of State Lands in any jurisdictional wetlands or water of the United States or State of Oregon, respectively.*

This section does not apply, as no impacts to wetlands are proposed; however, PHS performed a wetland delineation in December of 2016 and concurrence was received from DSL in June of 2019. The DSL concurrence is included in Appendix B.

#### **SECTION 4.139.07 MITIGATION STANDARDS**

*The following mitigation standards apply to significant wildlife habitat resource areas for encroachments within the Area of Limited Conflicting uses and shall be followed by those proposing such encroachments. Wetland mitigation shall be conducted as per permit conditions from the U.S. Army Corps of Engineers and the Oregon Division of State Lands [emphasis ours]. While impacts are generally not allowed in the riparian corridor resource area, permitted impacts shall be mitigated by: using these mitigation standards if the impacts are to wildlife habitat values, and using state and federal processes if the impacts are to wetland resources in the riparian corridor...*

##### Wetlands

An outfall with a rock weir will be constructed in a drainage ditch mapped and described as Wetland Ditch 1 in the DSL concurrence Letter (Appendix B). Total fill will be eight square feet and less than 50 cubic yards and therefore mitigation for impacts to waters of the state is not necessary. Mitigation for waters of the US is also not necessary because impacts are less than 0.10 acre.

- (.01) *The applicant shall review the appropriate Goal 5 Inventory Summary Sheets for wildlife habitat (i.e. upland) contained in the City of Wilsonville Natural Resource Inventory and Goal 5/Title 3/ESA Compliance and Protection Plan ("Compliance and Protection Plan" - May 2000) to determine the resource function ratings at the time the inventory was conducted.*
- (.02) *The applicant shall prepare a Mitigation Plan document containing the following elements:*
- (.03) *Proposals for mitigation action where new natural resource functions and values are created (i.e. creating wetland or wildlife habitat where it does not presently exist) will be reviewed and may be approved by the Development Review Board or Planning Director if it is determined that the proposed action will create natural resource functions and values that are equal to or greater than those lost by the proposed impact activity.*
- (.04) *Mitigation actions shall be implemented prior to or at the same time as the impact activity is conducted.*
- (.05) *Mitigation plans shall have clearly stated goals and measurable performance standards.*
- (.06) *All mitigation plans shall contain a monitoring and maintenance plan to be conducted for a period of five years following mitigation implementation. The applicant shall be responsible for ongoing maintenance and management activities, and shall submit an annual report to the Planning Director documenting such activities, and reporting progress towards the mitigation goals. The report shall contain, at a minimum, photographs from established photo points, quantitative measure of success criteria, including plant survival and vigor if these are appropriate data. The Year 1 annual report shall be submitted one year following mitigation action implementation. The final annual report (Year 5 report) shall document successful satisfaction of mitigation goals, as per the stated performance standards. If the ownership of the mitigation site property changes, the new owners will have the continued responsibilities established by this section.*
- (.07) *The Mitigation Plan document shall be prepared by a natural resource professional.*
- (.08) *Prior to any site clearing, grading or construction, the SROZ area shall be staked, and fenced per approved plan. During construction, the SROZ area shall remain fenced and undisturbed except as allowed by an approved development permit.*
- (.09) *For any development which creates multiple parcels intended for separate ownership, the City shall require that the SROZ areas on the site be encumbered with a conservation easement or tract.*
- (.10) *The City may require a conservation easement over the SROZ that would prevent the owner from activities and uses inconsistent with the purpose of this Section and any easements therein. The purpose of the conservation easement is to conserve and protect resources as well as to prohibit certain activities that are inconsistent with the purposes of this section. Such conservation easements do not exclude the installation of utilities.*
- (.11) *At the Planning Director's discretion, mitigation requirements may be modified based on minimization of impacts at the impact activity site. Where such modifications are granted by the Planning Director, the Director shall clearly indicate the reasons for doing so in the record, citing the relevant information relied upon in reaching the decision.*
- (.12) *The Director may study the possibility of a payment-in-lieu-of system for natural resource impact mitigation. This process would involve the public acquisition and management of natural resource properties partially funded by these payments.*

The applicant shall adhere to all of these mitigation requirements. Please see Section 4.139.06 for specifics for Section 4.139.07.

## SECTION 4.139.10 Development Review Board (DRB) Process

(.01) *Exceptions. The following exceptions may be authorized through a Development Review Board quasi-judicial review procedure.*

*D Map Refinement process. The applicant may propose to amend the SROZ boundary through a Development Review Board quasi-judicial zone change where more detailed information is provided, such as a state approved wetland delineation. The criteria for amending the SROZ are as follows:*

Adjustments to the SROZ are proposed based on the locations of the DSL concurred wetland, and its associated 50-foot buffer.

(.03) *Development of structures, additions and improvements that relate to uses other than single family residential.*

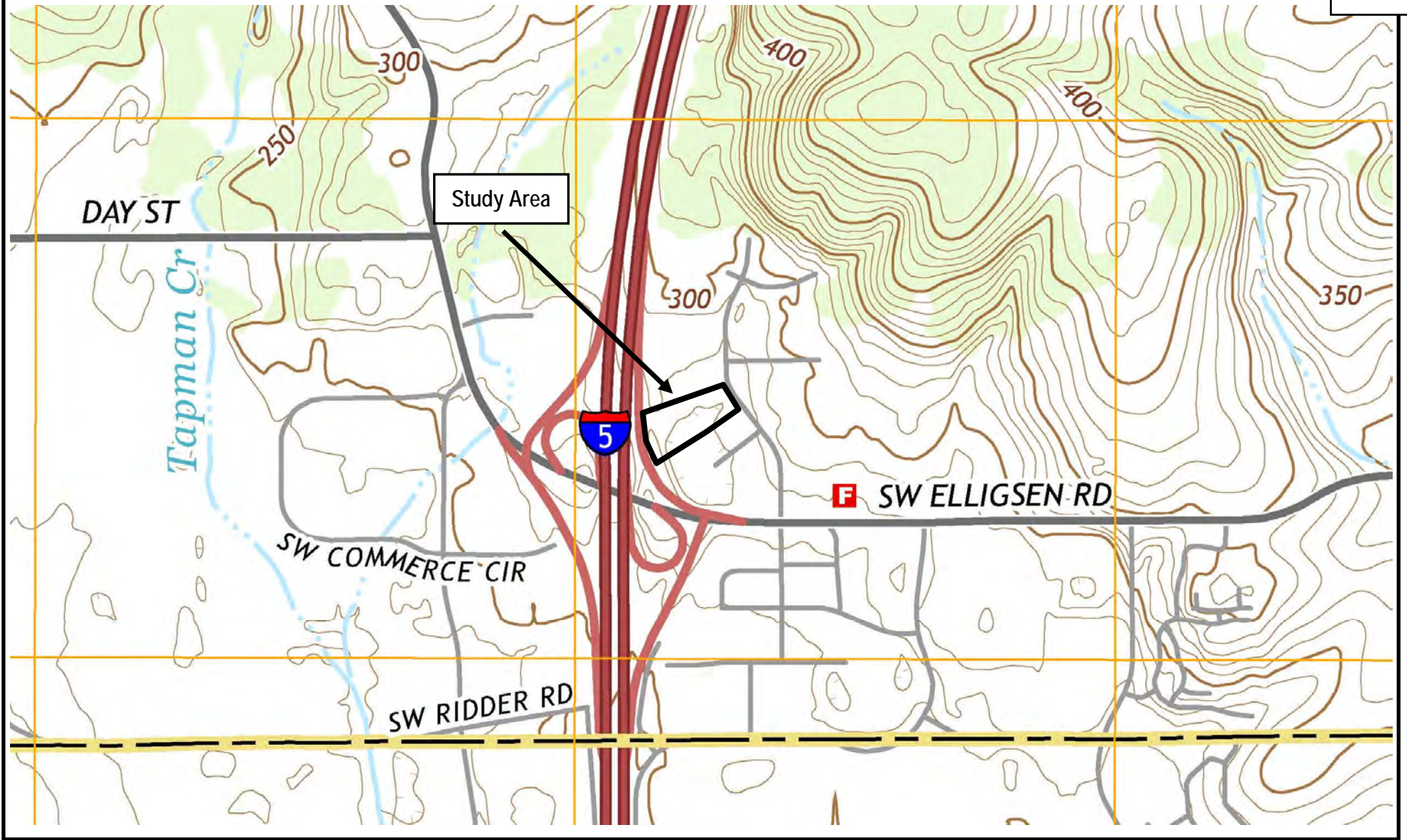
This SRIR addresses the development of additions and improvements to a structure other than single family residential and thus requires DRB process.

# Appendix A

## Figures







#6114  
12/19/2016



Pacific Habitat Services, Inc.  
9450 SW Commerce Circle, Suite 180  
Wilsonville, OR 97070

General Location and Topography  
 SW Parkway Avenue Property (Tax Lot 1000)- Wilsonville, Oregon  
 United States Geological Survey (USGS), Sherwood, Oregon, 7.5 Quadrangle, 2014  
 (viewer/nationalmap.gov/basic)

FIGURE

1

NE 1/4 SE 1/4 SECTION 2 T3S RIW W.M.

3S | 2DA

WASHINGTON COUNTY OREGON

SCALE 1" = 100'

SEE MAP  
3S | 2AD

FOR ASSESSMENT PURPOSES ONLY  
DO NOT RELY ON FOR ANY OTHER USE

Study Area

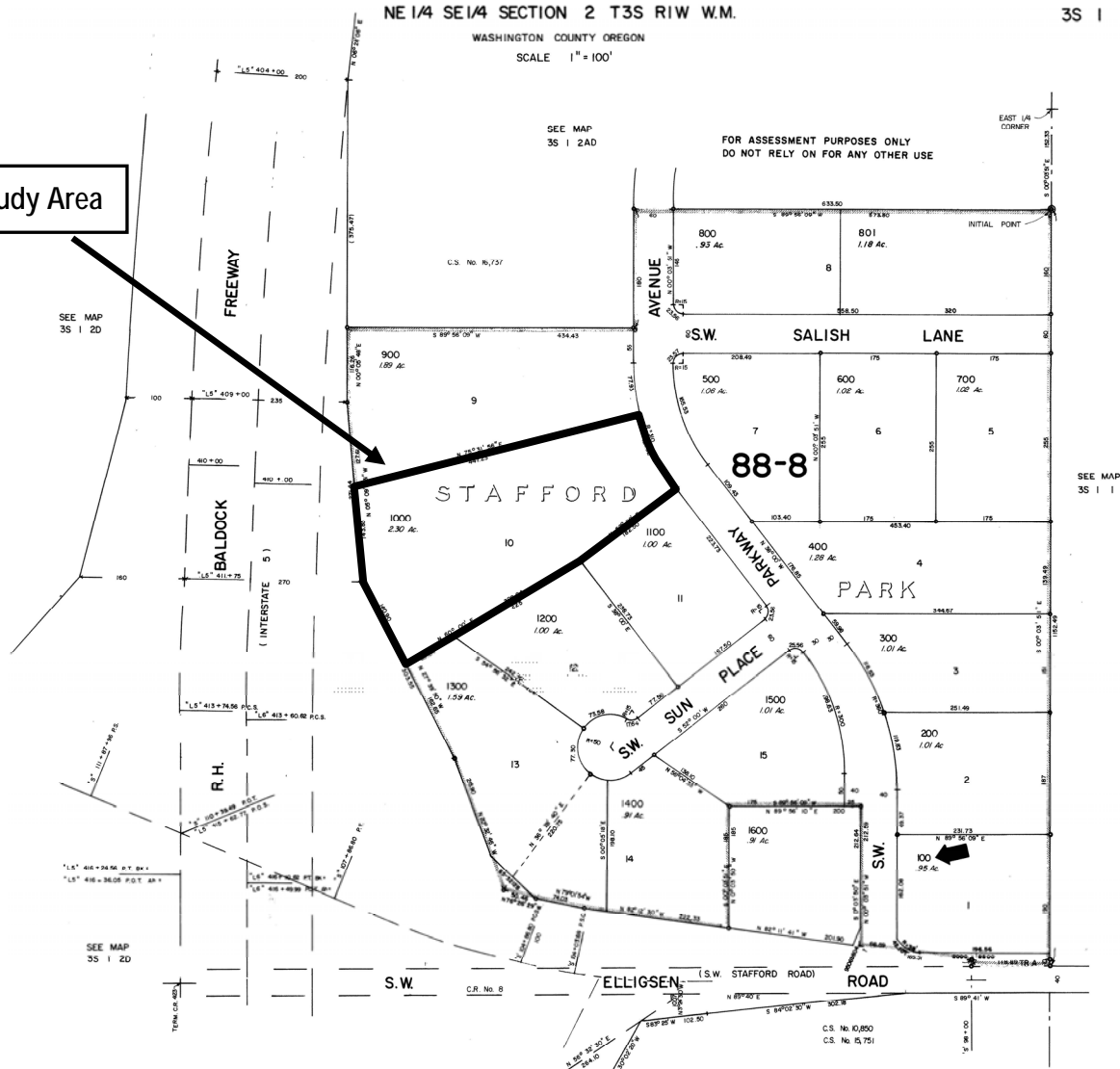
SEE MAP  
3S | 2D

SEE MAP  
3S | 1 |

SEE MAP  
3S | 2D

SEE MAP  
3S | 1 |

WILSONVILLE  
3S | 2DA



#6114  
12/19/2016



Pacific Habitat Services, Inc.  
9450 SW Commerce Circle, Suite 180  
Wilsonville, OR 97070

Tax Lot Map  
SW Parkway Avenue Property (Tax Lot 1000)- Wilsonville, Oregon  
The Oregon Map (ormap.net)

FIGURE  
2



**Soils Legend**  
4B - Woodburn silt loam, 3-7% slopes  
43 - Wapato silty clay loam, Hydric  
45B - Briedwell silt loam, 0-7% slopes

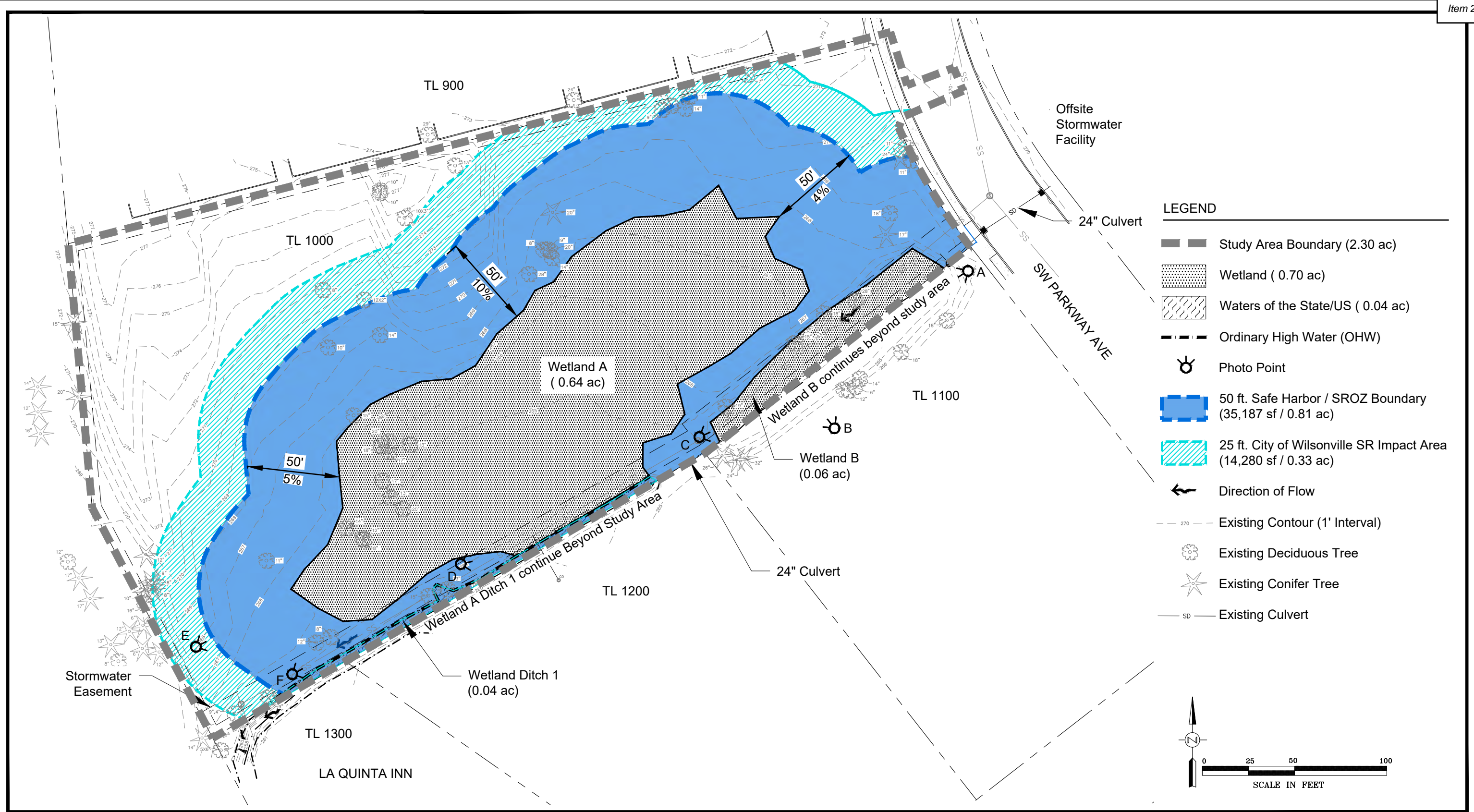
#6114  
12/19/2016



Pacific Habitat Services, Inc.  
9450 SW Commerce Circle, Suite 180  
Wilsonville, OR 97070

Soils  
SW Parkway Avenue Property (Tax Lot 1000)- Wilsonville, Oregon  
Natural Resources Conservation Services, Web Soil Survey, 2016  
(websoilsurvey.sc.egov.usda.gov)

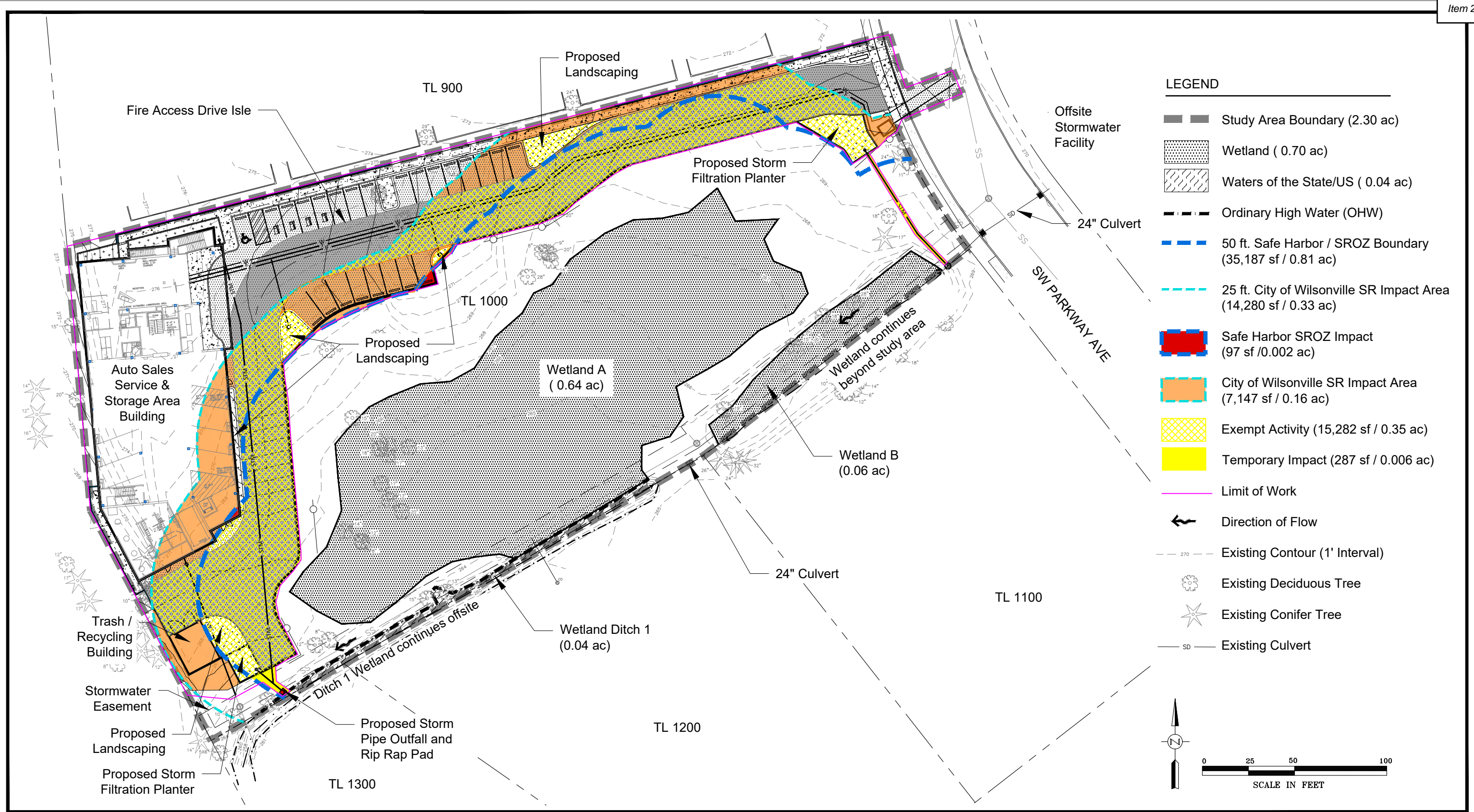
FIGURE  
3



Base Map Provided by HHPR

Existing Conditions  
 Tonkin Lamborghini Dealership - Wilsonville, Oregon

FIGURE  
**4**

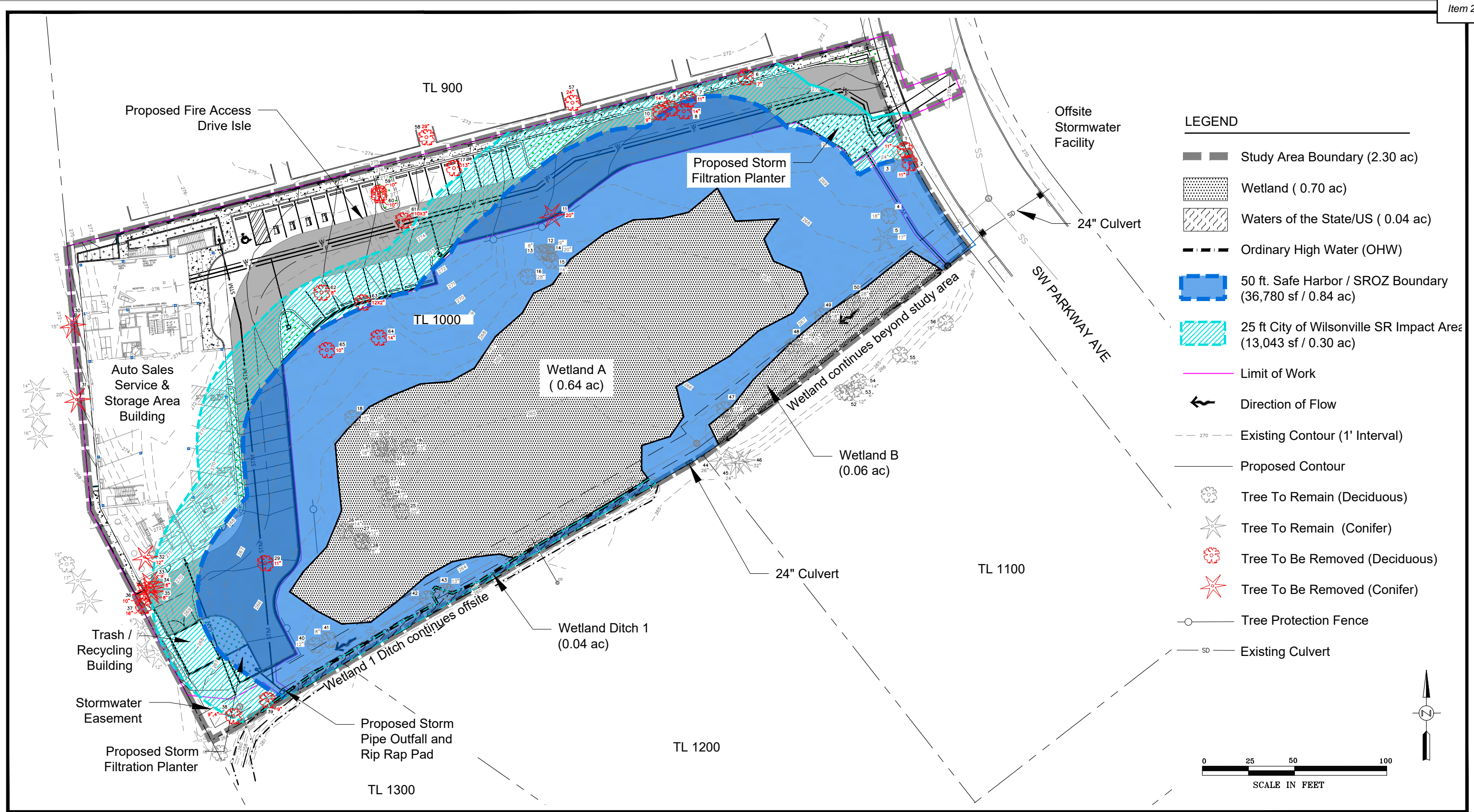


Wetland, Study Area and Tax Lots Provided by AKS Engineering and Forestry, LLC.  
 Site Development Plan Provided by Axis Design Group  
 Tree Survey By Todd Prager and Associates

Proposed Site Development Plan and SRIR / SROZ Impacts  
 Tonkin Lamborghini Dealership - Wilsonville, Oregon

FIGURE 5

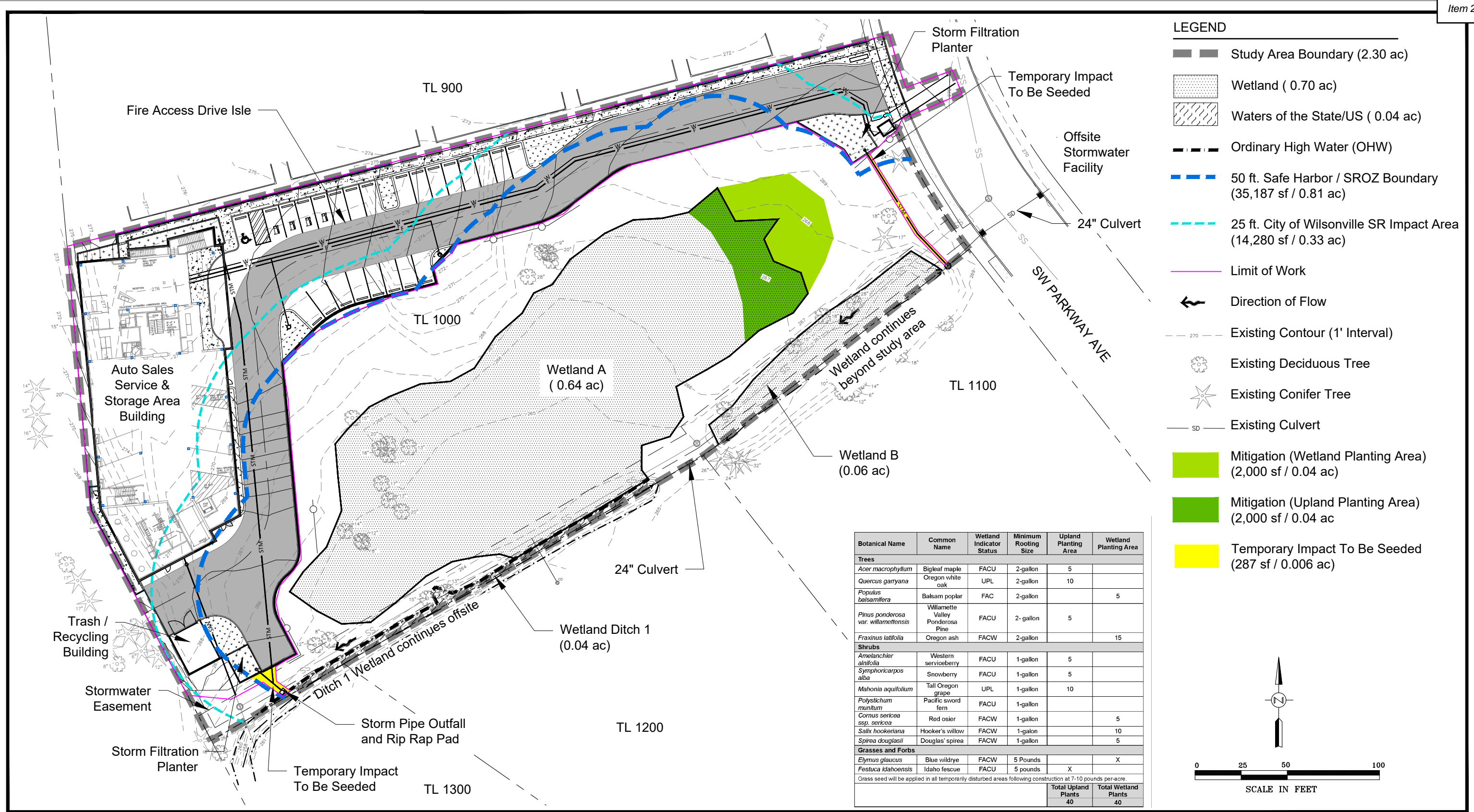
4-30-2024



Wetland, Study Area and Tax Lots Provided by AKS Engineering and Forestry, LLC.  
 Site Development Plan Provided by Axis Design Group  
 Tree Survey By Todd Prager and Associates

Tree Removal Plan  
 Tonkin Lamborghini Dealership - Wilsonville, Oregon  
**FIGURE 5A**

4-30-2024



Wetland, Study Area and Tax Lots Provided by AKS Engineering and Forestry, LLC.  
 Site Development Plan Provided by Axis Design Group  
 Tree Survey By Todd Prager and Associates

Mitigation Plan  
 Tonkin Lamborghini Dealership - Wilsonville, Oregon

FIGURE  
 6



#7943  
4/16/2024

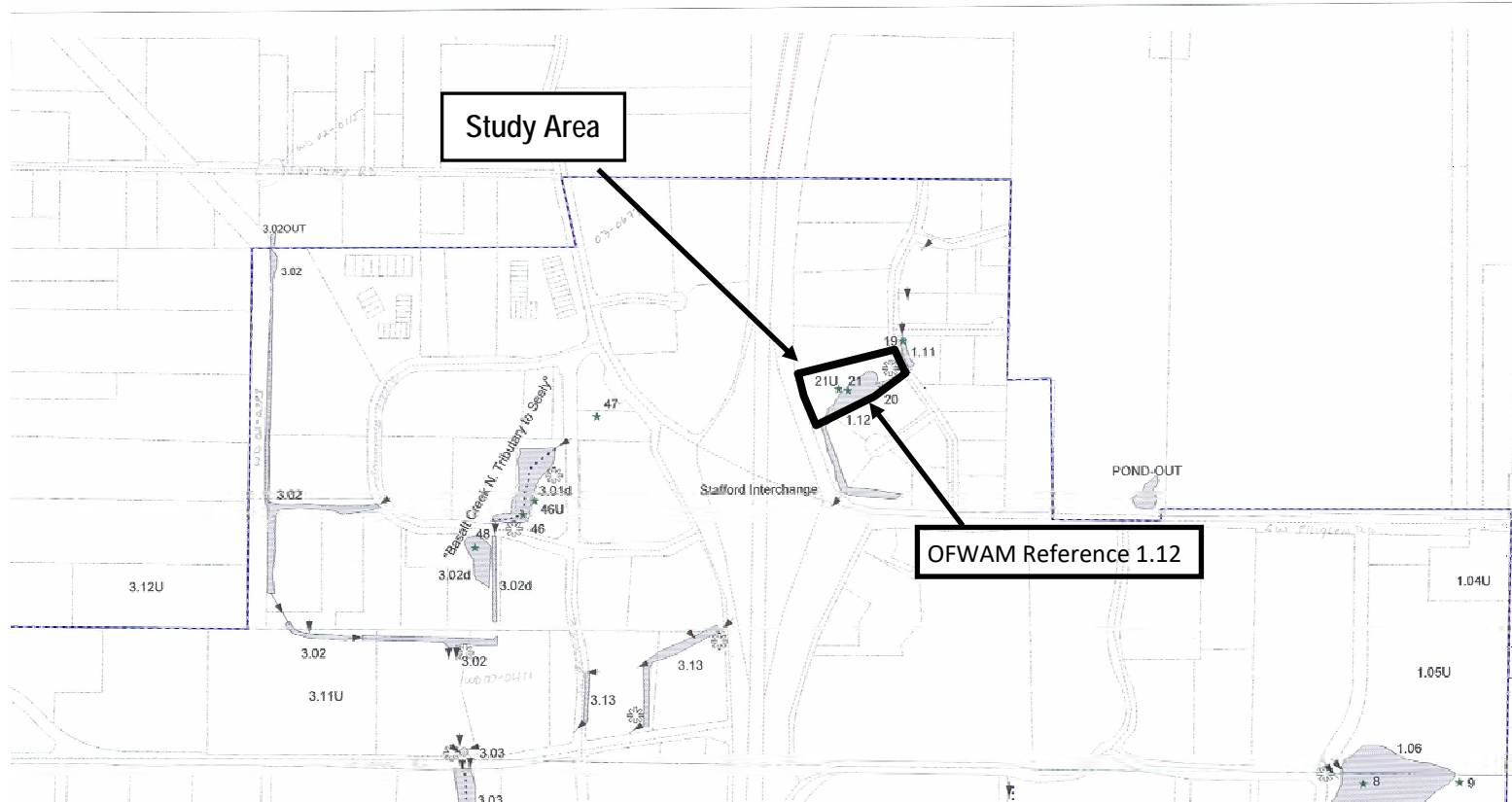


Pacific Habitat Services, Inc.  
9450 SW Commerce Circle, Suite 180  
Wilsonville, OR 97070

Title 3 Land in the Portland Metro Region  
Tonkin Lamborghini Dealership - Wilsonville, OR  
[www.oregonmetro.gov/rliis](http://www.oregonmetro.gov/rliis). 2012

**FIGURE**  
**7**





**LEGEND**

- WETLANDS
  - TAX LOTS
  - STREAMS
  - INTERMITTENT
  - PERENNIAL
  - UGB
  - CULVERT LOCATIONS
  - RAILROAD
  - STREETS
  - CLACKAMAS/WASHINGTON COUNTY LINE
  - VIEWPOINTS
  - WETLANDS MAPPED OFF-SITE
  - SAMPLE PLOT LOCATIONS
- 1.01 - WETLAND SITE ID
  - 6.03d - DELINEATED WETLAND SITE ID
  - 4.15R - RIPARIAN SITE ID
  - 1.04U - UPLAND SITE ID
  - \* 95 - SAMPLE PLOT ID

0 400 800 1200 Feet

Map Scale: 1 inch = 400 feet



Information shown on this map is for planning purposes only and all wetland boundaries are approximate. In all cases, actual field conditions determine wetland boundaries. There may be unmapped wetlands subject to regulation within the study area.

Fishman Environmental Services  
*Commitment to ecology and natural resource management*  
 434 NW Sixth Avenue, Suite 304  
 Portland, OR 97209  
 (503) 224-0333

City of WILSONVILLE  
 IN OREGON

30600 SW Town Center Loop E  
 Wilsonville, OR 97070  
 (503) 682-4960

**CITY OF WILSONVILLE  
 LOCAL WETLANDS  
 AND  
 RIPARIAN CORRIDOR INVENTORY  
 NORTH**

Draft Map prepared 4/93; revised 12/97  
 Aerial Photography: July 9, 1996  
 Data Sources: Digital Orthophotography -  
 Spencer B. Gross; Roads, Taxlots, Rail, Streets,  
 UGB - Metro RLIS Database.  
 Map Projection Oregon State Plane North Zone  
 Datum: NAD 83. Units = International Feet

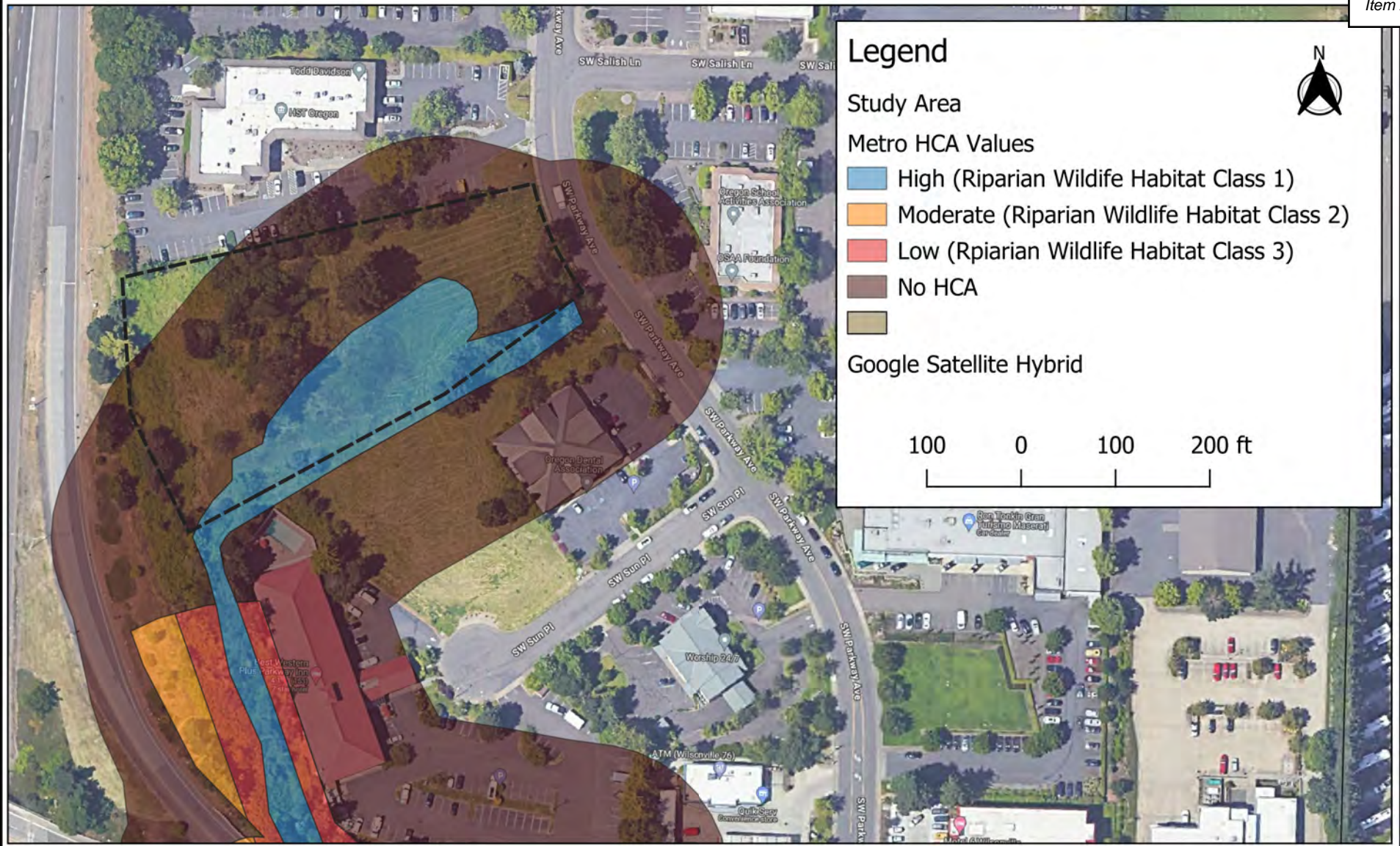
#6114  
12/19/2016



Pacific Habitat Services, Inc.  
9450 SW Commerce Circle, Suite 180  
Wilsonville, OR 97070

Local Wetland Inventory Map  
SW Parkway Avenue Property (Tax Lot 1000)- Wilsonville, Oregon  
Fishman Environmental Services, 1997

FIGURE  
8



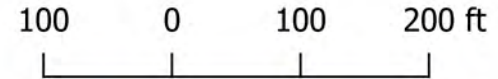
### Legend

Study Area

Metro HCA Values

- High (Riparian Wildlife Habitat Class 1)
- Moderate (Riparian Wildlife Habitat Class 2)
- Low (Riparian Wildlife Habitat Class 3)
- No HCA
- 

Google Satellite Hybrid



#7943  
4/17/2024



Pacific Habitat Services, Inc.  
9450 SW Commerce Circle, Suite 180  
Wilsonville, OR 97070

Title 13 Lands in the Portland Metro Region HCA Values  
Tonkin Lamborghini - Wilsonville, OR  
[www.oregonmetro.gov/rlis](http://www.oregonmetro.gov/rlis), 2012

**FIGURE**  
**9**

# Appendix B

## DSL Delineation Concurrence Letter and Site Photos





# Oregon

Kate Brown, Governor

Item 2.

Department of State Lands

775 Summer Street NE, Suite 100

Salem, OR 97301-1279

(503) 986-5200

FAX (503) 378-4844

[www.oregon.gov/dsl](http://www.oregon.gov/dsl)

State Land Board

June 14, 2019

Von Clemm Investments, LLC

Attn: Bruce Connors

8807 SW 50<sup>th</sup> Ave.

Portland, OR 97219

Kate Brown

Governor

Bev Clarno

Secretary of State

Re: **WD # 2019-0210 Approved**

Wetland Delineation Report for SW Parkway Avenue and SW Sun Place; Clackamas County; T3S R1W Sec. 2DA, Tax Lot 1000 City of Wilsonville Local Wetland Inventory 1.12

Tobias Read

State Treasurer

Dear Mr. Connors:

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

Within the study area, 5 wetlands (Wetlands A to D and Wetland Ditch 1) were identified. Wetlands A to C and the Wetland Ditch (totaling approximately 0.70 acres) are subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in wetlands or below the ordinary high-water line (OHWL) of the waterway (or the 2-year recurrence interval flood elevation if OHWL cannot be determined). Wetland D is exempt per OAR 141-085-0515(7).

This concurrence is for purposes of the state Removal-Fill Law only. Federal or local permit requirements may apply as well. The Army Corps of Engineers will determine jurisdiction for purposes of the Clean Water Act. We recommend that you attach a copy of this concurrence letter to both copies of any subsequent joint permit application to speed application review.

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

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

Thank you for having the site evaluated. Please phone me at 503-986-5246 if you have any questions.

Sincerely,



Chris Stevenson  
Jurisdiction Coordinator

Approved by



Peter Ryan, PWS  
Aquatic Resource Specialist

Enclosures

ec: Jodi Reed, Schott & Associates  
City of Wilsonville Planning Department (Maps enclosed for updating LWI)  
Jessica Menichino, Corps of Engineers  
Anita Huffman, DSL

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

Fully completed and signed report cover forms and applicable fees are required before report review timelines are initiated by the Department of State Lands. Make checks payable to the Oregon Department of State Lands. To pay fees by credit card, go online at: https://apps.oregon.gov/DSL/EPS/program?key=4.

Attach this completed and signed form to the front of an unbound report or include a hard copy with a digital version (single PDF file of the report cover form and report, minimum 300 dpi resolution) and submit to: Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279. A single PDF of the completed cover form and report may be e-mailed to: Wetland\_Delineation@dsl.state.or.us. For submittal of PDF files larger than 10 MB, e-mail DSL instructions on how to access the file from your ftp or other file sharing website.

<b>Contact and Authorization Information</b>	
<input checked="" type="checkbox"/> Applicant <input checked="" type="checkbox"/> Owner Name, Firm and Address: Von Clemm Investments, LLC Attn: Bruce Connors 8807 SW 50th Ave Portland, Oregon 97219	Business phone # (336) 420-2800 Mobile phone # (optional) E-mail: bruceconnors@gmail.com
<input type="checkbox"/> Authorized Legal Agent, Name and Address (if different):	Business phone # Mobile phone # (optional) E-mail:
I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.	
Typed/Printed Name: <u>Elisabeth von Clemm, Mgr.</u> Signature: <u>[Signature]</u> Date: <u>4-9-19</u> Special instructions regarding site access:	
<b>Project and Site Information</b>	
Project Name: SW Parkway Avenue & SW Sun Place	Latitude: <u>45</u> 42.337360 Longitude: -122.767542 decimal degree - centroid of site or start & end points of linear project
Proposed Use: Development	Tax Map # 3S 1 2DA Tax Lot(s) 1000 Tax Map # Tax Lot(s)
Project Street Address (or other descriptive location): Between SW Parkway & SW Sun Place	Township 3S Range 1W Section 2DA QQ Use separate sheet for additional tax and location information
City: Wilsonville County: Washington	Waterway: River Mile:
<b>Wetland Delineation Information</b>	
Wetland Consultant Name, Firm and Address: Schott & Associates, Inc. Attn: Jodi Reed 21018 NE Hwy 99E PO Box 589 Aurora, Oregon 97002	Phone # (503) 378-6007 Mobile phone # (if applicable) E-mail: Jodi@schottandassociates.com
The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.	
Consultant Signature: <u>[Signature]</u>	Date: <u>04/10/2019</u>
Primary Contact for report review and site access is <input checked="" type="checkbox"/> Consultant <input type="checkbox"/> Applicant/Owner <input type="checkbox"/> Authorized Agent	
Wetland/Waters Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Study Area size: 2.30 Total Wetland Acreage: 0.7100
<b>Check Applicable Boxes Below</b>	
<input type="checkbox"/> R-F permit application submitted	<input type="checkbox"/> Fee payment submitted \$ _____
<input type="checkbox"/> Mitigation bank site	<input type="checkbox"/> Fee (\$100) for resubmittal of rejected report
<input type="checkbox"/> Industrial Land Certification Program Site	<input type="checkbox"/> Request for Reissuance. See eligibility criteria. (no fee)
<input type="checkbox"/> Wetland restoration/enhancement project (not mitigation)	DSL # _____ Expiration date _____
<input type="checkbox"/> Previous delineation/application on parcel If known, previous DSL # _____	<input type="checkbox"/> LWI shows wetlands or waters on parcel Wetland ID code _____
<b>For Office Use Only</b>	
DSL Reviewer: <u>C.S.</u> Fee Paid Date: ____/____/____	DSL WD # <u>2019-010</u>
Date Delineation Received: <u>4/10/19</u> Scanned: <input type="checkbox"/> Electronic: <input checked="" type="checkbox"/>	DSL App.# _____

#77994



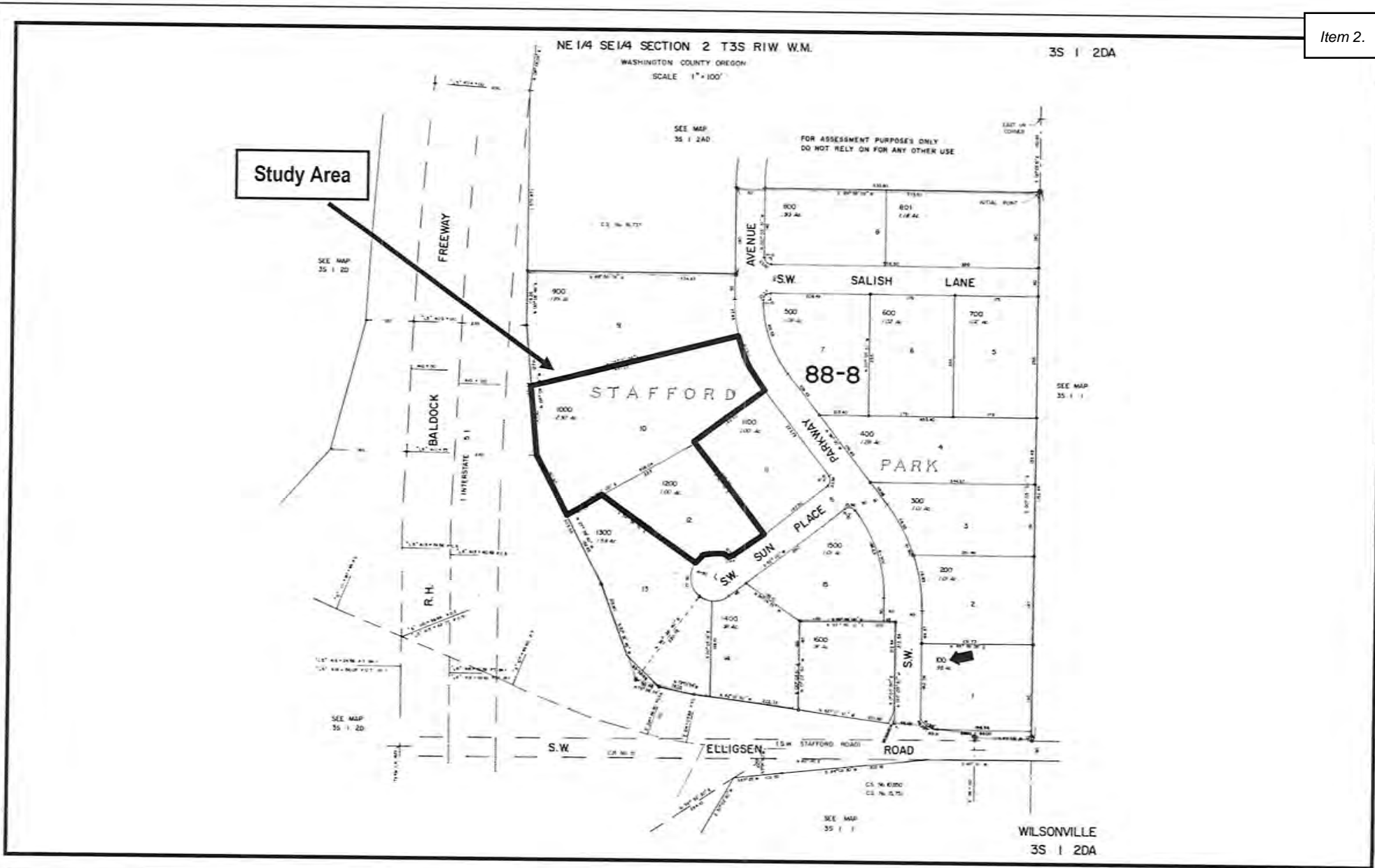
#6114  
12/19/2016



Pacific Habitat Services, Inc.  
9450 SW Commerce Circle, Suite 180  
Wilsonville, OR 97070

General Location and Topography  
SW Parkway Avenue / SW Sun Place Property - Wilsonville, Oregon  
United States Geological Survey (USGS), Sherwood, Oregon, 7.5 Quadrangle, 2014  
(viewer/nationalmap.gov/basic)

FIGURE  
1

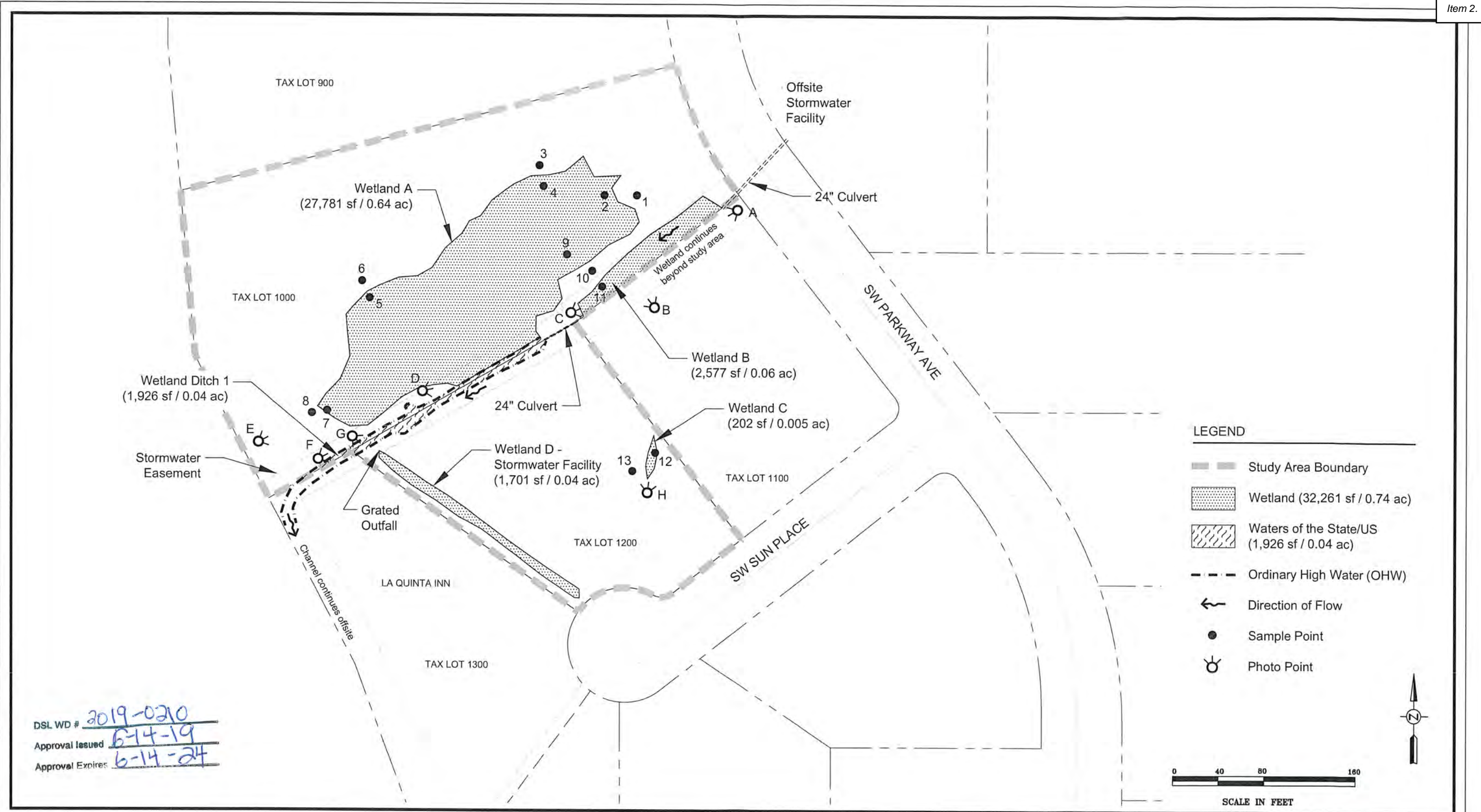


#6114  
12/19/2016  
Pacific Habitat Services, Inc.  
9450 SW Commerce Circle, Suite 180  
Wilsonville, OR 97070

Tax Lot Map  
SW Parkway Avenue / SW Sun Place Property - Wilsonville, Oregon  
The Oregon Map (ormap.net)

FIGURE  
2





DSL WD # 2019-0210  
 Approval Issued 6-14-19  
 Approval Expires 6-14-24



Survey provided by  
 AKS Engineering and Forestry LLC.  
 Survey and Sample point accuracy is  
 sub-centimeter.

Wetland Delineation  
 SW Parkway Avenue / SW Sun Place Property - Wilsonville, OR

FIGURE  
**6**

2-8-2017



**Photo A:**

Looks west from upstream outfall into Wetland B.

Photo was taken on December 23, 2016.

**Photo B:**

Looks north from edge of stormwater easement across Wetland B.

Photo was taken on December 23, 2016.



6114  
1/5/17



Pacific Habitat Services, Inc.  
9450 SW Commerce Circle, Suite 180  
Wilsonville, OR 97070

Photodocumentation  
SW Parkway Avenue Property (Tax Lot 1000)  
in Wilsonville, Oregon



**Photo C:**  
Looks east into Wetland B near culvert feeding into Wetland Ditch 1.

Photo was taken on December 23, 2016.

**Photo D:**  
Looks east from margin of Wetland A near its convergence with Wetland Ditch 1.

Photo was taken on December 23, 2016.





**Photo E:**

Looks east towards Wetland A and Wetland Drainage 1 from near the western edge of TL 1000.

Photo was taken on December 23, 2016.

**Photo F:**

Looks east along Wetland Drainage 1 from near southwestern corner of TL 1000.

Photo was taken on December 23, 2016.



6114  
1/5/17



Pacific Habitat Services, Inc.  
9450 SW Commerce Circle, Suite 180  
Wilsonville, OR 97070

Photodocumentation  
SW Parkway Avenue Property (Tax Lot 1000)  
in Wilsonville, Oregon

# Appendix C

## Arborist Tree Inventory





Attachment 1 - Tree Inventory - March 9 April 16, 2024  
Wilsonville Lamborghini Development

Tree Tag	Common Name	Scientific Name	DBH <sup>1</sup> (in)	Single DBH <sup>2</sup> (in)	C-Rad <sup>3</sup> (ft)	Health Condition <sup>4</sup>	Structural Condition <sup>4</sup>	Property Status <sup>5</sup>	Comments	Treatment
1	Sweet cherry	<i>Prunus avium</i>	11	11	21	Fair	Fair	On	Nuisance species, possible road and sidewalk conflict	Remove
2	Sweet cherry	<i>Prunus avium</i>	11	11	18	Fair	Fair	On	Nuisance species, codominant at 7', possible road and sidewalk conflict	Remove
3	Spruce sp.	<i>Picea sp.</i>	24	24	12	Fair	Fair	On	2 stems at 20', multiple tops, slightly thin crown (6" cones)	Preserve
4	Sweet cherry	<i>Prunus avium</i>	18	18	20	Fair	Poor	On	Codominant with included bark at 6'	Preserve
5	Spruce sp.	<i>Picea sp.</i>	12	12	7	Poor	Fair	On	Very shaded north side, very low live crown ratio (2" cones)	Preserve
6	Cottonwood	<i>Populus trichocarpa</i>	7	7	9	Good	Good	On	Conflict with proposed access road, species poorly suited for preservation	Remove
7	Cottonwood	<i>Populus trichocarpa</i>	11	11	9	Fair	Poor	On	Low live crown ratio, conflict with access road	Remove
8	Cottonwood	<i>Populus trichocarpa</i>	14	14	15	Fair	Fair	On	One-sided/shaded, conflict with access road	Remove
9	Cottonwood	<i>Populus trichocarpa</i>	14	14	15	Fair	Fair	On	One-sided/shaded, conflict with access road	Remove
10	Cottonwood	<i>Populus trichocarpa</i>	9	9	15	Fair	Fair	On	One-sided/shaded, conflict with access road	Remove
11	Douglas-fir	<i>Pseudotsuga menziesii</i>	20	20	15	Good	Fair	On	Part shade from cottonwood. Possible remove to move road south to create more space for neighbor's oaks	Remove
12	Cottonwood	<i>Populus trichocarpa</i>	9	9	15	Fair	Fair	On	Suppressed, poorly suited for preservation	Preserve
13	Cottonwood	<i>Populus trichocarpa</i>	8	8	0	Dead	Dead	On	15' snag,	Preserve
14	Cottonwood	<i>Populus trichocarpa</i>	15, 13	20	15	Fair	Poor	On	Codominant at base	Preserve
15	Cottonwood	<i>Populus trichocarpa</i>	14	14	20	Fair	Fair	On	One-sided/shaded	Preserve
16	Cottonwood	<i>Populus trichocarpa</i>	28	28	25	Good	Good	On		Preserve
17	Sweet cherry	<i>Prunus avium</i>	13	13	15	Fair	Fair	On	Conflict with access road	Remove
18	Cottonwood	<i>Populus trichocarpa</i>	13, 7	15	15	Fair	Fair	On	Grove, part shaded	Preserve
19	Cottonwood	<i>Populus trichocarpa</i>	13	13	15	Fair	Fair	On	Grove, part shaded	Preserve
20	Cottonwood	<i>Populus trichocarpa</i>	20	20	20	Fair	Fair	On	Grove, part shaded	Preserve
21	Cottonwood	<i>Populus trichocarpa</i>	18	18	20	Fair	Fair	On	Grove, part shaded	Preserve
22	Cottonwood	<i>Populus trichocarpa</i>	17	17	20	Fair	Fair	On	Grove, part shaded	Preserve
23	Cottonwood	<i>Populus trichocarpa</i>	17	17	15	Fair	Fair	On	Grove, part shaded	Preserve
24	Cottonwood	<i>Populus trichocarpa</i>	13	13	18	Fair	Poor	On	One-sided, previously shaded by adjacent tree that failed	Preserve
25	Cottonwood	<i>Populus trichocarpa</i>	20	20	15	Very Poor	Very Poor	On	Stem failure at 20', lower trunk still alive	Preserve
26	Cottonwood	<i>Populus trichocarpa</i>	14	14	15	Fair	Fair	On	One-sided	Preserve
27	Cottonwood	<i>Populus trichocarpa</i>	12	12	6	Very Poor	Very Poor	On	Stem failure at 18'	Preserve
28	Cottonwood	<i>Populus trichocarpa</i>	8	8	15	Poor	Poor	On	One-sided	Preserve
29	Sweet cherry	<i>Prunus avium</i>	11	11	15	Good	Good	On	Non-native/nuisance, conflict with development	Remove
30	Douglas-fir	<i>Pseudotsuga menziesii</i>	15	15	15	Fair	Good	Off	Estimated diameter, 2' from fence, roots likely in conflict with development	Remove
31	Deodar cedar	<i>Cedrus deodara</i>	31	31	25	Fair	Fair	Off	Dead and damaged branches, 2' from fence, roots likely in conflict with development	Remove
32	Pine	<i>Pinus sp.</i>	12	12	10	Fair	Fair	On	50% live crown, conflict with development	Remove
33	Pine	<i>Pinus sp.</i>	9	9	5	Poor	Poor	On	Dead branches, low live crown ratio, conflict with development	Remove
34	Pine	<i>Pinus sp.</i>	8	8	3	Poor	Poor	On	Dead branches, low live crown ratio, conflict with development	Remove
35	Pine	<i>Pinus sp.</i>	8	8	6	Poor	Poor	On	Dead branches, low live crown ratio, conflict with development	Remove
36	Pine	<i>Pinus sp.</i>	10	10	8	Poor	Poor	On	Dead branches, low live crown ratio, conflict with development	Remove
37	Norway maple	<i>Acer platanoides</i>	16	16	20	Good	Fair	On	Shaded by pines, non-native, conflict with development	Remove
38	English hawthorn	<i>Crataegus monogyna</i>	9, 4	10	15	Fair	Fair	On	Nuisance species, conflict with development	Remove
39	Sweet cherry	<i>Prunus avium</i>	9	9	15	Good	Good	On	Nuisance species, conflict with development	Remove
40	Domestic apple	<i>Malus domestica</i>	12	12	12	Fair	Fair	On	Edible fruit tree	Preserve
41	Sweet cherry	<i>Prunus avium</i>	8	8	9	Fair	Good	On	Nuisance species	Preserve
42	Willow species	<i>Salix sp.</i>	6, 6, 6, 6, 6	15	10	Fair	Poor	On	Diameter estimated, thicket of mature sprouts, great habitat	Preserve
43	Red alder	<i>Alnus rubra</i>	9, 9	13	12	Very Poor	Poor	On	1/2 dead, good habitat	Preserve
44	Douglas-fir	<i>Pseudotsuga menziesii</i>	24	24	18	Good	Good	Off	Diameter estimated	Preserve
45	Douglas-fir	<i>Pseudotsuga menziesii</i>	18	18	18	Good	Good	Off	Diameter estimated	Preserve
46	Douglas-fir	<i>Pseudotsuga menziesii</i>	24	24	18	Good	Good	Off	Diameter estimated	Preserve
47	Red alder	<i>Alnus rubra</i>	17, 9	19	18	Poor	Poor	On	Codominant with included bark at 3', dead top, good habitat	Preserve



Attachment 1 - Tree Inventory - March 9 April 16, 2024  
Wilsonville Lamborghini Development

Tree Tag	Common Name	Scientific Name	DBH <sup>1</sup> (in)	Single DBH <sup>2</sup> (in)	C-Rad <sup>3</sup> (ft)	Health Condition <sup>4</sup>	Structural Condition <sup>4</sup>	Property Status <sup>5</sup>	Comments	Treatment
48	Red alder	<i>Alnus rubra</i>	15	15	18	Fair	Fair	On	In thicket of blackberry	Preserve
49	Cottonwood	<i>Populus trichocarpa</i>	18	18	12	Good	Fair	On	One-sided	Preserve
50	Cottonwood	<i>Populus trichocarpa</i>	28	28	15	Good	Good	On		Preserve
51	Douglas-fir	<i>Pseudotsuga menziesii</i>	10	10	15	Fair	Fair	Off	Diameter estimated, part shaded in grove	Preserve
52	Douglas-fir	<i>Pseudotsuga menziesii</i>	12	12	15	Fair	Fair	Off	Diameter estimated, part shaded in grove	Preserve
53	Douglas-fir	<i>Pseudotsuga menziesii</i>	6	6	15	Fair	Fair	Off	Diameter estimated, part shaded in grove	Preserve
54	Douglas-fir	<i>Pseudotsuga menziesii</i>	14	14	15	Fair	Fair	Off	Diameter estimated, part shaded in grove	Preserve
55	Cottonwood	<i>Populus trichocarpa</i>	18	18	18	Fair	Fair	Off	Diameter estimated	Preserve
56	Douglas-fir	<i>Pseudotsuga menziesii</i>	18	18	15	Fair	Fair	Off	Diameter estimated, part shaded in grove	Preserve
57	Red oak	<i>Quercus rubra</i>	24	27	30	Good	Fair	Off	Arborist added to map, location approximate, roots would be impacted by development	Remove
58	Red oak	<i>Quercus rubra</i>	29	29	30	Good	Good	Off	Arborist added to map, location approximate, roots would be impacted by development	Remove
59	Black locust	<i>Robinia pseudoacacia</i>	10	10	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Remove
60	Black locust	<i>Robinia pseudoacacia</i>	10	10	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Remove
61	Black locust	<i>Robinia pseudoacacia</i>	10, 10, 10	17	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Remove
62	Black locust	<i>Robinia pseudoacacia</i>	8	8	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Remove
63	Black locust	<i>Robinia pseudoacacia</i>	12, 12	17	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Remove
64	Black locust	<i>Robinia pseudoacacia</i>	14	14	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Remove
65	Black locust	<i>Robinia pseudoacacia</i>	10	10	12	Fair	Fair	On	Diameter estimated, inaccessible, nuisance species, conflict with development	Remove

<sup>1</sup>DBH is the trunk diameter in inches measured per International Society of Arboriculture (ISA) standards.

<sup>2</sup>Single DBH is the trunk diameter of a multi-stem tree converted to a single number according to the following formula: square root of the sum of the squared diameter of each trunk at 4½ feet above mean ground level.

<sup>3</sup>C-Rad is the approximate crown radius in feet.

<sup>4</sup>Condition and Structure ratings range from dead, very poor, poor, fair, to good.

<sup>5</sup>Property status categorizes trees as on the property, off the property, or on the boundary between two properties. Boundary trees proposed for removal will require approval from the neighboring property.

# Appendix D

## OFWAM Summary Sheets





CITY OF WILSONVILLE LOCAL WETLANDS INVENTORY

WETLAND SUMMARY SHEET

<b>WETLAND:</b> Sun Court Drainage and Wet Meadow	<b>Site Number:</b> 1.12	<b>UNIT:</b> SD-NT-E
<b>Drainage Basin:</b> Headwaters of north trib. to Seely ("Basalt Cr.")	<b>'91 B&amp;W Aerial #:</b> 5-16	
<b>Acreage:</b> 1.35	<b>Field Date(s):</b> 1992, 8/29/97, 10/31/97	
<b>Location:</b> North of Elligsen Rd. & Sun Court, west of Parkway Ave, south of Salish Lane		
<b>Tax Lots:</b> Washington County	<b>Zoning:</b> PDC	
<b>T3S R1W Quarter Section:</b> 2 SE	<b>Delineation:</b> none	

**General Description:** Narrow willow scrub-shrub drainage with manna grass understory. Receives inflow via culvert under Parkway Ave. from stormwater pond (site 1.11), drains toward freeway, also receives runoff from ditch along Elligsen Road. The narrow drainage is routed around the hotel and then culverted under Elligsen Road and thence the I-5 freeway. The emergent wet meadow extends to the north and is dominated by rushes, sedges, and grasses.

**NWI Classification:** 50% PEMC, 50% PSSC

**Mapped Soils; On-site Soils:** 43 Wapato silty clay loam with 4B Briedwell to the north; 5GY 4/1 gleyed muck in drainage; 10YR 4/2 silty clay loam with 10YR 4/4 mottles in meadow to north.

**Hydrologic Source and Description:** Intermittent stream and stormwater runoff, with the wet meadow seasonally saturated.

**Dominant Vegetation:** (\* = major dominant)

Trees

Shrubs

Herbs/Emergents

- \**Salix lasiandra*
- \**Populus trichocarpa*
- Rosa species*

- \**Juncus patens*
- \**Juncus effusus*
- \**Holcus lanatus*
- \**Agrostis tenuis*
- Typha latifolia*
- \**Glyceria species*
- Epilobium ciliatum*

**Boundary Information:** Vegetation changes to tall fescue and soils change to 7.5YR 4/3. Surrounded by open field with patches of Himalayan blackberry.

**Wetland Functions:** Water quality (stormwater filtration). Provides diverse wildlife habitat and has intact water quality functions; hydrologic control functions are degraded, and fish habitat is not applicable. Has the potential for educational uses; it is not appropriate for recreation.

**Significance:** LSW (Locally Significant Wetland)

## City of Wilsonville

## Oregon Freshwater Wetland Assessment Method Summary Sheet

Unit SD-NT-E North Tributary to Seely Ditch East of I-5  
 (Headwaters of "Basalt Creek")  
 (1.12)

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides Diverse	Diverse vegetation
Fish Habitat	Not Applicable	
Water Quality (pollutant removal)	Intact	Receives inflow from stormwater pond (1.11)
Hydrologic Control (flood control & water supply)	Impacted or Degraded	fairly small, some storage in meadow but not a depressional wetland.
Sensitivity to Future Impacts	Potentially Sensitive	All wetlands in Wilsonville potentially sensitive to future impacts. **
Enhancement Potential*		
Education	Potential	
Recreation	Not Appropriate For	
Aesthetic Quality	Pleasing	(small wetland = large viewshed, scores higher)
<b>Narrative Description of Overall Wetland Functions and Conditions</b>		
Fairly aesthetic hidden wetland, isolated by freeway.		

\*Skip Enhancement Potential if Wildlife Habitat is diverse.

\*\*No wetlands in Wilsonville are "sensitive" to future impacts because no upstream reaches are listed as water quality limited and no non-point sources are identified.

# Carlson Geotechnical

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Tigard Office (503) 684-3460



**Report of  
Geotechnical Investigation  
Ron Tonkin Gran Turismo Lamborghini Dealership  
Lot South of 25195 SW Parkway Avenue  
Wilsonville, Oregon**

**CGT Project Number G2306033**

Prepared for

Celia Tonkin  
Ron Tonkin Gran Turismo  
25300 SW Parkway Avenue  
Wilsonville, Oregon 97070

May 13, 2024



City of Wilsonville  
Exhibit B9 DB24-0006

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May 13, 2024

Celia Tonkin  
Ron Tonkin Gran Turismo  
25300 SW Parkway Avenue  
Wilsonville, Oregon 97070

**Report of  
Geotechnical Investigation  
Ron Tonkin Gran Turismo Lamborghini Dealership  
Lot South of 25195 SW Parkway Avenue  
Wilsonville, Oregon**

CGT Project Number G2306033

Dear Celia Tonkin:

Carlson Geotechnical (CGT), a division of Carlson Testing, Inc. (CTI), is pleased to submit this report summarizing the results of our geotechnical investigation for the proposed Ron Tonkin Gran Turismo Lamborghini Dealership project. The site is located directly south of 25195 SW Parkway Avenue in Wilsonville, Oregon. We performed our work in general accordance with CGT Proposal GP23-302R1, dated November 7, 2023. Written authorization for our services was received on November 9, 2023. A draft version of this report was submitted on December 27, 2023.

We appreciate the opportunity to work with you on this project. Please contact us at (503) 601-8250 if you have any questions regarding this report.

Respectfully Submitted,  
**CARLSON GEOTECHNICAL**

*M. David Irish*

M. David Irish, CESCL  
Geotechnical Project Manager  
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Doc ID: \\geosrv\public\GEOTECH\PROJECTS\2023 Projects\G2306033 - Ron Tonkin Gran Turismo Lamborghini Dealership\G2306033 - GEO\008 - Deliverables\Report\G2306033 Geotechnical Investigation.docx

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Ron Tonkin Gran Turismo Lamborghini Dealership  
 Wilsonville, Oregon  
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 Site Photographs ..... Figure 3  
 Retaining Wall Pressure Distribution ..... Figure 4  
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Wilsonville, Oregon  
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## 1.0 INTRODUCTION

Carlson Geotechnical (CGT), a division of Carlson Testing, Inc. (CTI), is pleased to submit this report summarizing the results of our geotechnical investigation for the proposed Ron Tonkin Gran Turismo Lamborghini Dealership project. The site is located directly south of 25195 SW Parkway Avenue in Wilsonville, Oregon, as shown on the attached Site Location, Figure 1.

### 1.1 Project Information

CGT developed an understanding of the proposed project based on our correspondence with the project architect, Axis Design Group (Axis), and review of the provided preliminary project plan set prepared by Axis, dated October 4, 2023, and a survey map, prepared by Westlake Consultants, Inc. Based on our review, we understand the project will include:

- Construction of a new showroom and service building within the northwest portion of the site. The building will be three-stories, metal- and steel-framed, will incorporate a slab on grade ground floor, and include a partially below-grade vehicle storage level. The ground floor of the building will be established at elevation 269.50 feet. Based on information provided by Eric Esqueda, P.E., of VLMK Engineering, maximum column and continuous wall loads will be on the order of 395 kips and 12 kips per lineal foot (klf), respectively. Uniform floor slab loads are anticipated to be less than 250 pounds per square foot (psf).
- Construction of paved passenger car parking areas located east of the showroom and service building, and along the north and east margins of the site. We assume new pavements will be surfaced with asphalt concrete (AC), while loading docks and driveway aprons will be surfaced with Portland Cement Concrete (PCC).
- If conditions allow, stormwater collected from new impervious areas at the site will be disposed of, at least in part, via onsite infiltration. Infiltration testing was requested at three locations as part of this assignment. As described later in this report, due to the presence of shallow groundwater, infiltration testing was not performed at the site.
- Although no grading plans have been provided, we anticipate permanent grade changes at the site will include minimal fills. Cuts up to about 6 feet in depth are anticipated in the planned building pad to achieve desired ground floor elevation(s).
- No development or grading is anticipated to occur within a designated wetland (identified by others) within the south central portion of the site.

### 1.2 Scope of Services

Our scope of work included the following:

- Contact the Oregon Utilities Notification Center to mark the locations of public utilities within a 20-foot radius of our explorations at the site.
- Explore subsurface conditions at the site by advancing five drilled borings to depths of up to about 26½ feet below ground surface (bgs). Details of the subsurface investigation are presented in Appendix A.
- Classify the soils encountered in the explorations in general accordance with ASTM D2488 (Visual-Manual Procedure).
- Provide a technical narrative describing surface and subsurface deposits, and local geology of the site, based on the results of our explorations and published geologic mapping.

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- Provide recommendations for the Seismic Site Class, mapped maximum considered earthquake spectral response accelerations, and site seismic coefficients.
- Provide a qualitative evaluation of seismic hazards at the site, including earthquake-induced liquefaction, landsliding, and surface rupture due to faulting or lateral spread.
- Provide geotechnical recommendations for site preparation and earthwork.
- Provide geotechnical engineering recommendations for use in design and construction of shallow foundations deriving support from improved ground, floor slabs, retaining walls, and pavements.
- Provide this written report summarizing the results of our geotechnical investigation and recommendations for the project.

## 2.0 SITE DESCRIPTION

### 2.1 Site Geology

Based on available geologic mapping<sup>1,2</sup> of the area, the site is underlain by basalt bedrock. The basalt bedrock unit is composed of lava flows associated with the Columbia River Basalt group. The Columbia River basalt group consists of numerous fine-grained lava flows that primarily erupted from fissures in eastern Washington and Oregon and western Idaho during the Miocene (23.8 to 5.3 million years ago). Many individual flows are interbedded with thin paleosols that consist of clay-rich soils or sediments formed during period of volcanic inactivity. The basalt can weather in place to form clay and silt rich residual soils that overly the intact basalt bedrock. When intact, the basalt features jointed patterns ranging from columnar to entablature/colonnade, and is described as having fresh exposures that are dark gray to black, while weathered exposures area greenish-gray to grayish-black. Based on results of the drilled borings advanced at the site (described below) and review of local well logs, we anticipate that residual soils (fully decomposed bedrock) extend to depths of about 30 to 60 feet bgs, and are underlain by intact basalt bedrock.

### 2.2 Site Surface Conditions

The site is bordered by SW Parkway Avenue to the east, an on-ramp to Interstate 5 to the west, and commercial properties to the north and south. At the time of our field investigation, the north, west, and east perimeters of the site descended towards its center at gradients up to 4 horizontal:1 vertical (4H:1V). The south-central portion of the site is mapped (by others) as wetlands. Vegetation on the southern portion of the site consisted of grasses and scattered coniferous and deciduous trees. The northern and western portions of the site were densely vegetated with brush and trees. The western portion of the site exhibited moderately dense vegetation and resulted in limited access for exploration equipment. Site layout and surface conditions at the time of our field investigation are shown on the attached Site Plan (Figure 2) and Site Photographs (Figure 3).

<sup>1</sup> Madin, I.P., 2004. Geologic mapping and database for the Portland area fault studies: Final report, Clackamas, Multnomah, and Washington Counties, Oregon: Oregon Department of Geology and Mineral Industries, Open-File Report O-04-02, scale 1:100,000.

<sup>2</sup> Beeson, M.H., Tolan, T.L., and Madin, I.P., 1991. Geologic map of the Portland quadrangle, Multnomah and Washington counties, Oregon, and Clark County, Washington: Oregon Department of Geology and Mineral Industries, Geological Map Series 75, scale 1:24,000.

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## 2.3 Subsurface Conditions

### 2.3.1 Subsurface Investigation & Laboratory Testing

Our subsurface investigation consisted of five drilled borings (B-1 through B-5) completed on December 4, 2023. The approximate boring locations are shown on the Site Plan, attached as Figure 2. In summary, the borings were advanced to depths ranging from about 6½ to 26½ feet bgs. Details regarding the subsurface investigation, logs of the explorations, and results of laboratory testing are presented in Appendix A. Subsurface conditions encountered during our investigation are summarized below.

### 2.3.2 Subsurface Materials

Logs of the explorations are presented in Appendix A. The following describes each of the subsurface materials encountered at the site.

#### Organic Soil (OL)

Organic soil was encountered at the surface of each boring. The organic soil was typically dark brown, moist, exhibited low plasticity, and contained varying amounts of rootlets. This soil extended to depths of about ¼-foot bgs in the borings.

#### Elastic Silt (MH)

Elastic silt was encountered below the organic soil in each boring. The elastic silt was typically brown, moist, exhibited medium plasticity, and contained varying amounts of weathered rock fragments up to ¼-inch in diameter. In terms of consistency, this soil was very soft in the upper 5 feet in borings B-1 and B-2. Below that depth and in the remaining borings, this soil was typically medium stiff to stiff. This soil extended to depths of about 7 to 10 feet bgs in borings B-1 through B-4, and to the full depth explored in boring B-5, about 6½ feet bgs.

#### Silty Sand (SM)

Underlying the elastic silt in borings B-1 through B-4 was silty sand. The silty sand was typically medium dense, multicolored, moist to wet, fine- to coarse-grained, and contained medium plasticity fines and varying amounts of weathered rock fragments up to ½-inch in diameter. This soil extended to the full depths explored in those borings, about 9 to 26½ feet bgs. This soil was interpreted to consist of residual soils.

### 2.3.3 Groundwater

As shown on the attached logs and on the attached Site Plan, Figure 2, the groundwater level (phreatic surface) was encountered at variable depths (ranging from 1 to 12 feet bgs) within borings B-1 through B-5 during our investigation in early December 2023. To determine approximate regional groundwater levels in the area, we researched well logs available on the Oregon Water Resources Department (OWRD)<sup>3</sup> website for wells located within Section 02, Township 03 South, Range 01 West, Willamette Meridian. Our review indicated that groundwater levels in the area generally ranged from about 12½ to 25 feet bgs. It should be noted groundwater levels vary with local topography. In addition, the groundwater levels reported on the OWRD logs often reflect the purpose of the well, so water well logs may only report deeper, confined groundwater, while geotechnical or environmental borings will often report any groundwater encountered, including shallow, unconfined groundwater. Therefore, the levels reported on the OWRD well logs referenced

<sup>3</sup> Oregon Water Resources Department, 2023. Well Log Records, accessed December 2023, from OWRD web site: [http://apps.wrd.state.or.us/apps/gw/well\\_log/](http://apps.wrd.state.or.us/apps/gw/well_log/).



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above are considered generally indicative of local water levels and may not reflect actual groundwater levels at the project site. We anticipate that groundwater levels will fluctuate due to seasonal and annual variations in precipitation, changes in site utilization, or other factors. Additionally, the on-site fine-grained (silty) soils are conducive to formation of perched groundwater.

### 3.0 SEISMIC CONSIDERATIONS

#### 3.1 Seismic Design

Section 1613.2.2 of the 2022 Oregon Structural Specialty Code (2022 OSSC) requires that the determination of the seismic site class be in accordance with Chapter 20 of the American Society of Civil Engineers Minimum Design Loads for Buildings and Other Structures (ASCE 7-16). We have assigned the site as Site Class D (“Stiff Soil”) based on geologic mapping and subsurface conditions encountered during our investigation.

Earthquake ground motion parameters for the site were obtained in accordance with the 2022 OSSC using the Seismic Hazards by Location calculator on the ATC website<sup>4</sup>. The site Latitude 45.337419° North and Longitude 122.767954° West were input as the site location. The following table shows the recommended seismic design parameters for the site.

**Table 1 Seismic Ground Motion Values**

	Parameter	Value
Mapped Acceleration Parameters	Spectral Acceleration, 0.2 second ( $S_s$ )	0.826g
	Spectral Acceleration, 1.0 second ( $S_1$ )	0.384g
Coefficients (Site Class D)	Site Coefficient, 0.2 second ( $F_A$ )	1.169
	Site Coefficient, 1.0 second ( $F_V$ ) <sup>1</sup>	1.916
Adjusted MCE Spectral Response Parameters	MCE Spectral Acceleration, 0.2 second ( $S_{MS}$ )	0.966g
	MCE Spectral Acceleration, 1.0 second ( $S_{M1}$ )	0.736g
Design Spectral Response Accelerations	Design Spectral Acceleration, 0.2 second ( $S_{DS}$ )	0.644g
	Design Spectral Acceleration, 1.0 second ( $S_{D1}$ )	0.491g
Seismic Design Category (Risk Category II)		D

<sup>1</sup>Value determined from 2022 OSSC Table 1613.2.3(2).

#### 3.2 Seismic Hazards

##### 3.2.1 Liquefaction

In general, liquefaction occurs when deposits of loose/soft, saturated, cohesionless soils, generally sands and silts, are subjected to strong earthquake shaking. If these deposits cannot drain quickly enough, pore water pressures can increase, approaching the value of the overburden pressure. The shear strength of a cohesionless soil is directly proportional to the effective stress, which is equal to the difference between the overburden pressure and the pore water pressure. When the pore water pressure increases to the value of the overburden pressure, the shear strength of the soil approaches zero, and the soil can liquefy. The

<sup>4</sup> Applied Technology Council (ATC), 2023. USGS seismic design parameters determined using “Seismic Hazards by Location,” accessed December 2023, from the ATC website <https://hazards.atcouncil.org/>.

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liquefied soils can undergo rapid consolidation or, if unconfined, can flow as a liquid. Structures supported by the liquefied soils can experience rapid, excessive settlement, shearing, or even catastrophic failure.

For fine-grained soils, susceptibility to liquefaction is evaluated based on penetration resistance and plasticity, among other characteristics. Criteria for identifying non-liquefiable, fine-grained soils are constantly evolving. Current practice to identify non-liquefiable, fine-grained soils is based on moisture content and plasticity characteristics of the soils<sup>5,6,7</sup>. The susceptibility of sands, gravels, and sand-gravel mixtures to liquefaction is typically assessed based on penetration resistance, as measured using SPTs, CPTs, or Becker Hammer Penetration tests (BPTs).

The Oregon Department of Geology and Mineral Industries' Oregon Statewide Geohazards Viewer (HazVu)<sup>8</sup> shows a *low* hazard for liquefaction at the site. The Oregon Hazard Explorer for Lifelines Program (O-HELP)<sup>9</sup> show a *very low* hazard for liquefaction for the site or immediate vicinity due to a M9.0 Cascadia Subduction Zone earthquake.

Based on its plasticity, the native elastic silt (MH) is not susceptible to liquefaction. Based on the plasticity characteristics of the fines and its classification as residual soils (fully decomposed rock), the silty sand (SM) encountered within our explorations is considered non-liquefiable. Based on review of geologic mapping and our previous experience in the area, we do not anticipate liquefiable conditions are present at depths below those explored as part of this assignment.

### 3.2.2 Slope Instability

We did not observe any obvious signs of past or on-going slope instability at the site. Review of the Statewide Landslide Information Database for Oregon (SLIDO), available at the DOGAMI website<sup>10</sup>, shows no historic or prehistoric landslides at or in the immediate vicinity of the site. HazVu shows a *low* hazard for landslides at the site. O-HELP shows a *very low* probability of seismically-induced landslides at the site due to a M9.0 Cascadia Subduction Zone earthquake. Given the relatively gentle site grades, the lack of evidence of previous landslides in the vicinity, and the generally low hazard indicated by the hazard mapping, the risk of seismically-induced slope instability occurring at the site is considered very low. The proposed grading includes relatively minimal planned changes in site grades and is not anticipated to significantly increase this risk.

<sup>5</sup> Seed, R.B. et al., 2003. Recent Advances in Soil Liquefaction Engineering: A Unified and Consistent Framework. Earthquake Engineering Research Center Report No. EERC 2003-06.

<sup>6</sup> Bray, Jonathan D., Sancio, Rodolfo B., et al., 2006. Liquefaction Susceptibility of Fine-Grained Soils, Journal of Geotechnical and Geoenvironmental Engineering, Volume 132, Issue 9, September 2006.

<sup>7</sup> Idriss, I.M., Boulanger, R.W., 2008. Soil Liquefaction During Earthquakes, Earthquakes Engineering Research Institute Monograph MNO-12.

<sup>8</sup> Oregon Department of Geology and Mineral Industries, 2023. Oregon Statewide Geohazards Viewer, accessed December 2023, from DOGAMI web site: <http://www.oregongeology.org/sub/hazvu/index.htm>.

<sup>9</sup> Oregon State University College of Engineering, 2023. Oregon Hazard Explorer for Lifelines Program (O-HELP), accessed December 2023, from O-HELP web site: <http://ohelp.oregonstate.edu/#&ui-state=dialog>.

<sup>10</sup> Oregon Department of Geology and Mineral Industries, 2023. Statewide Landslide Information Database for Oregon (SLIDO), accessed December 2023, from DOGAMI web site: <https://gis.dogami.oregon.gov/maps/slido/>.

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### 3.2.3 Surface Rupture

#### 3.2.3.1 *Faulting*

Although the site is situated in a region of the country with known active faults and historic seismic activity, no known faults exist on or immediately adjacent to the site. Therefore, the risk of surface rupture at the site due to faulting is considered low.

#### 3.2.3.2 *Lateral Spread*

Surface rupture due to lateral spread can occur on sites underlain by liquefiable soils that are located on or immediately adjacent to slopes steeper than about 3 degrees (20H:1V), and/or adjacent to a free face, such as a stream bank or the shore of an open body of water. During lateral spread, the materials overlying the liquefied soils are subject to lateral movement downslope or toward the free face. Based on the relatively level topography at the site and the discontinuous nature of the liquefiable soil layers, the risk of damage associated with lateral spread is negligible.

## 4.0 FOUNDATION SETTLEMENT ANALYSES

CGT performed settlement analyses to estimate post-construction settlements of conventional shallow spread foundations supporting structural loads for the proposed building. The analyses were based on subsurface data collected from the drilled borings, laboratory testing performed on collected soil samples, the loadings detailed in Section 1.1, and the following assumptions:

- Building shallow foundations are designed assuming a maximum soil bearing pressure of 2,000 psf.
- Building shallow foundations are established on the native silty soils (MH, SM) at a depth of about 4 feet below existing site grades and no subgrade improvement is performed.

The following table presents the results of our settlement analyses for shallow foundations supporting the proposed building.

**Table 2 Estimated Foundation Settlements from Structural Loads**

Foundation Type	Maximum Loading <sup>1</sup>	Foundation Bearing Pressure Used	Estimated Settlement (inches) <sup>2</sup>
Individual (Column Pad)	395 kips	2,000 psf	Up to 2½
	200 kips	2,000 psf	Up to 1¾
	100 kips	2,000 psf	Up to 1½
Continuous Wall	12 kips per lineal foot	2,000 psf	Up to 1½
	6 kips per lineal foot	2,000 psf	Up to 1

<sup>1</sup> Consistent with loading described in Section 1.1 of this report and considers dead and long-term live loading. If increased loads are estimated for the building, the geotechnical engineer should be consulted to review loading conditions.

<sup>2</sup> Estimated settlement resulting from consolidation/densification of subgrade soils (from sustained loading).

Based on our experience with similar projects, we anticipate the maximum allowable total post-construction settlements of building foundations is 1 inch. Similarly, we anticipate the maximum allowable differential settlement of foundations (considering adjacent columns and/or walls) is ½ inch. To determine if the settlements could be reduced to those levels, we modeled “granular pads” below the column pad and heavier wall foundations. Our analyses showed the required subgrade improvement (taking the form of over-

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excavation and replacement with granular structural fill) would need to extend to considerable depths<sup>11</sup> and, recognizing the presence of relatively shallow groundwater and other considerations, is not anticipated to be cost effective for the project. As an alternative, we recommend an alternative form of ground improvement [granular piers (GPs)] be considered to mitigate the excessive settlements.

## 5.0 CONCLUSIONS

Based on the results of our field explorations and analyses, the site may be developed as described in Section 1.1 of this report, provided the recommendations presented in this report are incorporated into the design and development. The primary geotechnical considerations for the project are summarized in the following sections.

### 5.1 Consolidation (Settlement) Potential from Building Loads

As indicated in Section 4.0 above, our analyses indicated that consolidation settlements from sustained structural loads associated with the planned building will be up to about 2½ inches. In the absence of ground improvement, the estimated total and differential settlements are not expected to be tolerable for the proposed building if supported on conventional shallow spread foundations.

Subsequent to completion of our analyses, but prior to issuance of this written report, we reviewed this consideration with the project design team members. Based on recent discussions, the project team indicated their preference to proceed with shallow foundations supported on granular piers (GPs). GPs are an intermediate, foundation system that consists of nominally spaced, aggregate piers that provide shallow foundation bearing support and assist with controlling settlement. Through proper design and construction, we anticipate this approach should help reduce total and differential, consolidation settlements to a level acceptable for supporting the building on conventional shallow foundations. Geotechnical recommendations for use in design and construction of GPs are presented in Section 6.5 of this report.

### 5.2 Moisture Sensitive Soils

The near surface fine-grained silty soils (MH, SM) are susceptible to disturbance during wet weather. Trafficability of these soils may be difficult, and significant damage to the subgrade could occur, if earthwork is undertaken without proper precautions at times when the exposed soils are more than a few percentage points above optimum moisture content. In the event that construction occurs during wet weather, CGT recommends that measures be implemented to protect the fine-grained subgrade in areas of repeated construction traffic and within footing excavations. Geotechnical recommendations for wet weather construction are presented in Section 6.3 of this report.

### 5.3 Shallow Groundwater

As indicated in Section 2.3.3 above, the groundwater level (phreatic surface) was encountered at depths of about 1 to 12 feet bgs in the borings advanced at the site in early December 2023. The following geotechnical conclusions are presented relative to the groundwater levels observed at this site:

<sup>11</sup> For the maximum column loading indicated in Table 2, our analyses indicates granular pads for ground-level column pad foundations would need to be 5+ feet in depth to reduce post-construction settlement to an acceptable level.

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- Some seasonal and annual fluctuation<sup>12</sup> of the groundwater level should be anticipated at this site. With regard to the building pad, we recommend the “seasonal high groundwater level” be assigned at an elevation of 265 feet. Although not anticipated based on provided information, in the event the building ground floor will be established within 2 feet of that elevation, the geotechnical engineer should be consulted to review the proposed construction and provide supplemental recommendations for waterproofing and/or underslab drainage, if warranted.
- Within planned pavement areas, we recommend site grades be maintained at their current elevations to the extent possible. Permanent cuts at the site extending below a depth of 1-foot bgs, if proposed, should be reviewed by the geotechnical engineer.
- The relatively shallow groundwater effectively precludes infiltration of stormwater collected from new impervious areas of the site. Notwithstanding the preceding, in the event stormwater infiltration facilities(ies) are to be pursued at this site, the geotechnical engineer should be consulted to review potential siting and depth(s) of those facilities.
- With regard to construction, depending on the time of year (and the area of the site) that site work takes place, groundwater may be encountered when excavations extend below a few feet below existing ground surface and should be factored. Dewatering plans will rest with the project contractor. Additional discussion of dewatering considerations is presented in Section 6.2.2 of this report.

## 6.0 RECOMMENDATIONS

The recommendations presented in this report are based on the information provided to us, results of our field investigation and analyses, laboratory data, and professional judgment. CGT has observed only a small portion of the pertinent subsurface conditions. The recommendations are based on the assumptions that the subsurface conditions do not deviate appreciably from those found during the field investigation. CGT should be consulted for further recommendations if the design of the proposed development changes and/or variations or undesirable geotechnical conditions are encountered during site development.

### 6.1 Site Preparation

#### 6.1.1 Stripping & Grubbing

Existing vegetation, topsoil, and rooted soils (OL) should be removed from within, and for a minimum 5-foot margin around, proposed building pad, structural fill, and pavement areas. Based on the results of our field explorations, topsoil stripping depths are anticipated to be on the order of about ¼-foot bgs. These materials may be deeper or shallower at locations away from the completed explorations. The geotechnical engineer’s representative should provide recommendations for actual stripping depths based on observations during site stripping. Stripped surface vegetation and rooted soils should be transported off-site for disposal, or stockpiled for later use in landscaped areas.

Grubbing of trees should include the removal of the root mass and roots greater than ½ inch in diameter. Grubbed materials should be transported off-site for disposal. Root masses from larger trees may extend greater than 3 feet bgs. Where root masses are removed, the resulting excavation should be properly backfilled with structural fill in conformance with Section 6.4 of this report.

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<sup>12</sup> The client is advised that monitoring of the groundwater level at the site could be performed at the site via periodic explorations (e.g. hand auger borings) and/or through the installation of piezometers. Such services are outside the scope of this current assignment, but could be provided, upon request, for an additional fee.

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### 6.1.2 Existing Utilities & Below-Grade Structures

All existing utilities at the site should be identified prior to excavation. Abandoned utility lines beneath the new building, pavements, and hardscaping features should be completely removed or grouted full. Soft, loose, or otherwise unsuitable soils encountered in utility trench excavations should be removed and replaced with structural fill in conformance with Section 6.4 this report. Buried structures (i.e. footings, foundation walls, retaining walls, slabs-on-grade, tanks, etc.), if encountered during site development, should be completely removed and replaced with structural fill in conformance with Section 6.4 of this report.

### 6.1.3 Subgrade Preparation - Building Pad & Pavement Areas

After site preparation as recommended above, but prior to placement of structural fill and/or aggregate base, the geotechnical engineer's representative should observe the exposed subgrade soils in order to identify areas of excessive yielding through either proof rolling or probing. Proof rolling of subgrade soils is typically conducted during dry weather using a fully-loaded, 10- to 12-cubic-yard, tandem-axle, tire-mounted, dump truck or equivalent weighted water truck. Areas of limited access or that appear too soft or wet to support proof rolling equipment should be evaluated by probing. During wet weather, subgrade preparation should be performed in general accordance with the recommendations presented in Section 6.3 of this report. If areas of soft soil or excessive yielding are identified, the affected material should be over-excavated to firm, unyielding subgrade, and replaced with imported granular structural fill in conformance with Section 6.4.2 of this report.

The elastic silt (MH) soils should be kept moist, near optimum moisture content, and not allowed to dry out. If allowed to dry below optimum moisture content, to a point where surface cracking appears in the subgrade, the affected material should be over-excavated and replaced with imported granular structural fill.

### 6.1.4 Erosion Control

Erosion and sedimentation control measures should be employed in accordance with applicable City, County, and State regulations.

## 6.2 **Temporary Excavations**

### 6.2.1 Overview

Conventional earthmoving equipment in proper working condition should be capable of making necessary excavations for the anticipated site cuts as described earlier in this report. All excavations should be in accordance with applicable OSHA and state regulations. It is the contractor's responsibility to select the excavation methods, to monitor site excavations for safety, and to provide any shoring required to protect personnel and adjacent improvements. A "competent person," as defined by OR-OSHA, should be on-site during construction in accordance with regulations presented by OR-OSHA. CGT's current role on the project does not include review or oversight of excavation safety.

### 6.2.2 Dewatering

As indicated in Section 2.3.3 above, groundwater was encountered at depths of approximately 1 to 12 feet bgs within the borings advanced at the site in early December 2023. The soils encountered at these depths exhibited relatively high fines content and are anticipated to exhibit low to moderate rates of transmissivity. Accordingly, we would expect low to moderate seepage when excavations extend below the groundwater

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level. Pumping from sumps may be effective in removing groundwater within shallow or localized excavations at the site. Pumping from multiple well points will likely be required for larger excavations and those extending below the groundwater level. The sumps or wells should be installed to remove water to a depth of at least 2 feet below the lowest elevation of the excavation, and should be installed and put into operation prior to commencing excavation. With regards to temporary dewatering, the contractor or his representative should determine the appropriate size, number, and location of sump pumps or wells. The project civil engineer should evaluate requirements for disposal of the resultant discharge.

#### 6.2.3 OSHA Soil Types

For use in the planning and construction of temporary excavations up to 10 feet in depth, an OSHA soil type "A" may be used for the native elastic silt (MH) encountered near the surface of the site. In the event groundwater seepage is observed within temporary excavations within this soil, the sidewalls should be flattened in accordance with OSHA soil type "C". Similarly, an OSHA soil type "C" should be used for the native silty sand (SM) encountered at depth in the borings.

#### 6.2.4 Utility Trenches

Temporary trench cuts should stand near vertical to depths of approximately 4 feet in the native, elastic silt (MH) encountered near the surface of the site. If groundwater seepage undermines the stability of the trench, or if sidewall caving is observed during excavation, the sidewalls should be flattened or shored. Depending on the time of year trench excavations occur, trench dewatering may be required in order to maintain dry working conditions. A discussion of dewatering of temporary excavations is presented in Section 6.2.2 above. If groundwater is encountered, we recommend placing trench stabilization material at the base of the excavations. Trench stabilization material should be in conformance with Section 6.4.3.

#### 6.2.5 Excavations Near Foundations

Excavations near footings should not extend within a 1 horizontal to 1 vertical (1H:1V) plane projected out and down from the outside, bottom edge of the footings. In the event excavation needs to extend below the referenced plane, temporary shoring of the excavation and/or underpinning of the subject footing may be required. The geotechnical engineer should be consulted to review proposed excavation plans for this design case to provide specific recommendations.

### **6.3 Wet Weather Considerations**

For planning purposes, the wet season should be considered to extend from late September to late June. It is our experience that dry weather working conditions should prevail between early July and mid-September. Notwithstanding the above, soil conditions should be evaluated in the field by the geotechnical engineer's representative at the initial stage of site preparation to determine whether the recommendations within this section should be incorporated into construction.

#### 6.3.1 Overview

Due to their fines content, the on-site silty soils (MH, SM) are susceptible to disturbance during wet weather. Trafficability of these soils may be difficult, and significant damage to subgrade soils could occur, if earthwork is undertaken without proper precautions at times when the exposed soils are more than a few percentage points above optimum moisture content. For wet weather construction, site preparation activities may need to be accomplished using track-mounted equipment, loading removed material onto trucks supported on

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granular haul roads, or other methods to limit soil disturbance. The geotechnical engineer's representative should evaluate the subgrade during excavation by probing rather than proof rolling. Soils that have been disturbed during site preparation activities, or soft or loose areas identified during probing, should be over-excavated to firm, unyielding subgrade, and replaced with imported granular structural fill in conformance with Section 6.4.2.

### 6.3.2 Geotextile Separation Fabric

We recommend a geotextile separation fabric be placed to serve as a barrier between the prepared subgrade and granular fill/base rock in areas of repeated or heavy construction traffic. The geotextile fabric should meet the requirements presented in the current Oregon Department of Transportation (ODOT) Standard Specification for Construction (ODOT SSC), Section 02320.

### 6.3.3 Granular Working Surfaces (Haul Roads & Staging Areas)

Haul roads subjected to repeated heavy, tire-mounted, construction traffic (e.g. dump trucks, concrete trucks, etc.) will require a minimum of 18 inches of imported granular material. For light staging areas, 12 inches of imported granular material is typically sufficient. Additional granular material or geo-grid reinforcement may be recommended based on site conditions and/or loading at the time of construction. The imported granular material should be in conformance with Section 6.4.2 and have less than 5 percent material passing the U.S. Standard No. 200 Sieve. The prepared subgrade should be covered with geotextile fabric (Section 6.3.2) prior to placement of the imported granular material. The imported granular material should be placed in a single lift (up to 24 inches deep) and compacted using a smooth-drum, non-vibratory roller until well-keyed.

### 6.3.4 Footing Subgrade Protection

A minimum of 3 inches of imported granular material (crushed rock) is recommended to protect fine-grained (silty), footing subgrades from foot traffic during inclement weather. The imported granular material should be in conformance with Section 6.4.2. The maximum particle size should be limited to 1 inch. The imported granular material should be placed in one lift over the prepared, undisturbed subgrade, and compacted using non-vibratory equipment until well keyed.

Surface water should not be allowed to collect in footing excavations. The excavations should be draped and/or provided with sumps to preclude water accumulation during inclement weather.

## 6.4 **Structural Fill**

The geotechnical engineer should be provided the opportunity to review all materials considered for use as structural fill (prior to placement). Samples of the proposed fill materials should be submitted to the geotechnical engineer a minimum of 5 business days prior their use on site<sup>13</sup>. The geotechnical engineer's representative should be contacted to evaluate compaction of structural fill as the material is being placed. Evaluation of compaction may take the form of in-place density tests and/or proof roll tests with suitable equipment. Structural fill should be evaluated at intervals not exceeding every 2 vertical feet as the fill is being placed.

<sup>13</sup> Laboratory testing for moisture density relationship (Proctor) is required. Tests for gradation may be required.



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#### 6.4.1 On-Site Soils – General Use

##### 6.4.1.1 *Elastic Silt (MH), Silty Sand (SM)*

Re-use of these soils as structural fill may be difficult because these soils are sensitive to small changes in moisture content and are difficult, if not impossible, to adequately compact during wet weather. We anticipate the moisture content of these soils will be higher than the optimum moisture content for satisfactory compaction. Therefore, moisture conditioning (drying) should be expected in order to achieve adequate compaction. If used as structural fill, these soils should be free of organic matter, debris, and particles larger than 4 inches. When used as structural fill, these soils should be placed in lifts with a maximum pre-compaction thickness of about 8 inches at moisture contents within –1 and +3 percent of optimum, and compacted to not less than 92 percent of the material's maximum dry density, as determined in general accordance with ASTM D1557 (Modified Proctor).

If the on-site materials cannot be properly moisture-conditioned and/or processed, we recommend using imported granular material for structural fill.

#### 6.4.2 Imported Granular Structural Fill – General Use

Imported granular structural fill should consist of angular pit or quarry run rock, crushed rock, or crushed gravel that is fairly well graded between coarse and fine particle sizes. The granular fill should contain no organic matter, debris, or particles larger than 4 inches, and have less than 5 percent material passing the U.S. Standard No. 200 Sieve. For fine-grading purposes, the maximum particle size should be limited to 1½ inches. The percentage of fines can be increased to 12 percent of the material passing the U.S. Standard No. 200 Sieve if placed during dry weather, and provided the fill material is moisture-conditioned, as necessary, for proper compaction. Imported granular fill material should be placed in lifts with a maximum thickness of about 12 inches, and compacted to not less than 95 percent of the material's maximum dry density, as determined in general accordance with ASTM D1557 (Modified Proctor). Proper moisture conditioning and the use of vibratory equipment will facilitate compaction of these materials.

Granular fill materials with high percentages of particle sizes in excess of 1½ inches are considered non-moisture-density testable materials. As an alternative to conventional density testing, compaction of these materials should be evaluated by proof roll test observation (deflection tests), where accepted by the geotechnical engineer.

#### 6.4.3 Trench Base Stabilization Material

If groundwater is present at the base of utility excavations, trench base stabilization material should be placed. Trench base stabilization material should consist of a minimum of 1 foot of well-graded granular material with a maximum particle size of 4 inches and less than 5 percent material passing the U.S. Standard No. 4 Sieve. The material should be free of organic matter and other deleterious material, placed in one lift, and compacted until well-keyed.

#### 6.4.4 Trench Backfill Material

Trench backfill for the utility pipe base and pipe zone should consist of granular material as recommended by the utility pipe manufacturer. Trench backfill above the pipe zone should consist of well-graded granular material containing no organic matter or debris, have a maximum particle size of ¾ inch, and have less than 8 percent material passing the U.S. Standard No. 200 Sieve. As a guideline, trench backfill should be placed

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in maximum 12-inch-thick lifts. The earthwork contractor may elect to use alternative lift thicknesses based on their experience with specific equipment and fill material conditions during construction in order to achieve the required compaction. The following table presents recommended relative compaction percentages for utility trench backfill.

**Table 3 Utility Trench Backfill Compaction Recommendations**

Backfill Zone	Recommended <u>Minimum</u> Relative Compaction	
	Structural Areas <sup>1,2</sup>	Landscaping Areas
Pipe Base and Within Pipe Zone	90% ASTM D1557 or pipe manufacturer's recommendation	85% ASTM D1557 or pipe manufacturer's recommendation
Above Pipe Zone	92% ASTM D1557	88% ASTM D1557
Within 3 Feet of Design Subgrade	95% ASTM D1557	90% ASTM D1557

<sup>1</sup> Includes proposed building, pavement areas, structural fill areas, exterior hardscaping, etc.  
<sup>2</sup> Or as specified by the local jurisdiction where located within the public right of way.

#### 6.4.5 Controlled Low-Strength Material (CLSM)

CLSM is a self-compacting, cementitious material that is typically considered when backfilling localized areas. CLSM is sometimes referred to as “controlled density fill” or CDF. Due to its flowable characteristics, CLSM typically can be placed in restricted-access excavations where placing and compacting fill is difficult. If chosen for use at this site, we recommend the CLSM be in conformance with Section 00442 of the most recent, ODOT SSC. The geotechnical engineer's representative should observe placement of the CLSM and obtain samples for compression testing in accordance with ASTM D4832. As a guideline, for each day's placement, two compressive strength specimens from the same CLSM sample should be tested. The results of the two individual compressive strength tests should be averaged to obtain the reported 28-day compressive strength. If CLSM is considered for use on this site, please contact the geotechnical engineer for site-specific and application-specific recommendations.

## 6.5 Building Foundations

As indicated in Section 5.1 above, we recommend granular piers (GPs) be used to support shallow foundations associated with the proposed building. GPs are an intermediate foundation system that consists of nominally spaced aggregate piers that provide shallow foundation bearing support and assist with controlling settlement. We recommend GPs be designed and installed by an experienced, qualified, design-build firm specialized in this ground improvement technique. GPs and shallow foundations supported by GPs should be constructed in accordance with plans, details, and specifications provided by the GP design-build firm.

### 6.5.1 Recommended Foundation Design & Performance Criteria

For the purposes of planning and design, subject to review of the design team, we recommend the following criteria be used for design and construction of shallow foundations associated with the proposed building and supported on GP-improved ground:

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**Table 4 Design & Performance Criteria for Shallow Foundations**

Foundation Soil Parameter	Recommended Value for Design	
Allowable net soil bearing pressure <sup>1</sup> (considering dead + long-term live loads)	6,000 psf	
Allowable net soil bearing pressure <sup>1</sup> (considering dead + long-term live + transient loads)	8,000 psf	
Maximum Allowable Settlement (from building loads) <sup>1,2</sup>	Total = 1 inch; Differential = ½ inch	
Minimum Footing Width	Continuous Walls	18 inches
	Individual (Column Pad)	24 inches
Minimum Footing Embedment <sup>3</sup>	18 inches	
Ultimate Sliding Coefficient <sup>1,4</sup>	0.40	
Allowable Passive Lateral (Equivalent Fluid) Pressure <sup>4</sup>	150 pcf	

<sup>1</sup> Recommended design objective for the granular pier (GP) improvement plans.  
<sup>2</sup> Or as specified by the building structural engineer. Differential settlements should be measured between adjacent columns and/or walls.  
<sup>3</sup> Relative to the lowest, permanent adjacent grade next to the subject foundation.  
<sup>4</sup> Refer to Section 6.5.3 below for additional discussion.

### 6.5.2 Subgrade Preparation

Subgrade preparation of shallow foundations supported on GP-improved ground should be in conformance with the approved GP-design plans.

### 6.5.3 Lateral Capacity

A maximum passive (equivalent fluid) earth pressure of 150 pounds per cubic foot (pcf) is recommended for design of footings cast neat into excavations in suitable native soil or confined by imported granular structural fill that is properly placed and compacted during construction. The recommended earth pressure was computed using a factor of safety of 1½, which is appropriate due to the amount of movement required to develop full passive resistance. In order to develop the above capacity, the following should be understood:

1. Concrete must be poured neat in excavations or the foundations must be backfilled with imported granular structural fill,
2. The adjacent grade must be level,
3. The static ground water level must remain below the base of the footings throughout the year.
4. Adjacent floor slabs, pavements, or the upper 12-inch-depth of adjacent, unpaved areas should not be considered when calculating passive resistance.

An ultimate coefficient of friction equal to 0.40 may be used when calculating resistance to sliding for footings founded on GP-improved ground. An ultimate coefficient of friction equal to 0.45 may be used when calculating resistance to sliding for footings founded on a minimum of 6 inches of imported granular structural fill (crushed rock) that is properly placed and compacted during construction.

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#### 6.5.4 Subsurface Drainage

Subject to review of the GP designer, recognizing the predominantly fine-grained (silty) soils encountered at this site, we recommend placing foundation drains at the exterior, base elevations of perimeter continuous wall footings. Foundation drains should consist of a minimum 4-inch diameter, perforated, PVC drainpipe wrapped with a non-woven geotextile filter fabric. The drains should be backfilled with a minimum of 2 cubic feet of open graded drain rock per lineal foot of pipe. The drain rock should also be encased in a geotextile fabric in order to provide separation from the surrounding fine-grained soils. Foundation drains should be positively sloped and should outlet to a suitable discharge point. The geotechnical engineer's representative should observe the drains prior to backfilling. Roof drains should not be tied into foundation drains.

#### 6.5.5 Soil Strength Parameters

We have provided recommended values for soil strength parameters, including drained friction angle ( $\Phi'$ ), effective cohesion ( $c'$ ), total unit weight ( $\gamma_T$ ), and undrained shear strength ( $S_u$ ), for use in design of GPs in the following table. The parameters provided below were based on the results of the subsurface explorations, laboratory testing, published correlations with SPT and laboratory (index) test data, and our experience with similar soils.

**Table 5 Soil Parameters Recommended for Use in Granular Pier Design**

Depth (feet bgs) <sup>1</sup>	Description <sup>2,3</sup>	Recommended Soil Type	Soil Shear Strength Parameter <sup>2,3</sup>			
			$\Phi'$ (degrees)	$c'$ (psf)	$\gamma_T$ (pcf)	$S_u$ (psf)
0 to 10	Native, Med. Stiff to Stiff, Elastic Silt (MH)	Phi + $c'$	30	100	115	900
10+	Native, Medium Dense, Silty Sand (SM)	Cohesionless	36	0	120	0

<sup>1</sup> Depth measured relative to existing site grades.

<sup>2</sup> Soil profile from boring B-2 were used for this model. If additional parameters are required, the geotechnical engineer should be consulted.

<sup>3</sup> We recommend modeling groundwater at elevation 265 feet MSL at this site.

## 6.6 Rigid Retaining Walls

The recommendations that follow are presented for use in design and construction of "site" retaining walls (i.e. walls that are not structurally-connected to, or relied upon for vertical support of structural loads associated with, the planned building). Retaining walls that will be structurally-connected to the building should be supported similarly to that selected for the building in accordance with Section 6.5 of this report.

### 6.6.1 Footings

#### 6.6.1.1 Subgrade Preparation

Satisfactory subgrade support for retaining wall foundations can be obtained from the native, medium stiff to better elastic silt (MH), the native, medium dense to better silty sand (SM), or new structural fill that is properly placed and compacted on these materials during construction. These materials were first encountered at depths of about 5 feet bgs within our borings (B-1 and B-2) advanced in the vicinity of the building pad. The geotechnical engineer's representative should be contacted to observe subgrade conditions prior to placement of forms, reinforcement steel, or granular backfill (if required). If soft, loose, or otherwise unsuitable soils are encountered, they should be over-excavated as recommended by the geotechnical representative at the time of construction. The resulting over-excavation should be brought

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back to grade with imported granular structural fill in conformance with Section 6.4.2. The maximum particle size of over-excavation backfill should be limited to 1½ inches. All granular pads for footings should be constructed a minimum of 6 inches wider on each side of the footing for every vertical foot of over-excavation.

#### 6.6.1.2 Minimum Footing Width & Embedment

Minimum footing widths should be in conformance with the most recent, Oregon Structural Specialty Code (OSSC). We recommend continuous wall footings have a minimum width of 18 inches. All footings should be founded at least 18 inches below the lowest, permanent adjacent grade.

#### 6.6.1.3 Bearing Pressure & Settlement

Footings founded as recommended above should be proportioned for a maximum allowable soil bearing pressure of 2,000 pounds per square foot (psf). This bearing pressure is a net bearing pressure, applies to the total of dead and long-term live loads, and may be increased by one-third when considering seismic or wind loads. For foundations founded as recommended above and considering static loading only, total settlement of foundations is anticipated to be less than 1 inch.

#### 6.6.1.4 Lateral Capacity

A maximum passive (equivalent fluid) earth pressure of 150 pounds per cubic foot (pcf) is recommended for design of footings cast neat into excavations in suitable native soil or confined by imported granular structural fill that is properly placed and compacted during construction. The recommended earth pressure was computed using a factor of safety of 1½, which is appropriate due to the amount of movement required to develop full passive resistance. In order to develop the above capacity, the following should be understood:

1. Concrete must be poured neat in excavations or the foundations must be backfilled with imported granular structural fill,
2. The adjacent grade must be level,
3. The static ground water level must remain below the base of the footings throughout the year.
4. Adjacent floor slabs, pavements, or the upper 12-inch-depth of adjacent, unpaved areas should not be considered when calculating passive resistance.

An ultimate coefficient of friction equal to 0.35 may be used when calculating resistance to sliding for footings founded as described above. An ultimate coefficient of friction equal to 0.45 may be used when calculating resistance to sliding for footings founded on a minimum of 6 inches of imported granular structural fill (crushed rock) that is properly placed and compacted during construction.

#### 6.6.2 Wall Drains

We recommend placing retaining wall drains at the base elevation of the heel of retaining wall footings. Retaining wall drains should consist of a minimum 4-inch-diameter, perforated, HDPE (High Density Polyethylene) drainpipe wrapped with a non-woven geotextile filter fabric. The drains should be backfilled with a minimum of 2 cubic feet of open graded drain rock per lineal foot of pipe. The drain rock should be encased in a geotextile fabric in order to provide separation from the surrounding soils. Retaining wall drains should be positively sloped and should outlet to a suitable discharge point. The geotechnical engineer's representative should be contacted to observe the drains prior to backfilling. Roof or area drains should not be tied into retaining wall drains.

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### 6.6.3 Wall Backfill

Retaining walls should be backfilled with imported granular structural fill in conformance with Section 6.4.2 and contain less than 5 percent passing the U.S. Standard No. 200 Sieve. The backfill should be compacted to a minimum of 90 percent of the material's maximum dry density as determined in general accordance with ASTM D1557 (Modified Proctor). When placing fill behind walls, care must be taken to minimize undue lateral loads on the walls. Heavy compaction equipment should be kept at least "H" feet from the back of the walls, where "H" is the height of the wall. Light mechanical or hand tamping equipment should be used for compaction of backfill materials within "H" feet of the back of the walls.

### 6.6.4 Design Parameters & Limitations

For rigid retaining walls founded, backfilled, and drained as recommended above, the following table presents parameters recommended for design.

**Table 6 Design Parameters for Rigid Retaining Walls**

Retaining Wall Condition	Modeled Backfill Condition	Static Equivalent Fluid Pressure ( $S_A$ ) <sup>1</sup>	Seismic Equivalent Fluid Pressure ( $S_{AE}$ ) <sup>1,2</sup>	Surcharge from Uniform Load, $q$ , Acting on Backfill Behind Retaining Wall
Not Restrained from Rotation	Level ( $i=0$ )	28 pcf	38 pcf	$0.22*q$
Restrained from Rotation	Level ( $i=0$ )	50 pcf	52 pcf	$0.38*q$

<sup>1</sup> Refer to the attached Figure 4 for a graphical representation of static and seismic loading conditions. Seismic resultant force acts at  $0.6H$  above the base of the wall.

<sup>2</sup> Seismic (dynamic) lateral loads were computed using the Mononobe-Okabe Equation as presented in the 1997 Federal Highway Administration (FHWA) design manual. Static and seismic equivalent fluid pressures are not additive.

The above design recommendations are based on the assumptions that:

- The walls consist of concrete cantilevered retaining walls ( $\beta = 0$  and  $\delta = 24$  degrees, see Figure 4).
- The walls are 10 feet or less in height.
- The backfill is drained and consists of imported granular structural fill ( $\phi = 38$  degrees).
- No point, line, or strip load surcharges are imposed behind the walls.
- The grade behind the wall is level, or sloping down and away from the wall, for a distance of 15 feet or more from the wall.
- The grade in front of the walls is level or ascending for a distance of at least 5 feet from the wall.

Re-evaluation of our recommendations will be required if the retaining wall design criteria for the project vary from these assumptions.

### 6.6.5 Surcharge Loads

Where present, surcharges from adjacent site features (i.e. buildings, slabs, pavements, etc.) should be evaluated in design of retaining walls at the site. Methods for calculating lateral pressures on rigid retaining walls from strip, line, and vertical point loads are presented on the attached Figure 5.

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## 6.7 Floor Slabs

### 6.7.1 Subgrade Preparation

Satisfactory subgrade support for slabs constructed on grade, supporting up to 250 psf area loading, can be obtained from the native, medium stiff to better elastic silt (MH), the native, medium dense to better silty sand (SM), or new structural fill that is properly placed and compacted on these materials during construction. The geotechnical engineer's representative should be contacted to observe subgrade conditions prior to placement of structural fill or aggregate base. If soft, loose, or otherwise unsuitable soils are encountered, they should be over-excavated as recommended by the geotechnical representative at the time of construction. The resulting over-excavation should be brought back to grade with imported granular structural fill in conformance with Section 6.4.2.

### 6.7.2 Crushed Rock Base

Concrete floor slabs should be supported on a minimum 6-inch-thick layer of crushed rock (base rock). Floor slab base rock should consist of well-graded granular material (crushed rock) containing no organic matter or debris, have a maximum particle size of  $\frac{3}{4}$  inch, and have less than 5 percent material passing the U.S. Standard No. 200 Sieve. Floor slab base rock should be placed in one lift and compacted to not less than 95 percent of the material's maximum dry density as determined in general accordance with ASTM D1557 (Modified Proctor). We recommend "choking" the surface of the base rock with sand just prior to concrete placement. Choking means the voids between the largest aggregate particles are filled with sand, but does not provide a layer of sand above the base rock. Choking the base rock surface reduces the lateral restraint on the bottom of the concrete during curing. Choking the base rock also reduces punctures in vapor retarding membranes due to foot traffic where such membranes are used.

### 6.7.3 Design Considerations

For floor slabs constructed as recommended, an effective modulus of subgrade reaction of 150 pounds per cubic inch (pci) is recommended for the design of the floor slab. A higher effective modulus of subgrade reaction can be obtained by increasing the base rock thickness. Please contact the geotechnical engineer for additional recommendations if a higher modulus is desired. Floor slabs constructed as recommended will likely settle less than  $\frac{1}{2}$  inch. For general floor slab construction, slabs should be jointed around columns and walls to permit slabs and foundations to settle differentially.

### 6.7.4 Subgrade Moisture Considerations

Liquid moisture and moisture vapor should be expected at the subgrade surface. The recommended crushed rock base is anticipated to provide protection against liquid moisture. Where moisture vapor emission through the slab must be minimized, e.g. impervious floor coverings, storage of moisture sensitive materials directly on the slab surface, etc., a vapor retarding membrane or vapor barrier below the slab should be considered. Factors such as cost, special considerations for construction, floor coverings, and end use suggest that the decision regarding a vapor retarding membrane or vapor barrier be made by the architect and owner.

If a vapor retarder or vapor barrier is placed below the slab, its location should be based on current American Concrete Institute (ACI) guidelines, ACI 302 Guide for Concrete Floor and Slab Construction. In some cases, this indicates placement of concrete directly on the vapor retarder or barrier. Please note that the placement of concrete directly on impervious membranes increases the risk of plastic shrinkage cracking and slab

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curling in the concrete. Construction practices to reduce or eliminate such risk, as described in ACI 302, should be employed during concrete placement.

## 6.8 Pavements

### 6.8.1 Subgrade Preparation

Satisfactory subgrade support for pavements can be obtained from the native, medium stiff to better elastic silt (MH), the native, medium dense to better silty sand (SM), or new structural fill that is properly placed and compacted on these materials during construction. The geotechnical engineer's representative should be contacted to observe pavement subgrade conditions prior to placement of structural fill or aggregate base. If soft, loose, or otherwise unsuitable soils are encountered, they should be over-excavated as recommended by the geotechnical representative at the time of construction. The resulting over-excavation should be brought back to grade with imported granular structural fill in conformance with Section 6.4.2. Pavement subgrade surfaces should be crowned (or sloped) for proper drainage in accordance with specifications provided by the project civil engineer.

### 6.8.2 Traffic Classifications

Recognizing that traffic data has not been provided, CGT has considered four levels of traffic demand for review and design of pavement sections. We modeled the following four design cases (traffic levels) developed from the Asphalt Pavement Association of Oregon (APAO):

- *APAO Level I (Very Light)*: This design case considers typical average daily truck traffic (ADTT) of 1 per day over 20 years. Among others, examples under this loading consist of passenger car parking stalls, residential driveways, and seasonal recreational roads.
- *APAO Level II (Light)*: This design case considers typical ADTT of 2 to 7 per day over 20 years. Examples under this loading consist of residential streets and parking lots of less than 500 stalls.
- *APAO Level III (Low Moderate)*: This design case considers typical ADTT of 7 to 14 per day over 20 years. Among others, examples under this loading consist of urban minor collector streets and parking lots with more than 500 stalls.
- *APAO Level IV (Moderate)*: This design case considers typical ADTT of 14 to 35 per day over 20 years. Among others, examples under this loading consist of urban minor arterial streets and residential streets with bus routes.

We recommend the owner and design team review the traffic levels presented above and select those that most accurately represent anticipated daily truck traffic for select new pavements.

### 6.8.3 Asphalt Concrete Pavements

#### 6.8.3.1 *Input Parameters*

Design of the asphalt concrete (AC) pavement sections presented below were based on the parameters presented in the following table, the American Association of State Highway and Transportation Officials (AASHTO) 1993 "Design of Pavement Structures" manual, and pavement design manuals presented by APAO and ODOT<sup>14</sup>. If any of the items listed need revision, please contact us and we will reassess the provided design sections.

<sup>14</sup> Oregon Department of Transportation (ODOT) Pavement Design Guide, January 2019.



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**Table 7 Input Parameters Used in AC Pavement Design**

Input Parameter	Design Value <sup>1</sup>	Input Parameter	Design Value <sup>1</sup>
Pavement Design Life	20 years	Resilient Modulus	Subgrade (Native Silty Soils) <sup>4</sup> 5,000 psi
Annual Percent Growth	0 percent	Structural Coefficient <sup>2</sup>	Crushed Aggregate Base <sup>2</sup> 20,000 psi
Initial Serviceability <sup>2</sup>	4.2		Crushed Aggregate Base 0.10
Terminal Serviceability <sup>2</sup>	2.5		Asphalt 0.42
Reliability <sup>2</sup>	75 percent	Vehicle Traffic (range in ESAL <sup>5</sup> )	APAO Level I (Very Light) Less than 10,000
Standard Deviation <sup>2</sup>	0.49		APAO Level II (Light) Less than 50,000
Drainage Factor <sup>3</sup>	1.0		APAO Level III (Low Moderate) Less than 100,000
---	---		APAO Level IV (Moderate) Less than 250,000

<sup>1</sup> If any of the above parameters are incorrect, please contact us so that we may revise our recommendations, if warranted.  
<sup>2</sup> Value based on guidelines presented in the ODOT Pavement Design Guide.  
<sup>3</sup> Assumes good drainage away from pavement, base, and subgrade is achieved by proper crowning of subgrades.  
<sup>4</sup> Values based on experience with similar soils in the region.  
<sup>5</sup> ESAL = Total 18-Kip equivalent single axle load. Traffic levels taken from Table 3.1 of APAO manual. If actual traffic levels will be above those identified above, the geotechnical engineer should be consulted.

**6.8.3.2 Recommended Minimum Sections**

The following table presents the minimum AC pavement sections for various traffic loads indicated in the preceding table, based on the referenced AASHTO procedures.

**Table 5 Recommended Minimum AC Pavement Sections**

Material	APAO Traffic Loading			
	Level I	Level II	Level III	Level IV
Asphalt Pavement (inches)	3	3½	4	4½
Crushed Aggregate Base (inches) <sup>1</sup>	6	8	10	11
Subgrade Soils	Prepared in conformance with Section 6.8.1 of this report.			

<sup>1</sup> Thickness shown assumes dry weather construction. A granular sub-base section and/or a geotextile separation fabric may be required in wet conditions in order to support construction traffic and protect the subgrade. Refer to Section 6.3 for additional discussion.

**6.8.3.3 AC Pavement Materials**

**Aggregate Base:** We recommend pavement aggregate base consist of dense-graded aggregate in conformance with Section 02630.10 of the most recent ODOT SSC, with the following additional considerations. We recommend the material consist of crushed rock or gravel, have a maximum particle size of 1½ inches, and have less than 5 percent material passing the U.S. Standard No. 200 Sieve. Aggregate base should be compacted to not less than 95 percent of the material’s maximum dry density as determined in general accordance with ASTM D1557 (Modified Proctor).

**Asphalt Concrete:** We recommend asphalt pavement consist of Level 2, ½-inch, dense-graded AC in conformance with the most recent ODOT SSC. Asphalt pavement should be compacted to at least 91 percent of the material’s theoretical maximum density as determined in general accordance with ASTM D2041 (Rice Specific Gravity).

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#### 6.8.4 Rigid (Concrete) Pavements

##### 6.8.4.1 *Input Parameters*

Design of the rigid (Portland Cement Concrete, PCC) pavement sections presented below was based on the parameters presented in the following table and the referenced AASHTO design manual. If any of the items listed need revision, please contact us and we will reassess the provided design sections. Jointing, reinforcement, and surface finish should be performed in accordance with the project civil engineer, architect, and owner requirements.

**Table 6 Input Parameters Used in PCC Pavement Design**

Parameter / Discussion		Design Value
Subgrade Modulus (k-value)		150 pci
Standard Deviation <sup>1</sup>		0.39
Load Transfer Devices incorporated?		Yes; Load Transfer Coefficient = 3.2
Minimum Concrete Modulus of Rupture		600 psi
Concrete Elastic Modulus		5.0 x 10 <sup>6</sup> psi
Minimum Air-Entrained Concrete Compressive Strength		4,000 psi
Vehicle Traffic <sup>2</sup> (range in ESAL)	APAO Level I (Very Light)	Less than 10,000
	APAO Level II (Light)	Less than 50,000
	APAO Level III (Low Moderate)	Less than 100,000
	APAO Level IV (Moderate)	Less than 250,000

<sup>1</sup> Value based on guidelines presented in the ODOT Pavement Design Guide.  
<sup>2</sup> ESAL = Total 18-Kip equivalent single axle load. If actual traffic levels will be above those identified above, the geotechnical engineer should be consulted.

##### 6.8.4.2 *Recommended Minimum Sections*

The following table presents the recommended minimum concrete pavement sections based on the referenced AASHTO procedures.

**Table 7 Recommended Minimum PCC Pavement Sections**

Material	APAO Traffic Loading			
	Level I	Level II	Level III	Level IV
Portland Cement Concrete, PCC <sup>1</sup> (inches)	5	5½	6	7
All-Weather Base <sup>2,3</sup> (inches)	4	4	4	4
Subgrade Soils	Prepared in conformance with Section 6.8.1 of this report			

<sup>1</sup> Concrete strength and other properties should be in conformance with Table 6 above.

<sup>2</sup> All-weather base (base rock) should be a minimum of 4 inches thick.

<sup>3</sup> Thickness shown assumes dry weather construction. A granular sub-base section and/or a geotextile separation fabric may be required in wet conditions in order to support construction traffic and protect the subgrade. Refer to Section 6.3 for additional discussion.

##### 6.8.4.3 *PCC Pavement Materials*

**All-Weather Base:** We recommend all-weather base consist of dense-graded aggregate in conformance with Section 02630.10 of the most recent ODOT SSC, with the following additional considerations. We recommend the material consist have a maximum particle size of ¾-inch and have less than 5 percent material passing the U.S. Standard No. 200 Sieve. Aggregate base should be compacted to not less than 95

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percent of the material's maximum dry density as determined in general accordance with ASTM D1557 (Modified Proctor).

PCC Pavement: Portland cement concrete (PCC) pavement should be in conformance with Section 02001 of the most recent ODOT SSC and meet the properties detailed in Table 6 above.

## 6.9 Additional Considerations

### 6.9.1 Drainage

Subsurface drains should be connected to the nearest storm drain or other suitable discharge point. Paved surfaces and grading near or adjacent to the building should be sloped to drain away from the building. Surface water from paved surfaces and open spaces should be collected and routed to a suitable discharge point. Surface water should not be directed into foundation drains, retaining wall drains, or onto site slopes.

### 6.9.2 Expansive Potential

The near surface native soils consist mostly of moderate plasticity elastic silt soils. Based on our experience with similar soils in the vicinity of the site, these soils are not considered to be susceptible to appreciable movements from changes in moisture content. Accordingly, no special considerations are required to mitigate expansive potential of the near surface soils at the site.

## 7.0 RECOMMENDED ADDITIONAL SERVICES

### 7.1 Design Review

Geotechnical design review is of paramount importance. We recommend the geotechnical design review take place prior to releasing bid packets to contractors.

### 7.2 Observation of Construction

Satisfactory earthwork, foundation, floor slab, and pavement performance depends to a large degree on the quality of construction. Sufficient observation of the contractor's activities is a key part of determining that the work is completed in accordance with the construction drawings and specifications. Subsurface conditions observed during construction should be compared with those encountered during subsurface explorations, and recognition of changed conditions often requires experience. We recommend that qualified personnel visit the site with sufficient frequency to detect whether subsurface conditions change significantly from those observed to date and anticipated in this report. We recommend geotechnical engineer's representative attend a pre-construction meeting coordinated by the contractor and/or developer. The project geotechnical engineer's representative should provide observations and/or testing of at least the following earthwork elements during construction:

- Site Stripping and Grubbing
- Installation of Granular Piers (GPs)
- Subgrade Preparation for Shallow Foundations, Retaining Walls, Structural Fills, Floor Slabs, and Pavements
- Compaction of Structural Fill, Retaining Wall Backfill, and Utility Trench Backfill
- Compaction of Base Rock for Floor Slabs and Pavements
- Compaction of Asphalt Concrete for Pavements

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It is imperative that the owner and/or contractor request earthwork observations and testing at a frequency sufficient to allow the geotechnical engineer to provide a final letter of compliance for the earthwork activities.

## 8.0 LIMITATIONS

We have prepared this report for use by the owner/developer and other members of the design and construction team for the proposed development. The opinions and recommendations contained within this report are forwarded to assist in the planning and design process and are not intended to be, nor should they be construed as, a warranty of subsurface conditions.

We have made observations based on our explorations that indicate the soil conditions at only those specific locations and only to the depths penetrated. These observations do not necessarily reflect soil types, strata thickness, or water level variations that may exist between or away from our explorations. If subsurface conditions vary from those encountered in our site explorations, CGT should be alerted to the change in conditions so that we may provide additional geotechnical recommendations, if necessary. Observation by experienced geotechnical personnel should be considered an integral part of the construction process.

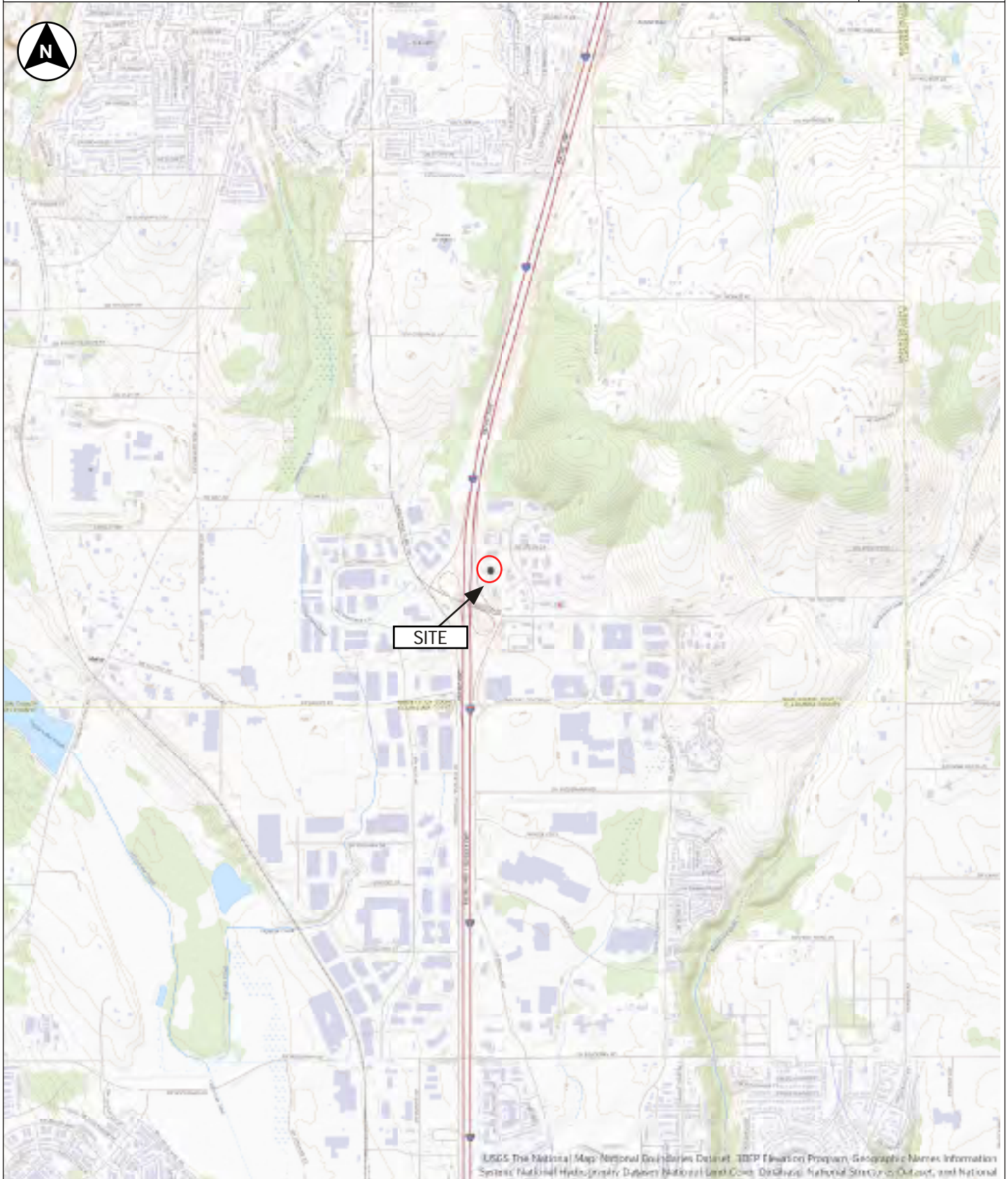
The owner/developer is responsible for ensuring that the project designers and contractors implement our recommendations. When the design has been finalized, prior to releasing bid packets to contractors, we recommend that the design drawings and specifications be reviewed by our firm to see that our recommendations have been interpreted and implemented as intended. If design changes are made, we request that we be retained to review our conclusions and recommendations and to provide a written modification or verification. Design review and construction phase testing and observation services are beyond the scope of our current assignment, but will be provided for an additional fee.

The scope of our services does not include services related to construction safety precautions, and our recommendations are not intended to direct the contractor's methods, techniques, sequences, or procedures, except as specifically described in our report for consideration in design.

Geotechnical engineering and the geologic sciences are characterized by a degree of uncertainty. Professional judgments presented in this report are based on our understanding of the proposed construction, familiarity with similar projects in the area, and on general experience. Within the limitations of scope, schedule, and budget, our services have been executed in accordance with the generally accepted practices in this area at the time this report was prepared; no warranty, expressed or implied, is made. This report is subject to review and should not be relied upon after a period of three years.

**RON TONKIN GRAN TURISMO LAMBORGHINI DEALERSHIP - WILSONVILLE, OREGON**  
**Project Number G2306033**

**FIGURE** Item 2.  
**Site Location**

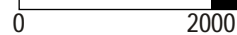


USGS Topographic base map created with The National Map, 2020, at <https://viewer.nationalmap.gov/advanced-viewer/>

Township 3 South, Range 1 West, Section 2, Willamette Meridian

Latitude: 45.337419° North  
Longitude: 122.767954° West

1 Inch = 2,000 feet




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FIGURE 2

Site Plan



LEGEND

B-1 (12')  Hollow-stem auger boring. Depth to groundwater shown in ().

 Orientation of site photographs shown on Figure 3

1 Inch = 60 Feet



NOTES: Drawing based on sheet A-101, "Site Plan", produced by Axis Design Group on 10/04/2023 and 2021 aerial imagery, provided by Wilsonville Maps, [www.wilsonvillemaps.com](http://www.wilsonvillemaps.com), accessed December 2, 2023. All locations are approximate



Drafted by: BG



Photograph 1



Photograph 2



Photograph 3



Photograph 4

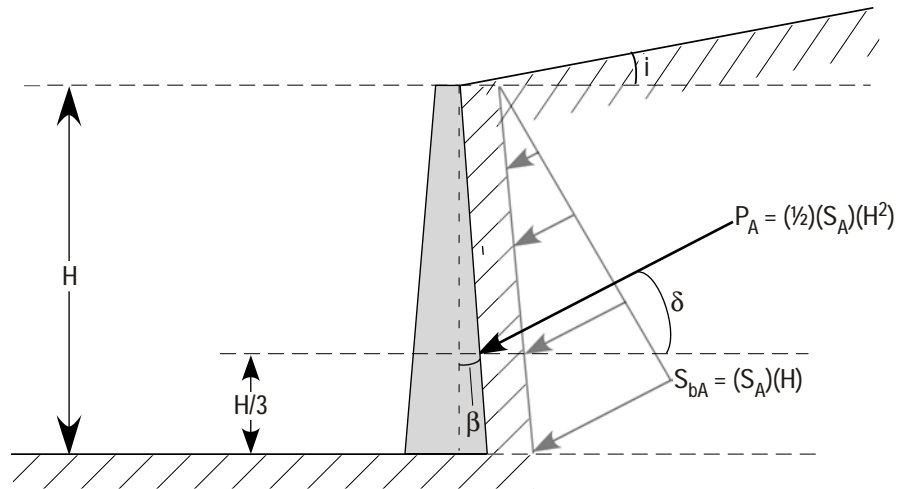


Drafted by: MDI

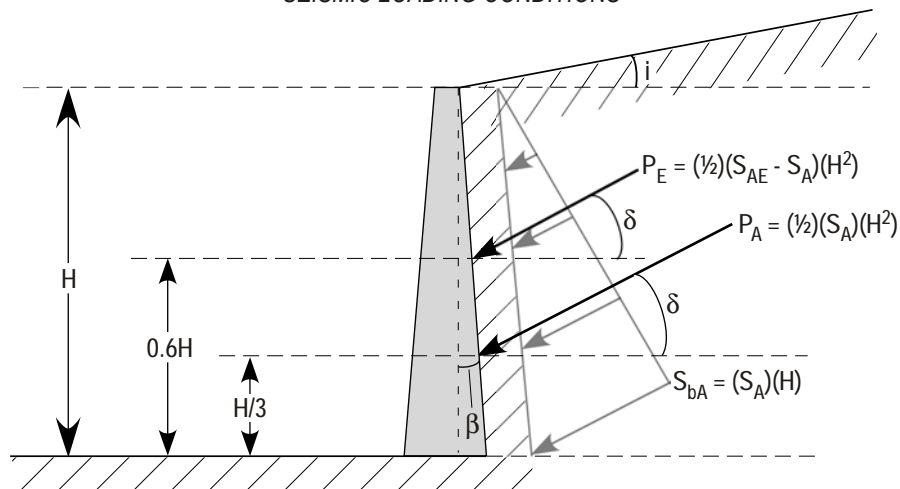
See Figure 2 for approximate photograph locations and directions. Photographs were taken at the time of our fieldwork.

ACTIVE LATERAL PRESSURE DISTRIBUTION

STATIC LOADING CONDITIONS



SEISMIC LOADING CONDITIONS



LEGEND

$S_A$  = Active lateral equivalent fluid pressure (lb/ft<sup>3</sup>)\*

$S_{bA}$  = Active lateral earth pressure (static) at the bottom of wall (lb/ft<sup>3</sup>)

$S_{AE}$  = Active total (static + seismic) equivalent fluid pressure (lb/ft<sup>3</sup>)\*

$i$  = Slope of backfill, relative to horizontal (degrees)\*\*

$\beta$  = Slope of back of wall, relative to vertical (degrees)\*\*

$P_A$  = Static active thrust force acting at  $H/3$  from bottom of retaining wall (lb/ft)

$P_E$  = Dynamic active thrust force acting at  $0.6H$  from bottom of retaining wall (lb/ft)

$\delta$  = Angle from normal of back of wall (degrees). Based on friction developing between wall and backfill\*\*

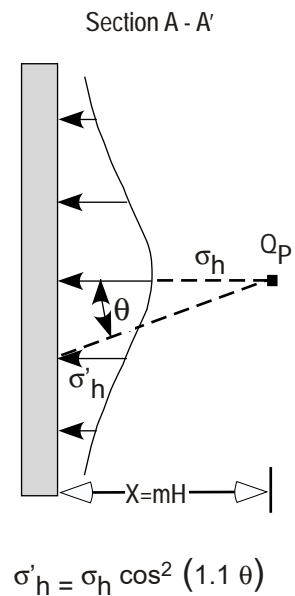
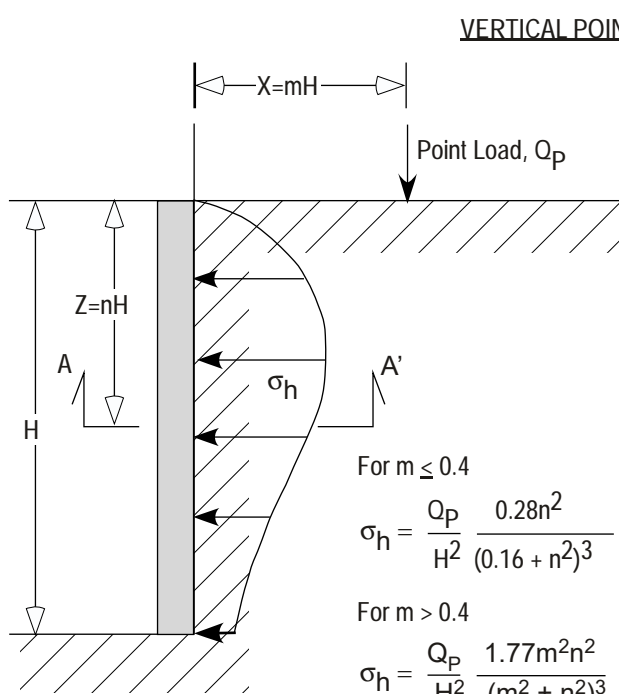
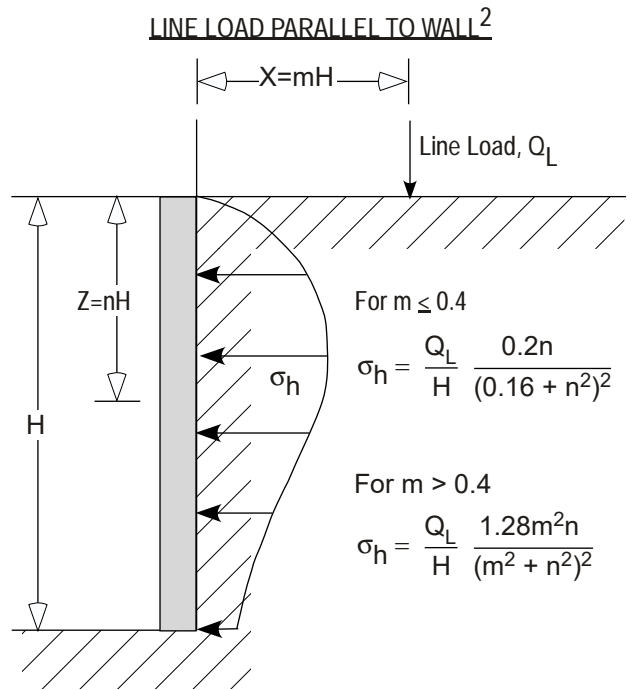
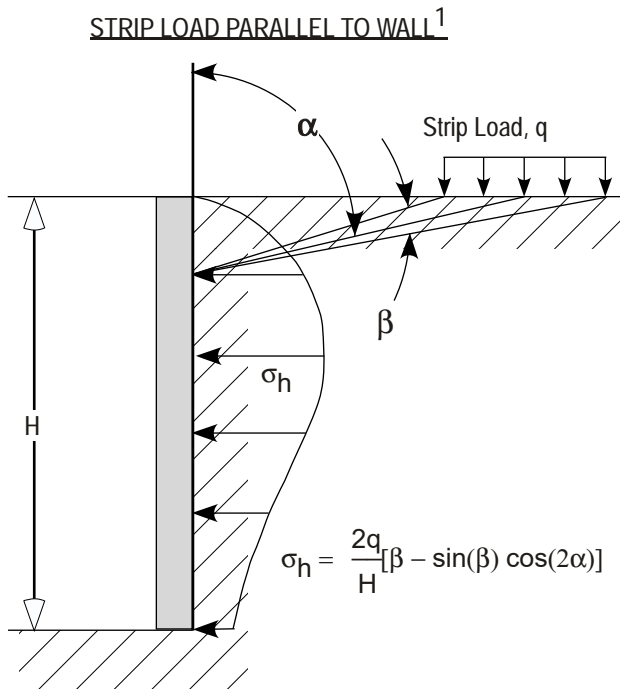
\*Refer to report text for calculated values    \*\*Refer to report text for modeled/assumed values



Notes

1. Uniform pressure distribution of seismic loading is based on empirical evaluations [Sherif et al, 1982 and Whitman, 1990].
2. Placement of seismic resultant force at  $0.6H$  is based on wall behavior and model test results [Whitman, 1990].





Notes: 1. Das, Principles of Geotechnical Engineering, 1990 Edition.  
 2. NAVFAC Design Manual 7.06.

Refer to the referenced design manuals for additional guidance. Contact CGT if there are any questions with modeling surcharge

# Carlson Geotechnical

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## Appendix A: Subsurface Investigation and Laboratory Testing

**Ron Tonkin Gran Turismo Lamborghini Dealership  
Lot South of 25195 SW Parkway Avenue  
Wilsonville, Oregon**

**CGT Project Number G2306033**

May 13, 2024

*Prepared For:*

Celia Tonkin  
Ron Tonkin Gran Turismo  
25300 SW Parkway Avenue  
Wilsonville, Oregon 97070

*Prepared by*  
**Carlson Geotechnical**

Exploration Key.....	Figure A1
Soil Classification.....	Figure A2
Drilled Boring Logs .....	Figures A3 – A7

## A.1.0 SUBSURFACE INVESTIGATION

Our field investigation consisted of five drilled borings completed on December 4, 2023. The exploration locations are shown on the Site Plan, attached to the geotechnical report as Figure 2. The exploration locations shown therein were determined based on measurements from existing site features (trees, pavements, etc.) and are approximate. Surface elevations indicated on the logs were estimated based on the topographic contours (by others) shown on the topographic survey provided by our client, and are approximate. The attached figures detail the exploration methods (Figure A1), soil classification criteria (Figure A2), and present detailed logs of the explorations (Figures A3 through A7), as discussed below.

### A.1.1 Drilled Borings

CGT observed the advancement of five drilled borings (B-1 through B-5) at the site using a B58 track-mounted drill rig provided and operated by our subcontractor, PLI Systems of Hillsboro, Oregon. The borings were advanced using the hollow-stem auger drilling technique to depths ranging from approximately 6½ to 26½ feet below ground surface (bgs). Upon completion, the borings were backfilled with granular bentonite. Drilling wastes (cuttings and drilling fluids) were left onsite.

### A.1.2 In-Situ Testing

#### A.1.2.1 Standard Penetration Tests (SPTs)

SPTs were conducted within the borings using a split-spoon sampler in general accordance with ASTM D1586. The SPTs were conducted at 2½- to 5-foot intervals to the termination depths of the borings. The SPT is described on the attached Exploration Key, Figure A1.

### A.1.3 Material Classification & Sampling

Soil samples were obtained at selected intervals in the borings using the referenced split-spoon (SPT) sampler and thin-walled, steel (Shelby) tube samplers detailed on Figure A1. A qualified member of CGT's geological staff collected the samples and logged the soils in general accordance with the Visual-Manual Procedure (ASTM D2488). An explanation of this classification system is attached as Figure A2. The SPT samples were stored in sealable plastic bags and the Shelby tube samples were sealed with caps and tape and transported to our soils laboratory for further examination and testing. Our geotechnical staff visually examined all samples in order to refine the initial field classifications.

### A.1.4 Subsurface Conditions

Subsurface conditions are summarized in Section 2.3 of the geotechnical report. Detailed logs of the explorations are presented on the attached exploration logs, Figures A3 through A7.

## A.2.0 LABORATORY TESTING

Laboratory testing was performed on samples collected in the field to refine our initial field classifications and determine in-situ parameters. Laboratory testing included the following:

- Twelve moisture content determinations (ASTM D2216).
- Three percentage passing the U.S. Standard No. 200 Sieve tests (ASTM D1140).
- Three Atterberg limits (plasticity) tests (ASTM D4318).

Results of the laboratory tests are shown on the exploration logs.



Atterberg limits (plasticity) test results (ASTM D4318): PL = Plastic Limit, LL = Liquid Limit, and MC= Moisture Content (ASTM D2216)

□ FINES CONTENT (%) Percentage passing the U.S. Standard No. 200 Sieve (ASTM D1140)

**SAMPLING**

 GRAB

Grab sample

 BULK

Bulk sample

 SPT

**Standard Penetration Test (SPT)** consists of driving a 2-inch, outside-diameter, split-spoon sampler into the undisturbed formation with repeated blows of a 140-pound, hammer falling a vertical distance of 30 inches (ASTM D1586). The number of blows (N-value) required to drive the sampler the last 12 inches of an 18-inch sample interval is used to characterize the soil consistency or relative density. The drill rig was equipped with an cat-head or automatic hammer to conduct the SPTs. The observed N-values, hammer efficiency, and  $N_{60}$  are noted on the boring logs.

 MC

**Modified California** sampling consists of 3-inch, outside-diameter, split-spoon sampler (ASTM G3550) driven similarly to the SPT sampling method described above. A sampler diameter correction factor of 0.44 is applied to calculate the equivalent SPT  $N_{60}$  value per Lacroix and Horn, 1973.

 CORE

**Rock Coring** interval

 SH

**Shelby Tube** is a 3-inch, inner-diameter, thin-walled, steel tube push sampler (ASTM D1587) used to collect relatively undisturbed samples of fine-grained soils.

WDCP

**Wildcat Dynamic Cone Penetrometer (WDCP)** test consists of driving 1.1-inch diameter, steel rods with a 1.4-inch diameter, cone tip into the ground using a 35-pound drop hammer with a 15-inch free-fall height. The number of blows required to drive the steel rods is recorded for each 10 centimeters (3.94 inches) of penetration. The blow count for each interval is then converted to the corresponding SPT  $N_{60}$  values.

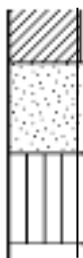
DCP

**Dynamic Cone Penetrometer (DCP)** test consists of driving a 20-millimeter diameter, hardened steel cone on 16-millimeter diameter steel rods into the ground using a 10-kilogram drop hammer with a 460-millimeter free-fall height. The depth of penetration in millimeters is recorded for each drop of the hammer.

POCKET PEN. (tsf)

**Pocket Penetrometer** test is a hand-held instrument that provides an approximation of the unconfined compressive strength in tons per square foot (tsf) of cohesive, fine-grained soils.

**CONTACTS**



Observed (measured) contact between soil or rock units.

Inferred (approximate) contact between soil or rock units.

Transitional (gradational) contact between soil or rock units.

**ADDITIONAL NOTATIONS**

*Italics*

Notes drilling action or digging effort

{ Braces }

Interpretation of material origin/geologic formation (e.g. { Base Rock } or { Columbia River Basalt })



*All measurements are approximate.*





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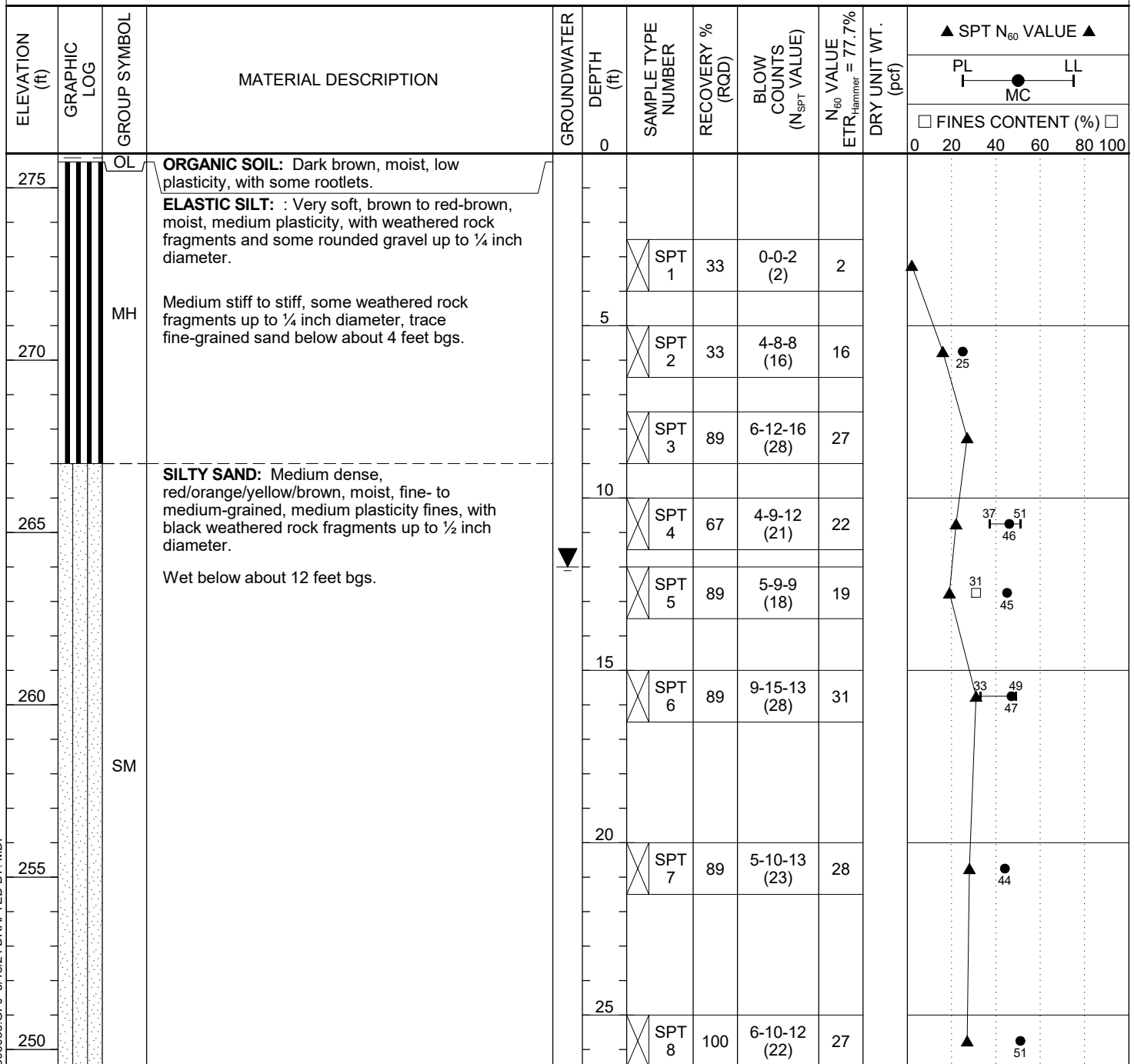
# FIGURE A3

Item 2.

## Boring B-1

PAGE 1 OF 1

<b>CLIENT</b> Celia Tonkin - Ron Tonkin Gran Turismo	<b>PROJECT NAME</b> Ron Tonkin Gran Turismo Lamborghini Dealership
<b>PROJECT NUMBER</b> G2306033	<b>PROJECT LOCATION</b> South of 25195 SW Parkway Ave. - Wilsonville, OR
<b>DATE STARTED</b> 12/4/23 <b>GROUND ELEVATION</b> 276 ft	<b>ELEVATION DATUM</b> From Survey Map Provided by Client
<b>WEATHER</b> Rain, 57F <b>SURFACE</b> Shrubs	<b>LOGGED BY</b> BJG <b>REVIEWED BY</b> BMW
<b>DRILLING CONTRACTOR</b> PLI Systems, Inc.	<b>SEEPAGE</b> ---
<b>EQUIPMENT</b> B58 Track Mounted Drill Rig	<b>GROUNDWATER DURING DRILLING</b> ---
<b>DRILLING METHOD</b> Hollow Stem 4¼-inch ID Auger	<b>GROUNDWATER 4 HOURS AFTER DRILLING</b> 12.0 ft / El. 264.0 ft



- Boring terminated at 26½ feet bgs.
- Groundwater observed at about 12 feet bgs.
- No caving observed.
- Boring backfilled with granular bentonite upon completion.

CGT BOREHOLE G2306033.GPJ 5/13/24 DRAFTED BY: MDI



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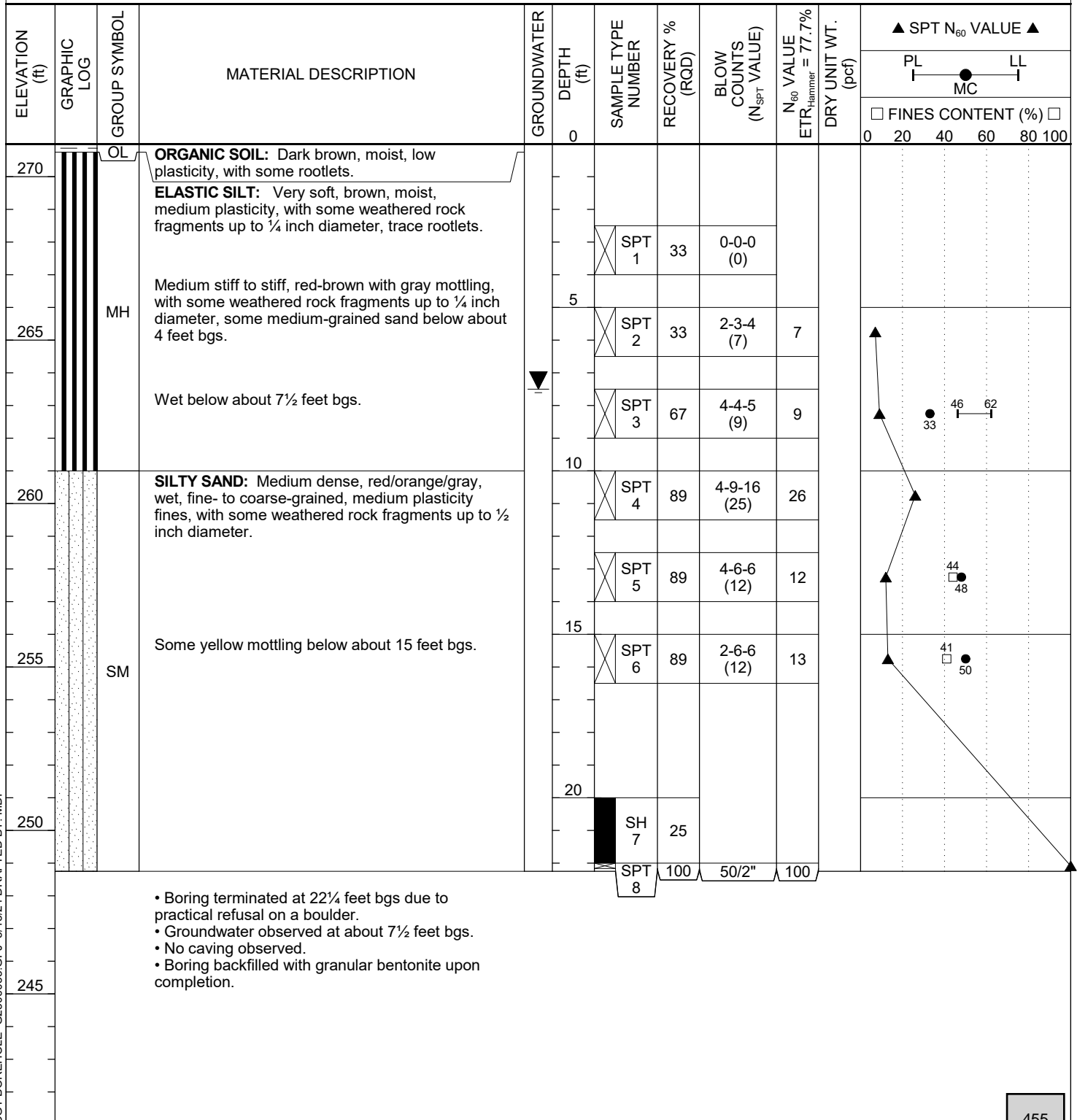
# FIGURE A4

Item 2.

## Boring B-2

PAGE 1 OF 1

<b>CLIENT</b> Celia Tonkin - Ron Tonkin Gran Turismo	<b>PROJECT NAME</b> Ron Tonkin Gran Turismo Lamborghini Dealership
<b>PROJECT NUMBER</b> G2306033	<b>PROJECT LOCATION</b> South of 25195 SW Parkway Ave. - Wilsonville, OR
<b>DATE STARTED</b> 12/4/23 <b>GROUND ELEVATION</b> 271 ft	<b>ELEVATION DATUM</b> From Survey Map Provided by Client
<b>WEATHER</b> Rain, 58F <b>SURFACE</b> Grass	<b>LOGGED BY</b> BJG <b>REVIEWED BY</b> BMW
<b>DRILLING CONTRACTOR</b> PLI Systems, Inc.	<b>SEEPAGE</b> ---
<b>EQUIPMENT</b> B58 Track Mounted Drill Rig	<b>GROUNDWATER DURING DRILLING</b> ---
<b>DRILLING METHOD</b> Hollow Stem 4¼-inch ID Auger	<b>GROUNDWATER 2 HOURS AFTER DRILLING</b> 7.5 ft / El. 263.5 ft



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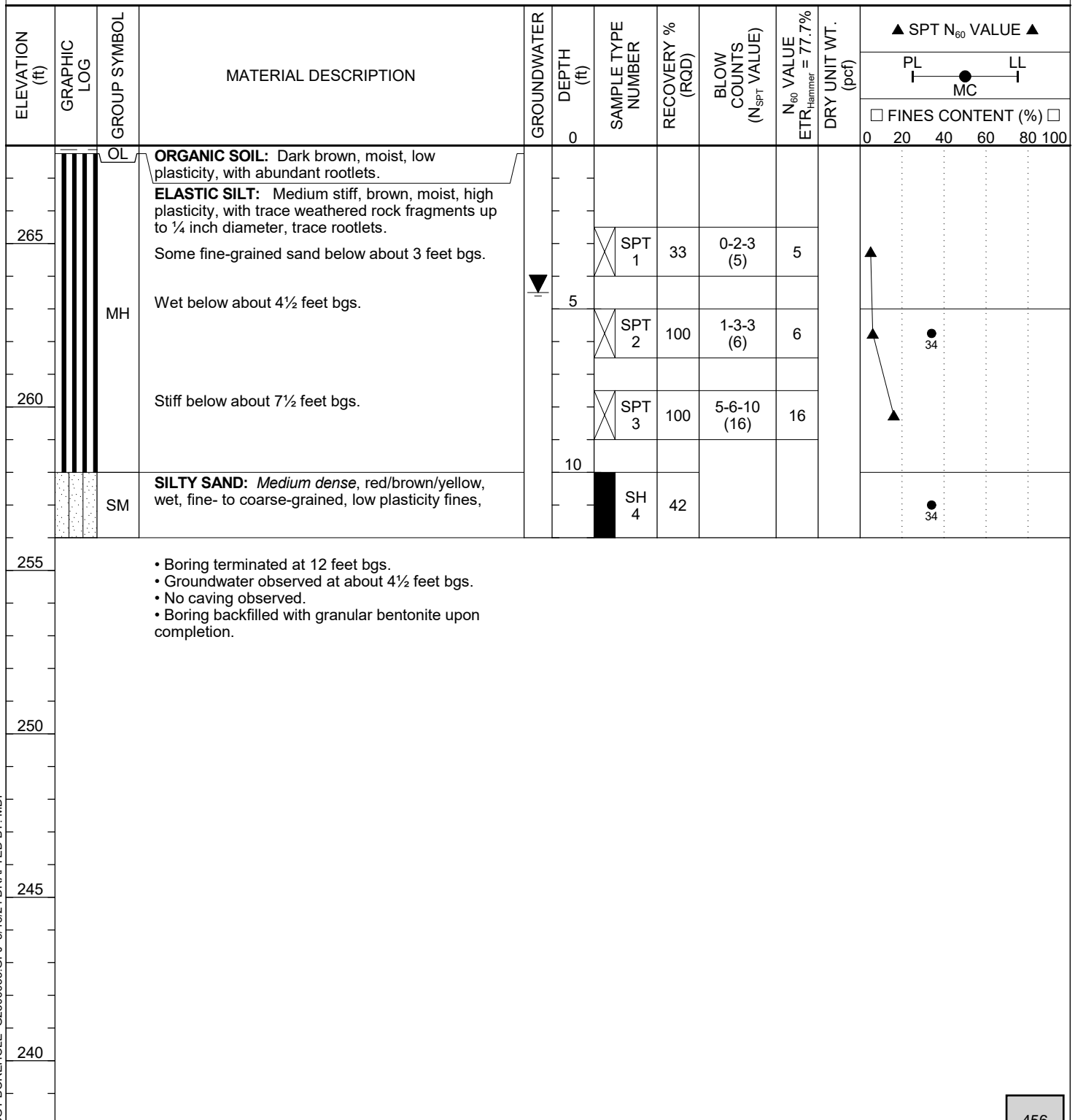
# FIGURE A5

Item 2.

## Boring B-3

PAGE 1 OF 1

<b>CLIENT</b> Celia Tonkin - Ron Tonkin Gran Turismo	<b>PROJECT NAME</b> Ron Tonkin Gran Turismo Lamborghini Dealership
<b>PROJECT NUMBER</b> G2306033	<b>PROJECT LOCATION</b> South of 25195 SW Parkway Ave. - Wilsonville, OR
<b>DATE STARTED</b> 12/4/23 <b>GROUND ELEVATION</b> 268 ft	<b>ELEVATION DATUM</b> From Survey Map Provided by Client
<b>WEATHER</b> Rain, 58F <b>SURFACE</b> Grass	<b>LOGGED BY</b> BJG <b>REVIEWED BY</b> BMW
<b>DRILLING CONTRACTOR</b> PLI Systems, Inc.	<b>SEEPAGE</b> ---
<b>EQUIPMENT</b> B58 Track Mounted Drill Rig	<b>GROUNDWATER DURING DRILLING</b> ---
<b>DRILLING METHOD</b> Hollow Stem 4¼-inch ID Auger	<b>GROUNDWATER 1 HOURS AFTER DRILLING</b> 4.5 ft / El. 263.5 ft



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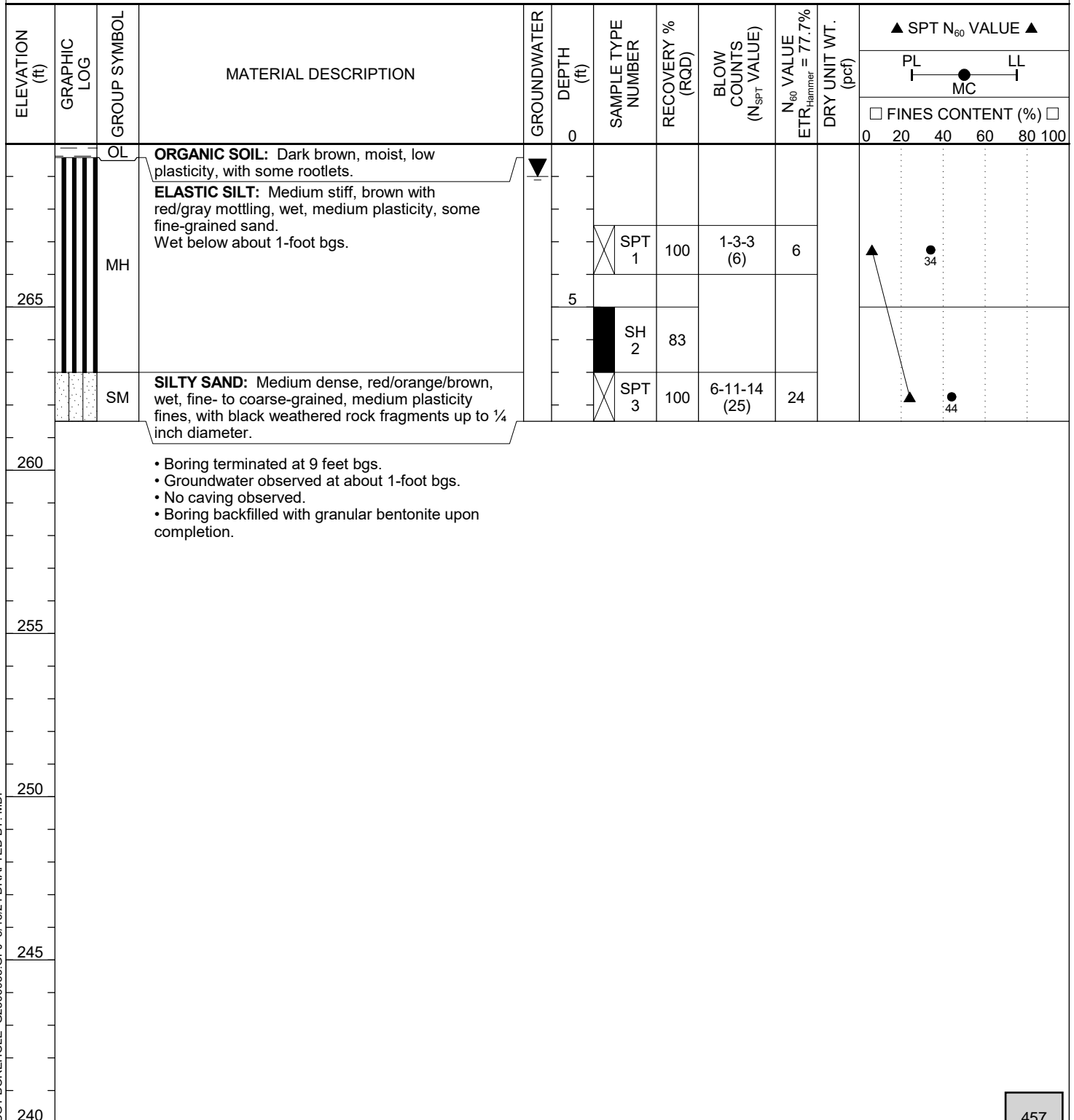
**FIGURE A6**

Item 2.

**Boring B-4**

PAGE 1 OF 1

<b>CLIENT</b> Celia Tonkin - Ron Tonkin Gran Turismo	<b>PROJECT NAME</b> Ron Tonkin Gran Turismo Lamborghini Dealership
<b>PROJECT NUMBER</b> G2306033	<b>PROJECT LOCATION</b> South of 25195 SW Parkway Ave. - Wilsonville, OR
<b>DATE STARTED</b> 12/4/23 <b>GROUND ELEVATION</b> 270 ft	<b>ELEVATION DATUM</b> From Survey Map Provided by Client
<b>WEATHER</b> Rain, 58F <b>SURFACE</b> Grass	<b>LOGGED BY</b> BJB <b>REVIEWED BY</b> BMW
<b>DRILLING CONTRACTOR</b> PLI Systems, Inc.	<b>SEEPAGE</b> ---
<b>EQUIPMENT</b> B58 Track Mounted Drill Rig	<b>GROUNDWATER DURING DRILLING</b> ---
<b>DRILLING METHOD</b> Hollow Stem 4¼-inch ID Auger	<b>GROUNDWATER .5 HOURS AFTER DRILLING</b> 1.0 ft / El. 269.0 ft



CGT BOREHOLE G2306033.GPJ 5/13/24 DRAFTED BY: MDI



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**FIGURE A7**

Item 2.

**Boring B-5**

PAGE 1 OF 1

**CLIENT** Celia Tonkin - Ron Tonkin Gran Turismo **PROJECT NAME** Ron Tonkin Gran Turismo Lamborghini Dealership  
**PROJECT NUMBER** G2306033 **PROJECT LOCATION** South of 25195 SW Parkway Ave. - Wilsonville, OR  
**DATE STARTED** 12/4/23 **GROUND ELEVATION** 269 ft **ELEVATION DATUM** From Survey Map Provided by Client  
**WEATHER** Rain, 58F **SURFACE** Grass **LOGGED BY** BJG **REVIEWED BY** BMW  
**DRILLING CONTRACTOR** PLI Systems, Inc. **SEEPAGE** ---  
**EQUIPMENT** B58 Track Mounted Drill Rig **GROUNDWATER DURING DRILLING** ---  
**DRILLING METHOD** Hollow Stem 4¼-inch ID Auger **GROUNDWATER .5 HOURS AFTER DRILLING** 1.0 ft / El. 268.0 ft

ELEVATION (ft)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION	GROUNDWATER	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N <sub>SPT</sub> VALUE)	N <sub>60</sub> VALUE ETR <sub>Hammer</sub> = 77.7%	DRY UNIT WT. (pcf)	▲ SPT N <sub>60</sub> VALUE ▲	
											PL	LL
											0	100
265		OL MH	<p><b>ORGANIC SOIL:</b> Dark brown, moist, low plasticity, with some rootlets.</p> <p><b>ELASTIC SILT:</b> Soft, brown with red/gray mottling, moist, medium plasticity, some fine-grained sand. Wet below about 1-foot bgs.</p> <p>Very stiff below about 5 feet bgs.</p>	▼	0	SPT 1	56	1-1-2 (3)	3		▲	● 29
260					5	SPT 2	56	9-10-12 (22)	21		▲	● 30
255												
250												
245												
240												

- Boring terminated at 6½ feet bgs.
- Groundwater observed at about 1-foot bgs.
- No caving observed.
- Boring backfilled with granular bentonite upon completion.

CGT BOREHOLE G2306033.GPJ 5/13/24 DRAFTED BY: MDI

# WILSONVILLE LAMBORGHINI TRAFFIC IMPACT ANALYSIS (TIA)

FEBRUARY 2024

**PREPARED FOR CITY OF  
WILSONVILLE**



Amy Pepper, PE

**PREPARED BY DKS  
ASSOCIATES**



Jenna Bogert, PE

Harrison Steiger



City of Wilsonville  
Exhibit B10 DB24-0006

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## INTRODUCTION

This study evaluates the transportation impacts associated with the proposed specialty automobile sales and service center building located on tax lot 3S-1-32DA-1000 on SW Parkway Avenue in Wilsonville, Oregon.

The property is an approximately 2.56-acre empty plot of land on the west side of SW Parkway Ave between SW Sun Place and SW Salish Lane.

The proposed development will consist of approximately 37,500 square feet of automobile sales and service space. The proposed site access will be located on SW Parkway Ave.

The purpose of this transportation study is to conduct a traffic impact analysis (TIA), which will identify any potential mitigation measures that might be needed to offset transportation impacts that the proposed development may have on the nearby transportation network in the near-term.

## TRAFFIC IMPACT ANALYSIS (TIA)

The traffic impact analysis is focused on three existing intersections which were selected for evaluation in coordination with City staff. The intersections are listed below and shown in Figure 1. Important characteristics of the study area and proposed project are listed in Table 1.

1. Interstate-5 Southbound Ramps/SW Elligsen Road
2. Interstate-5 Northbound Ramps/SW Elligsen Road
3. SW Elligsen Road/SW Parkway Avenue

**TABLE 1: STUDY AREA & DEVELOPMENT CHARACTERISTICS**

<b>STUDY AREA</b>	
<b>NUMBER OF STUDY INTERSECTIONS</b>	Three intersections
<b>ANALYSIS PERIODS</b>	Weekday PM peak hour (one hour between 4pm – 6pm)
<b>PROPOSED DEVELOPMENT</b>	
<b>EXISTING LAND USE</b>	Vacant
<b>PROPOSED LAND USE</b>	Specialty automobile sales and service center
<b>PROJECT TRIPS</b>	89 PM peak hour trips (36 in, 53 out)

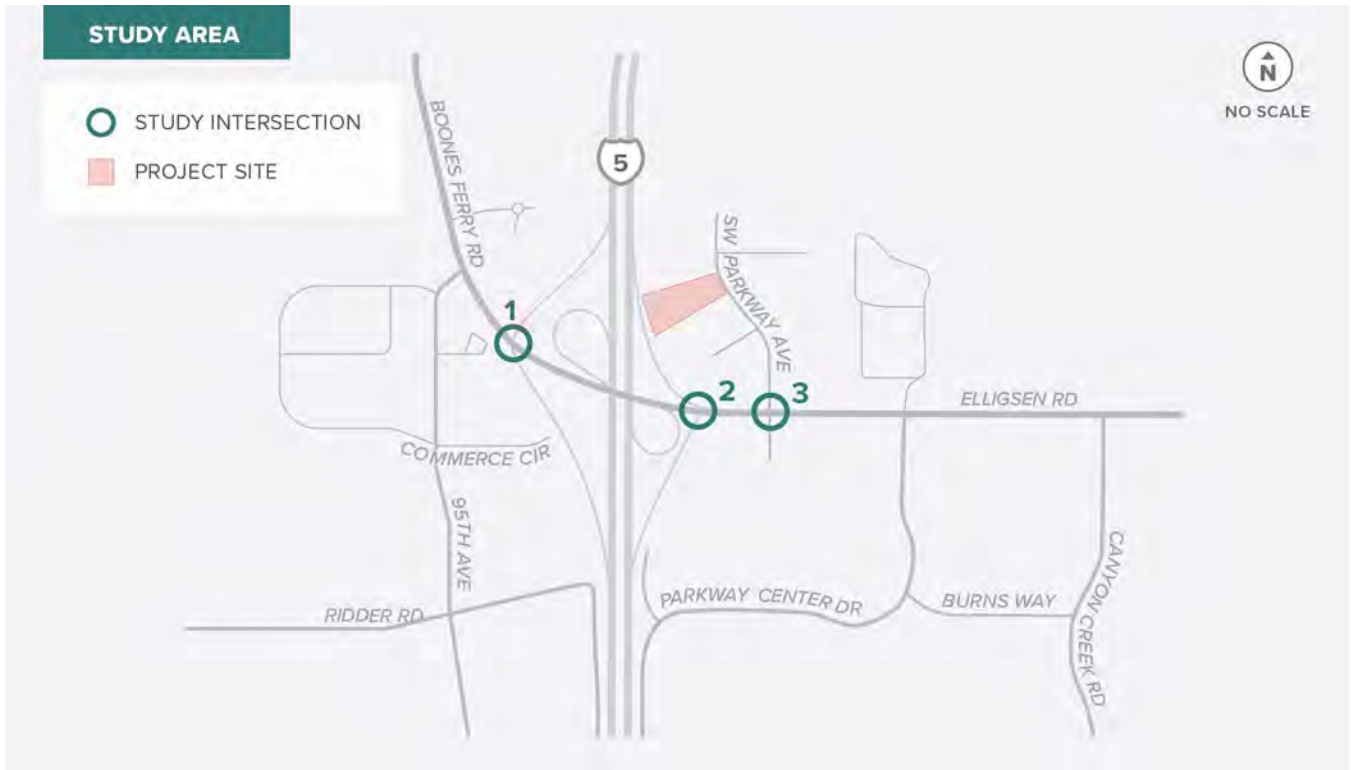


FIGURE 1: STUDY AREA

## EXISTING CONDITIONS

This chapter provides documentation of existing study area conditions, including the study area roadway network, pedestrian and bicycle facilities, and existing traffic volumes and operations.

### STUDY AREA ROADWAY NETWORK

Key roadways and their existing characteristics in the study area are summarized in Table 2. The functional classifications for City of Wilsonville streets are provided in the City of Wilsonville Transportation System Plan (TSP).<sup>1</sup>

<sup>1</sup> Chapter 3: The Standards, Wilsonville Transportation System Plan, City of Wilsonville, Amended November 2020.

**TABLE 2: STUDY AREA ROADWAY CHARACTERISTICS**

ROADWAY	FUNCTIONAL CLASS	OWNER	LANES	POSTED SPEED	SIDE-WALKS	BICYCLE FACILITIES	ON-STREET PARKING
<b>ELLIGSEN ROAD</b>	Minor Arterial	City of Wilsonville <sup>a</sup>	4 <sup>b</sup>	35 mph	Partial <sup>c</sup>	Partial <sup>c</sup>	No
<b>INTERSTATE 5</b>	Urban Interstate	ODOT	6/8 <sup>d</sup>	65 mph	No	No	No
<b>PARKWAY AVENUE</b>	Collector	City of Wilsonville	2	25 mph	Yes <sup>e</sup>	No	Partial <sup>f</sup>

<sup>a</sup> Elligsen Road is under ODOT jurisdiction near the I-5 interchange.

<sup>b</sup> Elligsen Road is primarily 4 travel lanes, with some additional lanes present near Parkway Avenue.

<sup>c</sup> On Elligsen Road, sidewalks and bicycle lanes are generally present. There are no bike lanes present on the segment from the NB ramps to the SB ramps.

<sup>d</sup> Interstate 5 has 6 travel lanes south of the Elligsen Road interchange and 8 travel lanes north of the Elligsen Road interchange.

<sup>e</sup> Parkway Avenue has sidewalks everywhere except for a section on the east side of the road. Sidewalk is present fronting the project site.

<sup>f</sup> Unmarked on-street parking is allowed on Parkway Avenue for most of the roadway.

### **Bicycle and Pedestrian Facilities**

Near the project site, there are no bike lanes on SW Parkway Ave, however there are on-street bike lanes on Elligsen Rd west of SW Elligsen Rd.

Sidewalks are mostly present along both sides of SW Parkway Ave. The only segment that is missing sidewalk is directly across from the development on the east side of SW Parkway Ave.

### **Public Transit Service**

South Metro Area Regional Transit (SMART) provides public transportation services within Wilsonville and outlying areas, including Canby, Salem, and south Portland. There are two bus stops located approximately 400 feet east of the SW Elligsen Rd / SW Parkway Ave intersection.

There are two bus stops located at the intersection of SW Parkway Center Drive/SW Burns Way, approximately 0.5 miles away. These bus stops are served by Route 2X (Tualatin Park & Ride) which provides service between the Wilsonville Transit Center and Tualatin Park & Ride with approximately 30-minute headways.

## PLANNED PROJECTS

The City of Wilsonville Transportation System Plan (TSP) has a list of planned projects which includes the recommended projects reasonably expected to be funded through 2035. These are the solutions to meet the City's most important needs. The list includes the following projects that impact the key roadways near the proposed project site.

- UU-P3 A/B (Elligsen Road Urban Upgrade) – Upgrade Elligsen Road from Parkway Center Drive to Stafford Road to meet applicable cross-section standards including bike lanes, sidewalks, and transit improvements.
- SI-07 (Dual Southbound Right Turn Lanes) (High Priority) – Add a second southbound right turn lane to the I-5 Exit Ramp at the Boones Ferry Road intersection. Also, a Washington County RTP project (#11489).

## EXISTING TRAFFIC VOLUMES

Intersection turning movement count data was collected during the weekday PM peak period (4:00pm – 6:00pm) on Tuesday, April 4<sup>th</sup>, 2023, at the study intersections. Because two of the study intersections are under ODOT authority, a seasonal adjustment factor was calculated and applied to those two intersections so that the 30<sup>th</sup> Highest Hour volumes were used in the analysis. Yearly volume data from Automatic Traffic Recorders (ATRs) 34-008 (on I-5 at MP 290.14) and ATR 03-011 (on I-5 at MP 281.20) were averaged together since both are within proximity to the project area. The resulting seasonal adjustment factor that was applied was 1.05.

Figure 2 shows the adjusted Existing PM peak hour traffic volumes for the study intersections, along with the lane configurations and traffic control.

## INTERSECTION PERFORMANCE MEASURES

Agency mobility standards often require intersections to meet level of service (LOS) or volume-to-capacity (v/c) intersection operation thresholds.

- The intersection LOS is similar to a “report card” rating based upon average vehicle delay. Level of service A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hour travel demand. Level of service D and E are progressively worse operating conditions. Level of service F represents conditions where average vehicle delay has become excessive and demand has exceeded capacity. This condition is typically evident in long queues and delays.
- The volume-to-capacity (v/c) ratio represents the level of saturation of the intersection or individual movement. It is determined by dividing the peak hour traffic volume by the maximum hourly capacity of an intersection or turn movement. When the V/C ratio approaches 0.95, operations become unstable and small disruptions can cause the traffic flow to break down, resulting in the formation of excessive queues.

The City of Wilsonville requires study intersections on public streets to meet its minimum acceptable level of service (LOS) standard of LOS D for the PM peak period. As may be approved



by the City Council, possible exceptions to the LOS D standard are a change to LOS E on Elligsen Road.<sup>2</sup>

The two intersections of the Interstate-5/Elligsen Road interchange are required to meet ODOT mobility targets, which are identified in the METRO Regional Transportation Plan (2018) and the Oregon Highway Plan (1999). For the I-5 corridor between the Marquam Bridge and Wilsonville, the PM peak hour target for the first and second hour is a v/c ratio equal to or less than 0.99.<sup>3</sup>

---

<sup>2</sup> Chapter 2: The Vision, Policy 5, Wilsonville Transportation System Plan, City of Wilsonville, Amended November 2020.

<sup>3</sup> Table 2.4, Regional Transportation Plan, Metro, December 2018.

Table 7, Oregon Highway Plan, Oregon Department of Transportation, 1999.

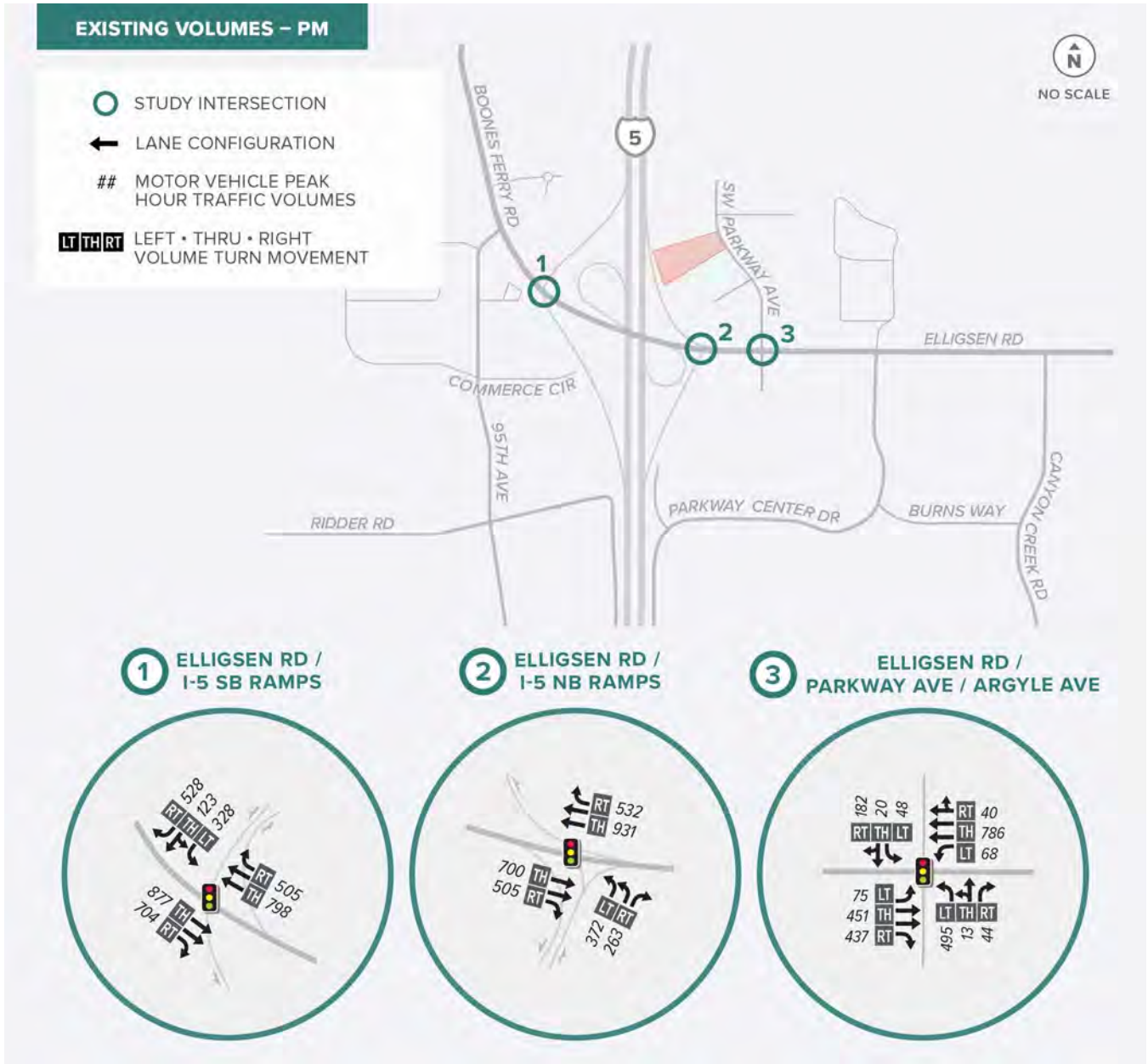


FIGURE 2: EXISTING PM PEAK HOUR TRAFFIC VOLUMES

**EXISTING INTERSECTION OPERATIONS**

Intersection operations were analyzed for the PM peak hour at all study intersections for the existing conditions using Highway Capacity Manual (HCM) 6th Edition methodology.<sup>4</sup> The volume to capacity (v/c) ratio, delay, and level of service (LOS) of each study intersection are listed in Table 3.

As shown, all study intersections meet the applicable operating standards under all future analysis scenarios.

**TABLE 3: EXISTING (2023) INTERSECTION OPERATIONS (PM PEAK)**

INTERSECTION	OPERATING STANDARD	EXISTING PM PEAK HOUR		
		V/C	DELAY	LOS
<b>SIGNALIZED</b>				
I-5 SB RAMPS/ELDIGSEN RD	v/c ≤ 0.99 (ODOT)	0.46	13.2	B
I-5 NB RAMPS/ELDIGSEN RD	v/c ≤ 0.99 (ODOT)	0.41	8.8	A
PARKWAY AVE/ELDIGSEN RD	LOS D (City)	0.50	21.1	C
<b>SIGNALIZED INTERSECTION:</b> Delay = Average Intersection Delay (secs) v/c = Total Volume-to-Capacity Ratio LOS = Total Level of Service		<b>TWO-WAY STOP-CONTROLLED INTERSECTION:</b> Delay = Critical Movement Delay (secs) v/c = Critical Movement Volume-to-Capacity Ratio LOS = Critical Levels of Service (Major/Minor Road)		

**PROJECT IMPACTS**

This chapter reviews the impacts that the proposed development may have on the transportation system within the study area. This analysis includes trip generation, trip distribution, future traffic volume development, and operations analysis for the study intersections.

**PROPOSED DEVELOPMENT**

The proposed development is a new three-story Lamborghini sales and service center approximately 37,500 square-feet on previously undeveloped land located on SW Parkway Ave in Wilsonville, Oregon. The existing development site contains wetlands. Proposed development occurs outside the wetlands, but portions occur within the Significant Resource Overlay Zone (SROZ).

<sup>4</sup> Highway Capacity Manual, 6th Edition, Transportation Research Board, 2017.

## FUTURE ANALYSIS SCENARIOS

Operating conditions were analyzed at the study intersections for the following traffic scenarios. The comparison of the following scenarios enables the assessment of project impacts:

- Existing + Project
- Existing + Stage II
- Existing + Project + Stage II

All future analysis scenarios assume the same traffic control as existing conditions. Stage II represents traffic from other developments that have Stage II approval or are under construction in Wilsonville, which are based on the list of currently approved Stage II developments provided by City staff.<sup>5</sup>

## TRIP GENERATION

Trip generation is the method used to estimate the number of vehicles added to site driveways and the adjacent roadway network by a development during a specified period (e.g., PM peak hour). The Institute of Transportation Engineers (ITE) publishes trip generation rates for the various land uses that can be applied to determine estimated traffic volumes.<sup>6</sup>

Shown in Table 4 is the ITE trip generation rate for Automobile Sales (New) (150). New Automobile Sales is described by ITE as a commercial development where the primary business is the sale or leasing of new cars, but also may include automobile servicing. This land use is expected to generate 89 total (36 in, 53 out) PM peak hour trips.

**TABLE 4: VEHICLE TRIP GENERATION RATES**

DATA SOURCE	SIZE <sup>a</sup>	PM PEAK HOUR TRIP GENERATION RATE	PM PEAK HOUR VEHICLE TRIPS			AVERAGE WEEKDAY TRIPS
			IN	OUT	TOTAL	
<b>AUTOMOBILE SALES (NEW) (ITE CODE 840)</b>	37.5 KSF	2.37 Trips per KSF	36	53	89	1,045

<sup>a</sup> KSF = 1,000 square feet

<sup>5</sup> Provided via email from Daniel Pauly, City of Wilsonville, January 17, 2024

<sup>6</sup> Trip Generation Manual, 11th Edition, Institute of Transportation Engineers, 2021.

## VEHICLE TRIP DISTRIBUTION

Vehicle trip distribution provides an estimation of where vehicles would be coming from and going to. It is given as a percentage at key gateways to the study area and is used to route project trips through the study intersections. Figure 3 shows the trip distribution for the proposed site. The trip distribution for the passenger car trips was based on the Wilsonville Travel Demand Model and adjusted based on existing traffic patterns.<sup>7</sup>

- 30% north of the project site via I-5
- 25% south of the project site via I-5
- 20% west of the project site via Elligsen Rd / SW Boones Ferry Rd
- 15% east of the project site via Elligsen Road
- 5% just south of the project site to/from Argyle Square Shopping Center
- 5% southeast of the project site via Canyon Creek Rd

### Project Trips Through City of Wilsonville I-5 Interchange Areas

The project trips through the two City of Wilsonville I-5 interchange areas were estimated based on the trip generation and distribution assumptions as discussed prior. Approximately 75% of the project trips (67 PM peak hour trips) are expected to travel through the I-5 / SW Elligsen Rd interchange and 0% of the project trips are expected to travel through the I-5 / Wilsonville Rd interchange area.

## FUTURE TRAFFIC VOLUMES

Traffic volumes were estimated at the study intersections for the three future analysis scenarios previously listed using the various combinations of the three traffic types: Existing, Project, and Stage II. Figure 4 shows the Existing + Project, Existing + Stage II, and Existing + Stage II + Project PM peak hour traffic volumes.

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<sup>7</sup> 2040 Wilsonville Travel Demand Model, Select Zone Analysis, TAZ 4137.

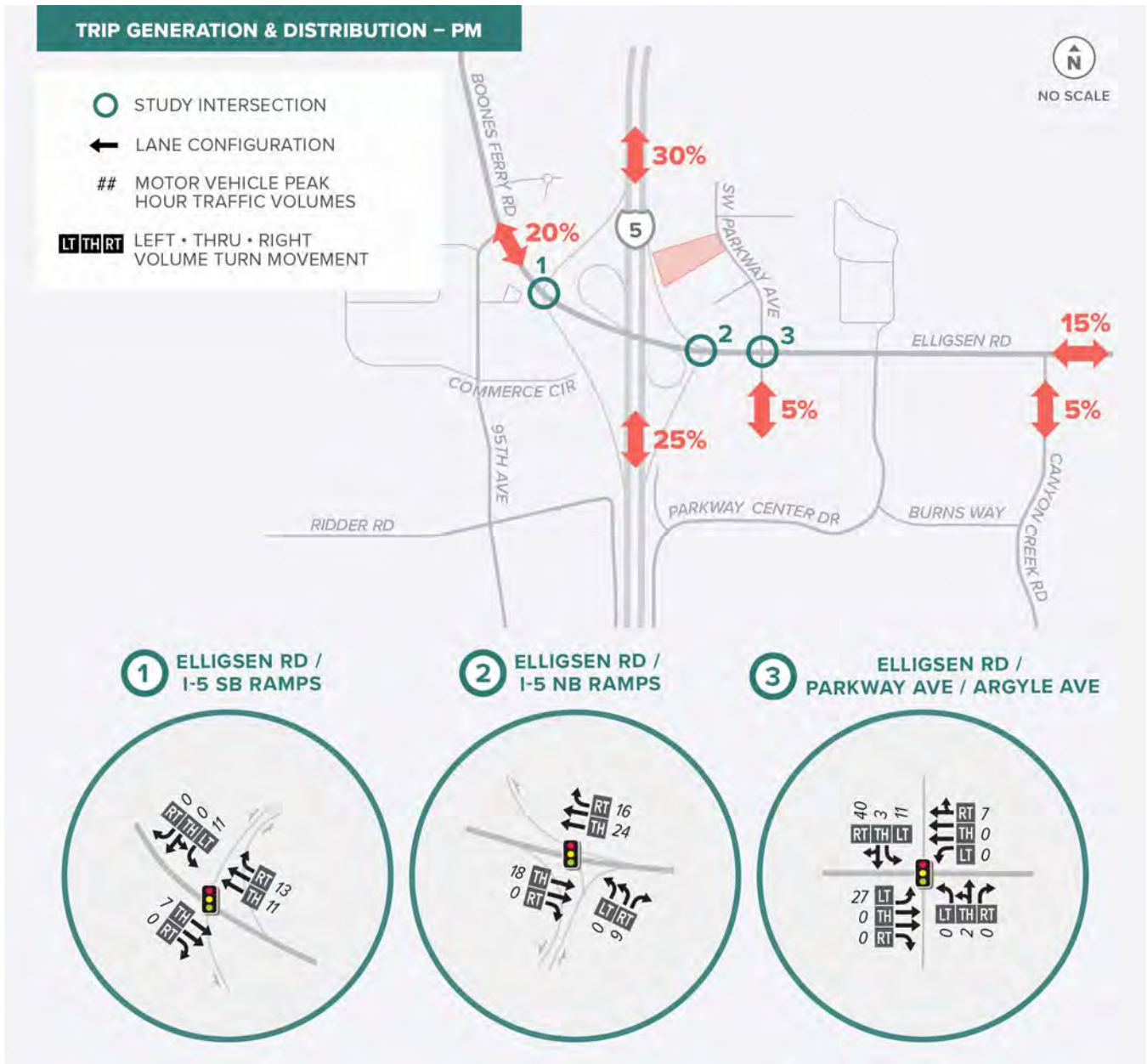


FIGURE 3: PROJECT TRIPS & TRIP DISTRIBUTION

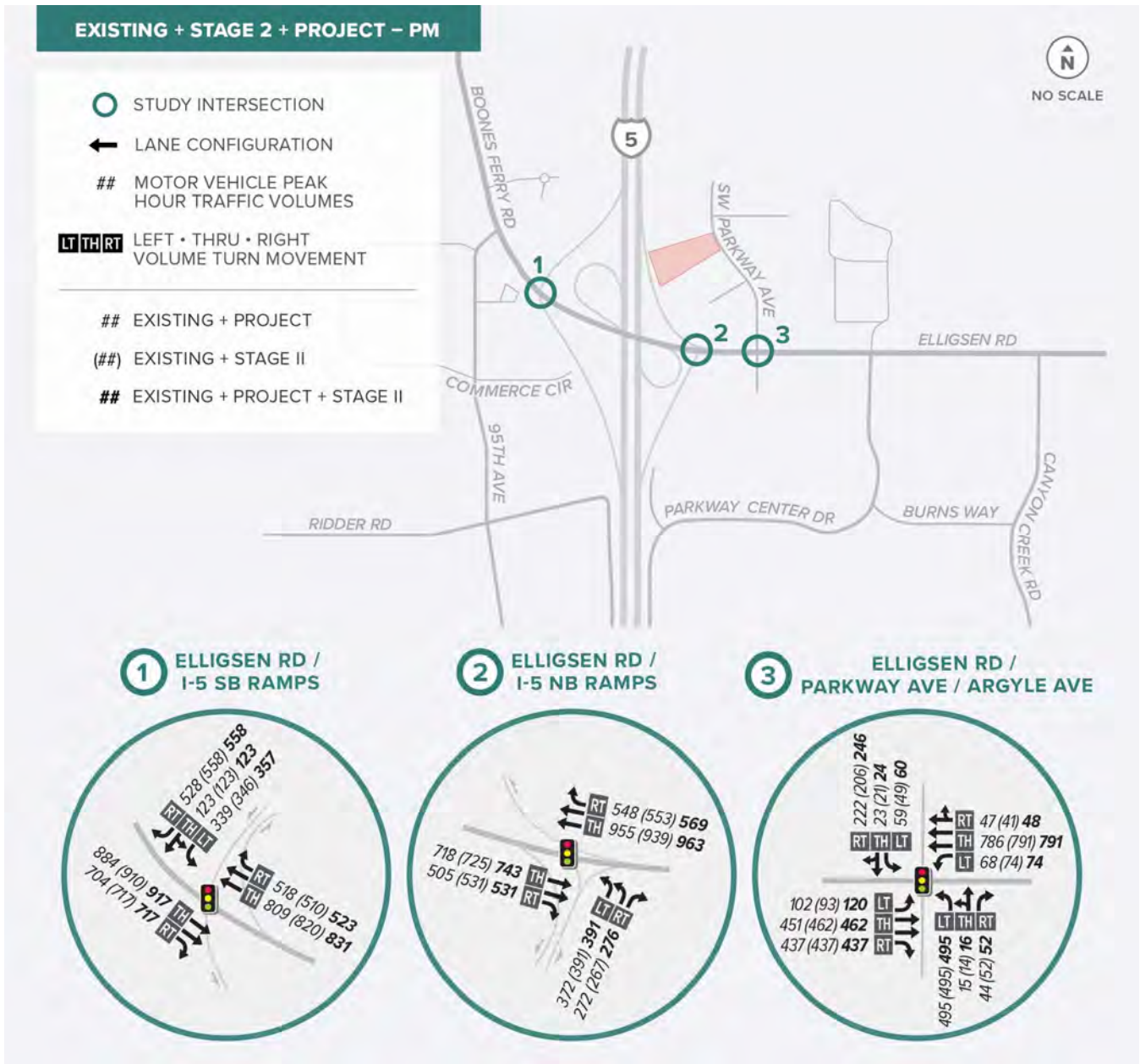


FIGURE 4: ALL FUTURE SCENARIO PM PEAK HOUR TRAFFIC VOLUMES

### FUTURE INTERSECTION OPERATIONS

Intersection operations were analyzed for the PM peak hour at all study intersections for the future scenarios using Highway Capacity Manual (HCM) 6th Edition methodology.<sup>8</sup> The volume to capacity (v/c) ratio, delay, and level of service (LOS) of each study intersection are listed in **Error! Reference source not found..**

As shown, all study intersections meet the applicable operating standards under all future analysis scenarios.

**TABLE 5: FUTURE INTERSECTION OPERATIONS (PM PEAK)**

INTERSECTION	OPERATING STANDARD	EXISTING + PROJECT			EXISTING + STAGE II			EXISTING + STAGE II + PROJECT		
		V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS
<b>SIGNALIZED</b>										
<b>I-5 SB RAMPS/ELLIGSEN RD</b>	v/c ≤ 0.99 (ODOT)	0.47	14.6	B	0.51	15.5	B	0.52	15.9	B
<b>I-5 NB RAMPS/ELLIGSEN RD</b>	v/c ≤ 0.99 (ODOT)	0.42	8.6	A	0.42	8.9	A	0.43	8.7	A
<b>PARKWAY AVE/ELLIGSEN RD</b>	LOS D (City)	0.51	22.6	C	0.50	21.8	C	0.54	23.9	C
<b>SIGNALIZED INTERSECTION:</b> Delay = Average Intersection Delay (secs) v/c = Total Volume-to-Capacity Ratio LOS = Total Level of Service		<b>TWO-WAY STOP-CONTROLLED INTERSECTION:</b> Delay = Critical Movement Delay (secs) v/c = Critical Movement Volume-to-Capacity Ratio LOS = Critical Levels of Service (Major/Minor Road)								

<sup>8</sup> Highway Capacity Manual, 6th Edition, Transportation Research Board, 2017.



## SITE PLAN REVIEW

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This section reviews the project site plan for consistency with the Wilsonville Transportation System Plan and other applicable transportation standards, including the Wilsonville Development Code and Wilsonville Public Works Standards. The purpose of this review is to help identify any major site plan design concerns that could impact the greater project goals and could necessitate overall site plan changes. The site plan is provided in the appendix.<sup>9</sup>

### VEHICULAR SITE ACCESS & ACCESS SPACING

There is one proposed site access (driveway) for the project. This is a new driveway that will be constructed on SW Parkway Ave.

The access point is required to meet the City's access spacing standards for collectors.<sup>10</sup> The access spacing for collectors is to be a minimum of 100 feet between adjacent curb returns, but the desired spacing is 300 feet. The proposed site access is less than 100 feet and does not meet the City's standard. However, the proposed driveway location is placed such that it has the least impact on the SROZ and has been approved by City staff.

### DRIVEWAY AISLE LENGTH

The City has minimum driveway aisle length standards.<sup>11</sup> For driveways with more than 100 average daily traffic (ADT), the drive aisle must be clear of parking stalls and intersecting drive aisles within 100 feet from the back of sidewalk.

The nearest intersecting driveway from the site's access point is a proposed parking lot that is approximately 30 feet from the back of the sidewalk. This does not meet the City's standard of 100 feet minimum.

### SIGHT DISTANCE

Adequate sight distance should be provided at all intersections and driveways. Objects (e.g., buildings, fences, walls, or vegetation) located near the intersections may inhibit sight distance for drivers attempting to turn out of a minor street onto the major street. Based on a preliminary sight distance evaluation, the sight distance at the proposed driveway on SW Parkway Ave appears to meet sight distance requirements, which is a minimum of 280 feet of visibility for vehicle speeds of 25 mph.

Prior to occupancy, sight distance at any existing or proposed driveways will need to be verified, documented, and stamped by a registered professional Civil Engineer licensed in the State of Oregon to assure that buildings, signs, or landscaping does not restrict sight distance.

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<sup>9</sup> Preliminary Site Plan, Drafted October 10<sup>th</sup>, 2023

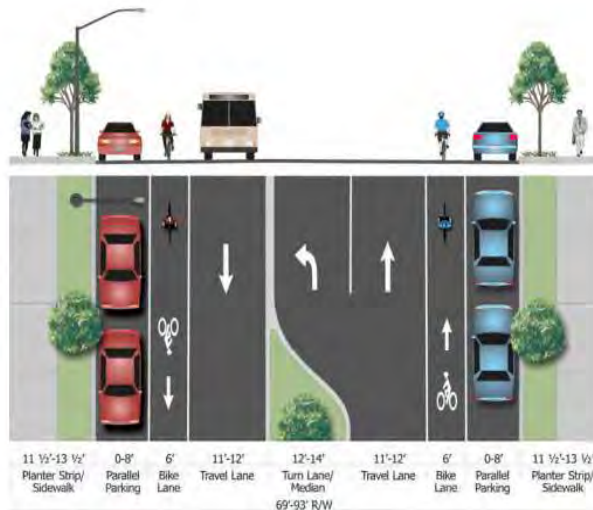
<sup>10</sup> Figure 3-8, Transportation System Plan, City of Wilsonville, Amended November 2020

<sup>11</sup> Section 201.2.23 (Driveways), Public Works Standards, City of Wilsonville, Revised September 2017.

**FRONTAGE IMPROVEMENTS**

The project site shall provide street frontage improvements on Parkway Avenue that are consistent with the City of Wilsonville’s collector cross section standard, for which the roadway is classified as such.<sup>12</sup> Today, SW Parkway Ave fronting the project site has 2 travel lanes, no bike lanes, sidewalk on one side, and unmarked on-street parking on both sides.

The collector cross-section standard shows a center turn lane, bike lanes, planter strips, on-street parking, and sidewalks, however the width of the center turn lane/median and presence of other on-street facilities shall ultimately be approved by the Community Development Director and City Staff along the project frontage.



**COLLECTOR CROSS SECTION STANDARD**

**ON-SITE CIRCULATION**

The City requires that all modes of transportation have safe and convenient on-site circulation to the highest degree that the site practically allows.<sup>13</sup> The site plan shows a 20-foot travel lane throughout the parking lot with adequate width for turning and parking maneuvers.

**PEDESTRIAN AND BICYCLE FACILITIES**

The City provides standards for pedestrian facilities within developments to provide safe and convenient accessibility for all pedestrians.<sup>14</sup> There is a proposed sidewalk that extends from the building to the sidewalk on SW Parkway Ave. Pedestrians and bicyclists can adequately access and utilize the development from SW Parkway Ave.

<sup>12</sup> Figure 3-7, Transportation System Plan, City of Wilsonville, Amended November 2020.

<sup>13</sup> Section 4.421, Wilsonville Development Code, Updated March 2023.

<sup>14</sup> Section 4.154, Wilsonville Development Code, Updated March 2023.

## SUMMARY

The key findings of the transportation impact analysis (TIA) are discussed below.

- The proposed project is a specialty automobile sales and service center building that is approximately 37,500 square feet.
- The proposed development is expected to generate 89 total (36 in, 53 out) PM peak hour trips. 75% (67 vehicles) of those trips are expected to travel through the I-5 / Elligsen Rd interchange.
- The traffic operations at the three study intersections are expected to operate within the City's LOS standard and ODOT's mobility targets under all future analysis scenarios.
- Prior to occupancy, sight distance at the proposed project access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon.
- The proposed site plan does not meet the City's standards for minimum access spacing, however the proposed access is placed such that it has the least impact on the SROZ and has been approved by City staff.
- The proposed driveway aisle length does not meet the City standard length (100 feet, in this case), which is the distance between the back of the sidewalk to any parking stalls or another driveway aisle.

# APPENDIX

APPENDIX A: SITE PLAN

APPENDIX B: TRAFFIC COUNT DATA

APPENDIX C: STAGE II LIST

APPENDIX D: HCM REPORT - EXISTING

APPENDIX E: HCM REPORT – EXISTING + PROJECT

APPENDIX F: HCM REPORT – EXISTING + STAGE II

APPENDIX G: HCM REPORT – EXISTING + PROJECT + STAGE II

# APPENDIX A: SITE PLAN

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**DEVELOPMENT CODE SUMMARY:**  
TAX LOT: 3S-1-32DA TA LOT 1000, SW PARKWAY AVE, WILSONVILLE, OR  
JURISDICTION: CLACKAMAS COUNTY, CITY OF WILSONVILLE DEVELOPMENT CODE  
ZONING: PLANNED DEVELOPMENT COMMERCIAL (PDC)

**CHAPTER 4 - PLANNING AND LAND DEVELOPMENT**  
SECTION 4.116 STANDARDS APPLYING TO COMMERCIAL DEVELOPMENTS IN ANY ZONE  
05 ALL BUSINESSES, SERVICE OR PROCESSING, SHALL BE CONDUCTED WHOLLY WITHIN A COMPLETELY ENCLOSED BUILDING EXCEPT FOR:  
G. EXTERIOR SALES AREAS, COMPLYING WITH THE FOLLOWING:  
1. THE SALES AREA SHALL BE ACCESSORY TO AND SHALL NOT EXCEED 5% OF THE FLOOR AREA OF THE PRIMARY RETAIL OPERATION.  
2. THE SALES AREA SHALL BE COMPLETELY COVERED BY A PERMANENT STRUCTURE.  
10 COMMERCIAL DEVELOPMENTS (GENERAL)  
SETBACKS: NONE REQUIRED, EXCEPT WHERE ABUTTING MORE RESTRICTIVE USE BUILDING HEIGHT: 35' MAXIMUM

SECTION 4.131 PDC - PLANNED DEVELOPMENT COMMERCIAL ZONE  
01 PERMITTED USES:  
1. RETAIL, BUSINESS, GOODS AND SALES  
2. ANY USE ALLOWED IN PDI ZONE (SERVICE) - WHEN CONDUCTED ENTIRELY WITHIN ENCLOSED BUILDING.  
02 PROHIBITED USES:  
1. NO USED CAR SALES SHALL BE PERMITTED, EXCEPT IN CONJUNCTION WITH NEW CAR DEALERSHIPS WITHIN ENCLOSED BUILDINGS.

SECTION 4.139 SIGNIFICANT RESOURCE OVERLAY ZONE (SROZ) ORDINANCE  
THE SR IMPACT AREA IS ALWAYS 25 FEET WIDE FROM THE EDGE OF THE SR.

SECTION 4.139.03 ADMINISTRATION  
02 IMPACT AREA: THE IMPACT AREA IS THE AREA ADJACENT TO THE OUTER BOUNDARY OF A SR WITHIN WHICH DEVELOPMENT OR OTHER ALTERATION ACTIVITIES MAY BE PERMITTED THROUGH THE REVIEW OF AN SRIR (SIGNIFICANT RESOURCE IMPACT REPORT)  
04 PROHIBITED ACTIVITIES, NEW STRUCTURES, DEVELOPMENT AND CONSTRUCTION ACTIVITIES SHALL NOT BE PERMITTED WITHIN THE SROZ IF THEY WILL NEGATIVELY IMPACT SIGNIFICANT NATURAL RESOURCES. UNAUTHORIZED LAND CLEARING OR GRADING OF THE SITE TO ALTER SITE CONDITIONS IS NOT ALLOWED.

SECTION 4.139.05 SIGNIFICANT RESOURCE OVERLAY ZONE MAP VERIFICATION  
01 IN ORDER TO CONFIRM THE LOCATION OF THE SROZ, MAP VERIFICATION SHALL BE REQUIRED OR ALLOWED AS FOLLOWS:  
A. DEVELOPMENT THAT IS PROPOSED TO BE EITHER IN THE SROZ OR LESS THAN 100 FEET OUTSIDE OF THE BOUNDARY OF THE SROZ, AS SHOWN ON THE SROZ MAP.  
SECTION 4.139.06 SRIR AND REVIEW CRITERIA  
AN SRIR IS ONLY REQUIRED FOR NON-EXEMPT DEVELOPMENT THAT IS LOCATED WITHIN THE SROZ AND/OR ITS ASSOCIATED 25 FOOT IMPACT AREA.  
SECTION 4.139.09 ACTIVITIES REQUIRING A CLASS II ADMIN REVIEW PROCESS  
01 THE REVIEW OF ANY ACTION REQUIRING AN SRIR  
SECTION 4.139.11 SPECIAL PROVISIONS  
01 REDUCED FRONT, REAR AND SIDE YARD SETBACK APPLICATIONS ON PROPERTIES CONTAINING THE SROZ MAY REDUCE THE FRONT, REAR AND SIDE YARD SETBACK FOR DEVELOPMENTS OR ADDITIONS TO PROTECT THE SR, AS APPROVED BY THE DEVELOPMENT BOARD.

SECTION 4.140 PLANNED DEVELOPMENT REGULATIONS  
05 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 (PRE-APP, STAGE 1, STAGE 2 PROCESSES)  
3. OBTAIN PLANNING DIRECTOR, DEVELOPMENT REVIEW BOARD, OR, ON APPEAL, CITY COUNCIL APPROVAL

SECTION 4.154 ON-SITE PEDESTRIAN ACCESS AND CIRCULATION  
01 ON-SITE PEDESTRIAN ACCESS AND CIRCULATION  
B1. CONTINUOUS PATHWAY SYSTEM. A PED PATHWAY SYSTEM SHALL EXTEND THROUGHOUT THE DEVELOPMENT SITE AND CONNECT TO ADJACENT SIDEWALKS. (REQUEST VARIANCE)  
B4. CROSSWALKS. WHERE PATHWAY CROSSES A PARKING AREA OR DRIVEWAY, IT SHALL BE CLEARLY MARKED WITH CONTRASTING PAINT OR PAVING MATERIALS.  
B5. PATHWAY WIDTH AND SURFACE. PRIMARY PATHWAY SHALL BE CONSTRUCTED OF CONCRETE, ASPHALT, BRICK/MASONRY PAVERS, NOT LESS THAN 5' WIDE.

SECTION 4.155 GENERAL REGULATIONS - PARKING, LOADING & BICYCLE PARKING  
PARKING SPACE = 9' X 18'  
COMPACT SPACE = 7'-6" X 15'  
BIKE SPACE = 2' X 6" WITH 5' AISLE LOCATED WITHIN 30' BUILDING ENTRANCE)  
LOADING SPACE = 12' X 35' WITH 14' CLEAR HT

02 GENERAL PROVISIONS  
N. UP TO 40% OF THE OFF-STREET SPACES MAY BE COMPACT SPACES.  
O. WHERE OFF-STREET PARKING SPACES OVERHANG BEYOND CURBS, LANDSCAPE AREA SHALL BE INCREASED TO MINIMUM OF 7'-0" IN DEPTH.

03 MINIMUM AND MAXIMUM OFF-STREET PARKING REQUIREMENTS  
B. PARKING AREAS OVER 650 SF; LANDSCAPE REQUIREMENTS:  
1. LANDSCAPING OF AT LEAST 10% OF THE PARKING AREA SHALL BE CONSIDERED TO BE PART OF THE 15% TOTAL LANDSCAPING REQUIRED FOR DEVELOPMENT.  
2. LANDSCAPE TREE PLANTING AREAS SHALL BE MINIMUM 8'-0" WIDTH AND LENGTH SPACED EVERY 8 PARKING SPACES.  
A. TREES SHALL BE PLANTED IN A RATIO OF 1 TREE PER 8 PARKING SPACES.  
3E. ALL PARKING LOTS VIEWED FROM PUBLIC R.O.W. SHALL HAVE MINIMUM 12'-0" LANDSCAPED BUFFER EXTENDING FROM EDGE OF PROPERTY LINE AT R.O.W. TO EDGE OF THE PARKING AREA. BUFFER LANDSCAPING TO MEET LOW SCREEN STANDARD.  
C. OFF STREET PARKING. PROVIDE 1 ADA SPACE FOR EVERY 50 STANDARD SPACES.

TABLE 5 PARKING STANDARDS

	PARKING MIN	PARKING MAX	BIKE PARKING MIN
SERVICE/REPAIR SHOPS	4.1 PER 1,000 SF	6.2 PER 1,000 SF	1 PER 200 SF
RETAIL - AUTOMOTIVE	1.67 PER 1,000 SF	6.2 PER 1,000 SF	1 PER 8,000 SF (MIN 2)

05 MINIMUM OFF-STREET LOADING REQUIREMENTS  
1. COMMERCIAL, INDUSTRIAL AND PUBLIC UTILITY USES WHICH HAVE GFA OF 5,000 SF OR MORE SHALL PROVIDE TRUCK LOADING PER FOLLOWING:  
5,000 - 30,000 SF = 1 LOADING SPACE

SECTION 4.156.08 SIGN REGULATIONS IN PDC, TC, PDI, AND PF ZONES  
01 FREESTANDING AND GROUND MOUNTED SIGNS  
A. ONE FREESTANDING OR GROUND MOUNTED SIGN IS ALLOWED FOR FIRST 200 FEET OF SITE FRONTAGE.  
B. ALLOWED HEIGHT ABOVE GROUND OF FREESTANDING OR GROUND MOUNTED SIGN IS 20 FEET.  
C. MAX ALLOWED SIGN AREA DETERMINED BASED ON GFA.  
26,000 SF OR MORE: 64 SF MAX SIGN AREA  
2. SIGNS FRONTING INTERSTATE 5:  
A. FOR SIGNS ON PROPERTIES OR WITHIN DEVELOPMENTS WITH A SINGLE TENANT OR BUSINESS THE SIGN AREA ALLOWED IS 64 SF.  
02 SIGNS ON BUILDINGS  
LINEAR LENGTH OF FAÇADE: GREATER THAN 72 = 36 SF SIGN AREA ALLOWED PLUS 12 SF FOR EACH 24 LINEAR FEET OR PORTION THEREOF GREATER THAN 72 UP TO A MAXIMUM OF 200 SF  
03 ADDITIONAL SIGNS  
B. PLANNED DEVELOPMENT SIGNS: UP TO 32 SF OF THE ALLOWED SIGN AREA FOR FREESTANDING SIGNS IN A PD MAY BE USED FOR A SEPARATE ON-SITE MONUMENT SIGN OR OFF-SITE MONUMENT SIGN ON AN ADJACENT PARCEL.

SECTION 4.176 LANDSCAPING, SCREENING AND BUFFERING  
03 LANDSCAPE AREA. NOT LESS THAN 15% OF THE TOTAL LOT AREA, SHALL BE LANDSCAPED. 10% PARKING AREA LANDSCAPING IS INCLUDED. 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.

SECTION 4.179 MIXED SOLID WASTE AND RECYCLABLES STORAGE  
01 REQUIRED FOR ALL SITE PLANS.  
06 SPECIFIC REQUIREMENTS  
B. NON-RESIDENTIAL BUILDINGS SHALL PROVIDE MINIMUM STORAGE AREA OF 10 SF PLUS:  
2. RETAIL: 10 SF PER 1,000 SF GFA  
OTHER: 4 SF PER 1,000 SF GFA

SECTION 4.199 OUTDOOR LIGHTING  
SECTION 4.199.30 LIGHTING OVERLAY ZONES  
01 THE DESIGNATED LIGHTING ZONE AS INDICATED ON THE LIGHTING OVERLAY ZONE MAP FOR A COMMERCIAL, INDUSTRIAL, MULTI-FAMILY OR PUBLIC FACILITY PARCEL OR PROJECT SHALL DETERMINE THE LIMITATIONS FOR LIGHTING SYSTEMS AND FIXTURES AS SPECIFIED IN THIS ORDINANCE.  
02 LIGHTING ZONES  
B. LZ 2: LOW-DENSITY SUBURBAN NEIGHBORHOODS AND SUBURBAN COMMERCIAL DISTRICTS, INDUSTRIAL PARKS AND DISTRICTS.  
SECTION 4.199.40 LIGHTING SYSTEMS STANDARDS FOR APPROVAL  
01 NON-RESIDENTIAL  
A. ALL OUTDOOR LIGHTING SHALL COMPLY WITH EITHER PRESCRIPTIVE OR PERFORMANCE OPTIONS.

**OREGON FIRE CODE REQUIREMENTS - FIRE APPARATUS ACCESS ROADS**  
FIRE DEPT ACCESS ROADS MUST BE PROVIDED SO FIRE APPARATUS CAN DRIVE WITHIN 50 FT OF AN EXTERIOR DOOR THAT ALLOWS ACCESS TO THE INTERIOR OF THE BUILDING.  
FIRE DEPT ACCESS ROADS NEED TO BE LOCATED SO ANY PORTION OF THE BUILDING IS NOT MORE THAN 150 FEET FROM FIRE DEPT ACCESS ROADS AS MEASURED AROUND PERIMETER OF BUILDING. THIS CAN BE INCREASED TO 450 FEET IN BUILDINGS PROTECTED WITH AUTOMATIC SPRINKLER SYSTEM.

D103.4 DEAD ENDS  
DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FEET SHALL BE PROVIDED WITH WIDTH AND TURNAROUND PROVISIONS IN ACCORDANCE WITH TABLE D103.4

LENGTH	WIDTH	TURNAROUND REQUIRED
1-150 FT	20 FT	NONE REQUIRED
151-500 SF	20 SF	120-FT HAMMERHEAD, 60-FT "Y" OR 96-FT DIA CUL-DE-SAC
501-750 SF	26 SF	120-FT HAMMERHEAD, 60-FT "Y" OR 96-FT DIA CUL-DE-SAC

\*BUILDINGS EXCEEDING 30 FT IN HEIGHT REQUIRE MINIMUM OF TWO FIRE ACCESS ROUTES TO STRUCTURE(S), MUST FOLLOW AERIAL FIRE APPARATUS REQUIREMENTS, AND MUST PROVIDE MINIMUM 26 FT WIDE ACCESS ROUTES.

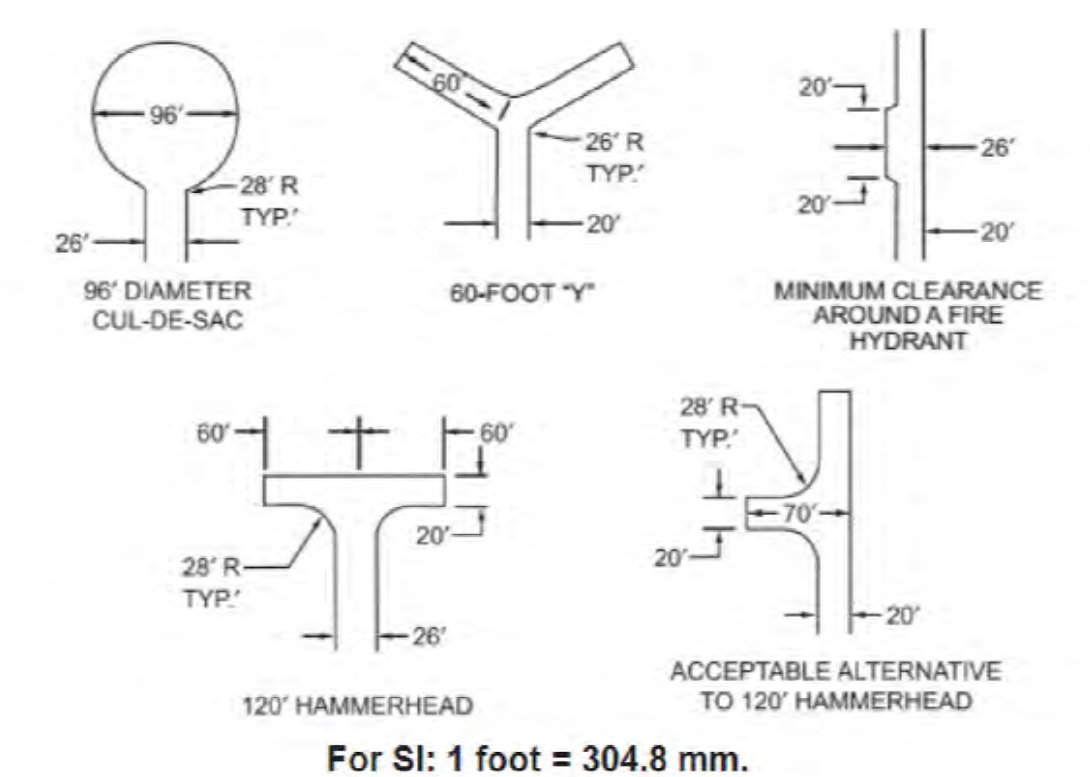
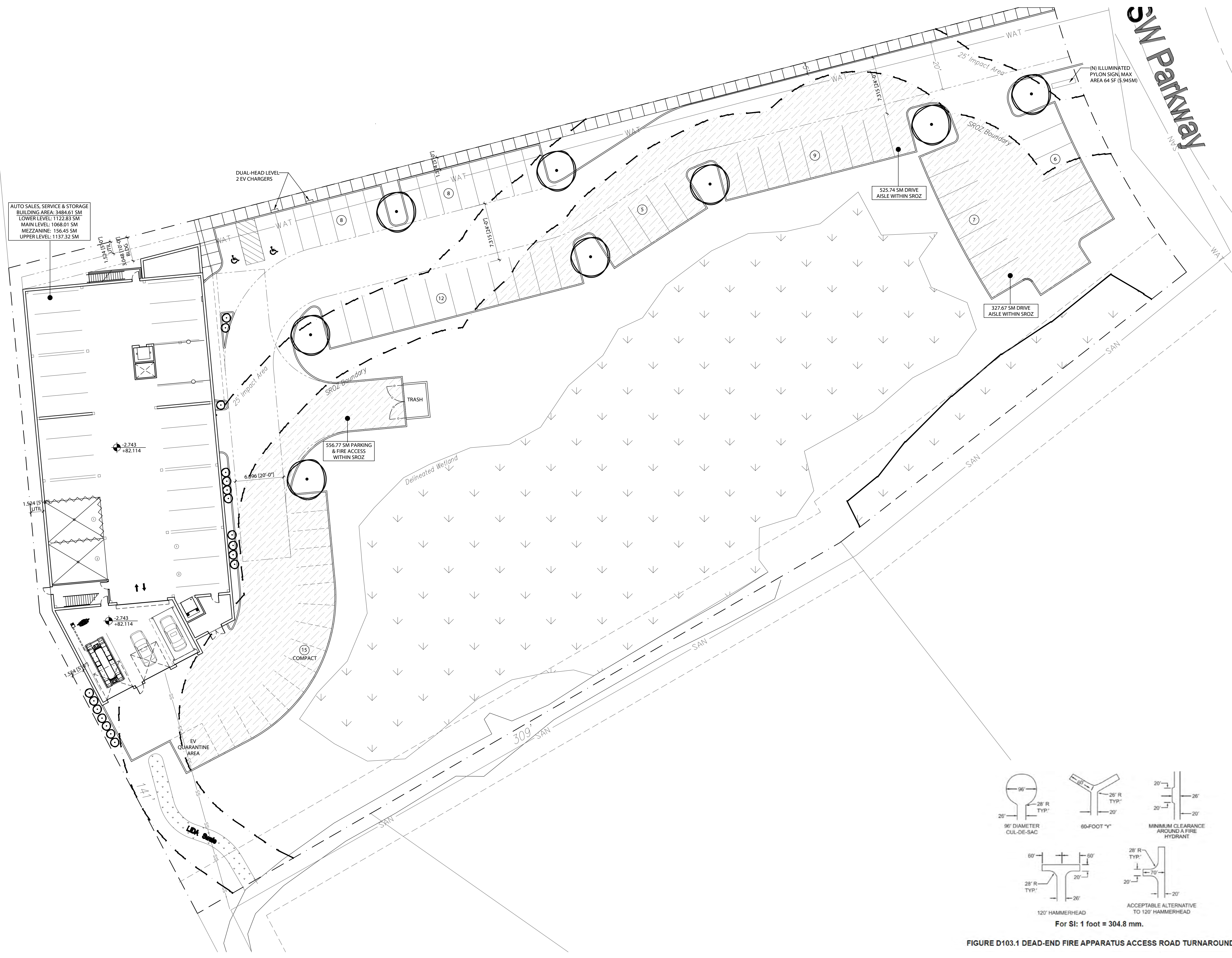


FIGURE D103.1 DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND

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LOADING SPACE = 12' X 35' WITH 14' CLEAR HT  
02 GENERAL PROVISIONS  
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RETAIL - AUTOMOTIVE 1.67 PER 1,000 SF 6.2 PER 1,000 SF 1 PER 8,000 SF (MIN 2)  
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B. ALLOWED HEIGHT ABOVE GROUND OF FREESTANDING OR GROUND MOUNTED SIGN IS 20 FEET.  
C. MAX ALLOWED SIGN AREA DETERMINED BASED ON GFA.  
26,000 SF OR MORE: 64 SF MAX SIGN AREA  
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151-500 SF 20 FT 120-FT HAMMERHEAD, 60-FT "Y" OR 96-FT DIA CUL-DE-SAC  
501-750 SF 26 SF 120-FT HAMMERHEAD, 60-FT "Y" OR 96-FT DIA CUL-DE-SAC  
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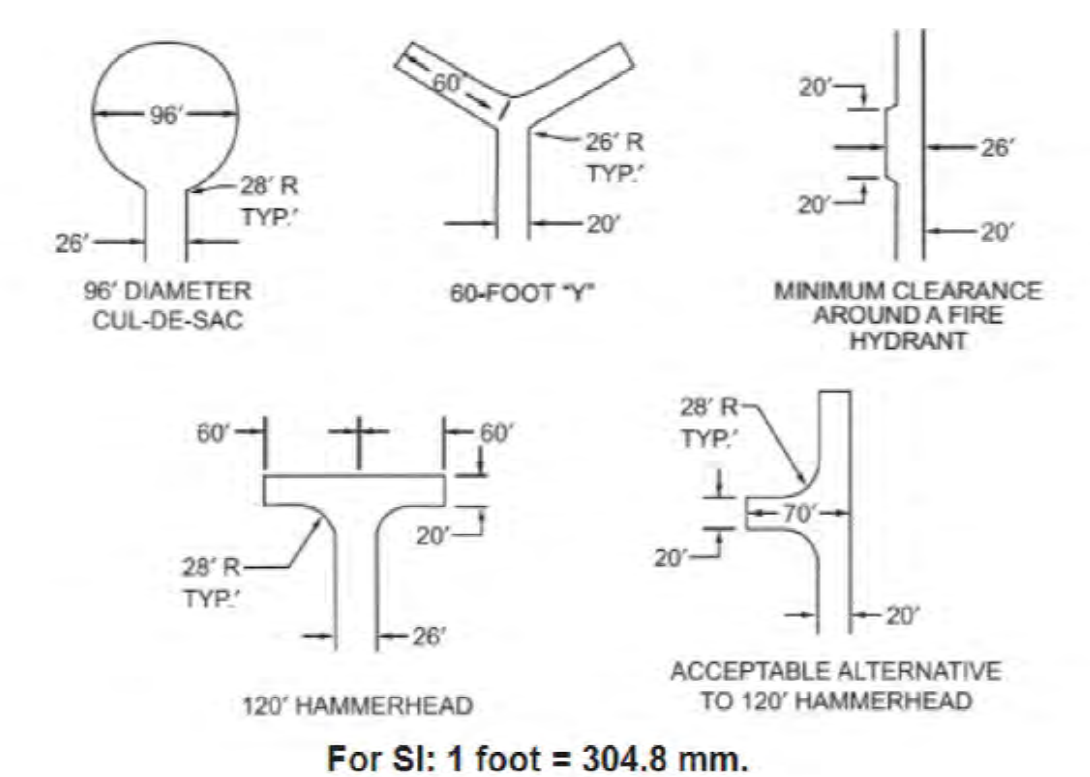
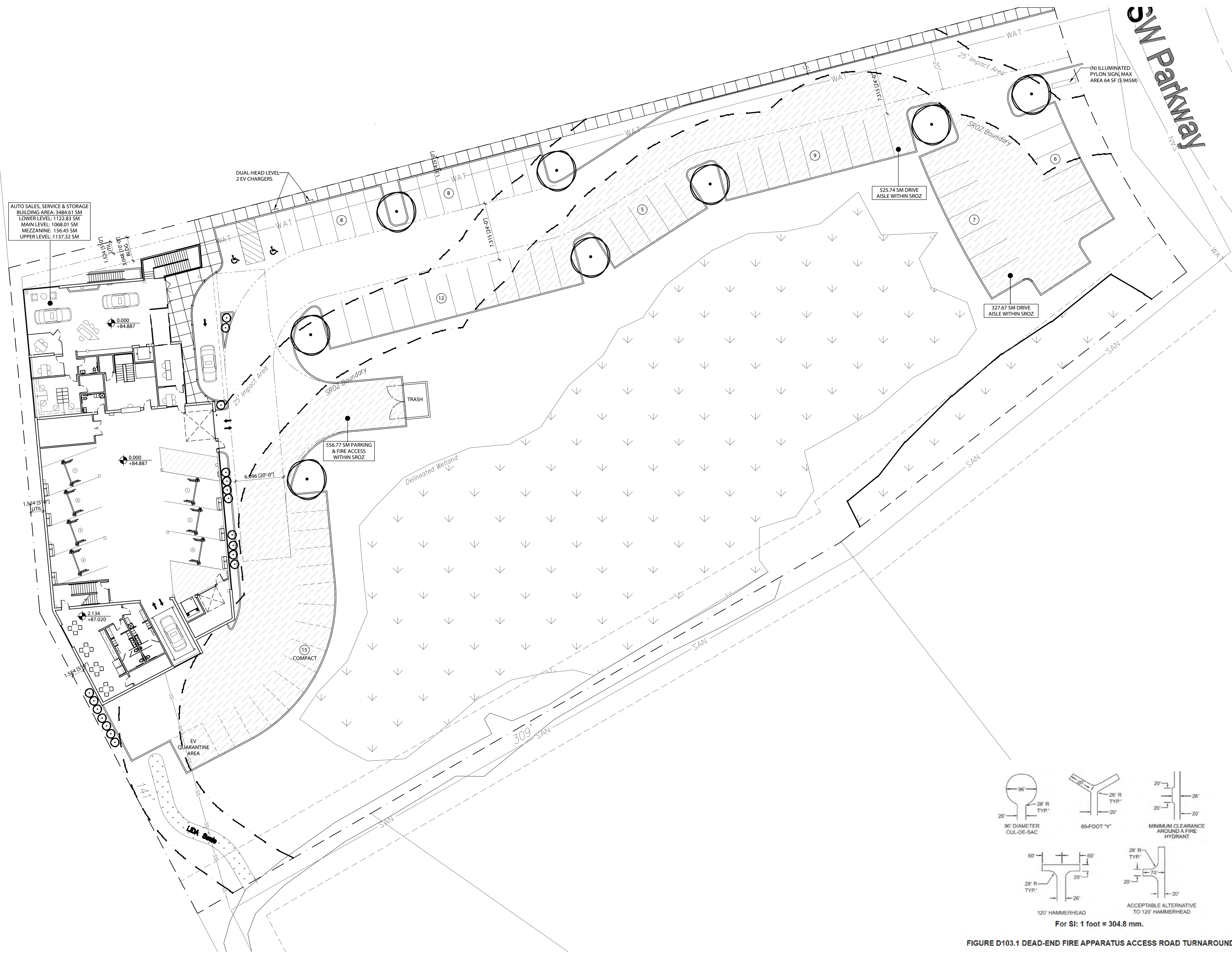
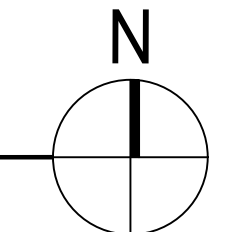


FIGURE D103.1 DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND



REVISIONS		
No.	Description	Date

DRAWN BY: KJK  
CHECKED BY: TRB  
JOB NO: 22-033  
DATE: 10/04/2023  
ISSUED FOR: PRELIMINARY  
SHEET TITLE  
SITE PLAN @ MAIN LEVEL  
SHEET NO.





# APPENDIX B: TRAFFIC COUNT DATA

---



**Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk**

*Item 2.*

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	9	0	4	7	20	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	2	0	3	5	10	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	5	0	6	8	19	4:10 PM	0	0	0	0	0	4:10 PM	1	0	0	0	1
4:15 PM	7	0	2	6	15	4:15 PM	0	0	0	0	0	4:15 PM	1	1	0	1	3
4:20 PM	7	0	11	9	27	4:20 PM	1	0	0	0	1	4:20 PM	0	0	0	0	0
4:25 PM	2	0	3	4	9	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	5	0	5	5	15	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	4	0	6	8	18	4:35 PM	0	0	0	0	0	4:35 PM	1	0	0	0	1
4:40 PM	4	0	5	14	23	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	7	0	6	14	27	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	3	0	3	9	15	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	1	1
4:55 PM	4	0	1	8	13	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	2	0	4	8	14	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	3	0	2	1	6	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	7	0	0	12	19	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	3	0	3	7	13	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	3	0	5	6	14	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	5	0	6	2	13	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	6	0	5	11	22	5:30 PM	0	0	0	0	0	5:30 PM	1	0	0	0	1
5:35 PM	3	0	2	3	8	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	3	0	1	6	10	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	1	0	7	6	14	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	1	0	2	4	7	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	1	0	4	3	8	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	97	0	96	166	359	Count Total	1	0	0	0	1	Count Total	4	1	0	2	7
Peak Hour	52	0	55	98	205	Peak Hour	1	0	0	0	1	Peak Hour	3	1	0	2	6



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Location: 2 I-5 NB RAMPS & ELLIGSEN RD PM

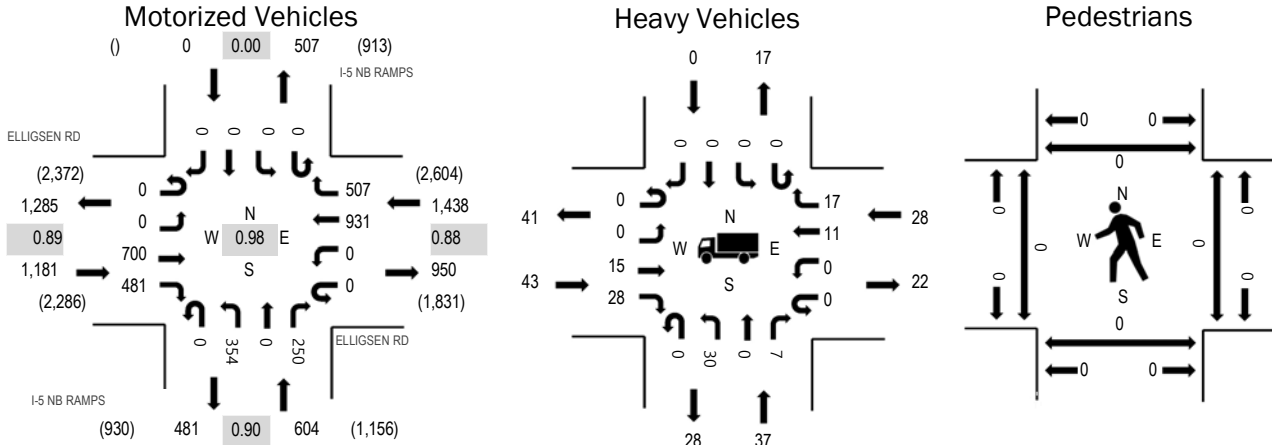
Date: Tuesday, April 4, 2023

Peak Hour: 04:10 PM - 05:10 PM

Peak 15-Minutes: 04:20 PM - 04:35 PM

Item 2.

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	3.6%	0.89
WB	1.9%	0.88
NB	6.1%	0.90
SB	0.0%	0.00
All	3.4%	0.98

Traffic Counts - Motorized Vehicles

Interval Start Time	ELLIGSEN RD Eastbound				ELLIGSEN RD Westbound				I-5 NB RAMPS Northbound				I-5 NB RAMPS Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	69	40	0	0	83	24	0	40	0	32	0	0	0	0	288	3,201
4:05 PM	0	0	54	37	0	0	58	46	0	34	0	18	0	0	0	0	247	3,179
4:10 PM	0	0	68	37	0	0	84	47	0	31	0	21	0	0	0	0	288	3,223
4:15 PM	0	0	66	46	0	0	68	29	0	21	0	24	0	0	0	0	254	3,174
4:20 PM	0	0	73	32	0	0	67	46	0	30	0	27	0	0	0	0	275	3,181
4:25 PM	0	0	77	40	0	0	66	28	0	39	0	24	0	0	0	0	274	3,135
4:30 PM	0	0	58	48	0	0	58	52	0	37	0	21	0	0	0	0	274	3,095
4:35 PM	0	0	42	34	0	0	83	44	0	28	0	21	0	0	0	0	252	3,045
4:40 PM	0	0	35	27	0	0	77	45	0	32	0	20	0	0	0	0	236	3,023
4:45 PM	0	0	59	63	0	0	102	33	0	38	0	23	0	0	0	0	318	3,018
4:50 PM	0	0	63	25	0	0	78	40	0	24	0	24	0	0	0	0	254	2,910
4:55 PM	0	0	57	45	0	0	66	38	0	22	0	13	0	0	0	0	241	2,862
5:00 PM	0	0	49	46	0	0	94	30	0	29	0	18	0	0	0	0	266	2,845
5:05 PM	0	0	53	38	0	0	88	75	0	23	0	14	0	0	0	0	291	
5:10 PM	0	0	37	40	0	0	94	31	0	20	0	17	0	0	0	0	239	
5:15 PM	0	0	56	48	0	0	80	36	0	26	0	15	0	0	0	0	261	
5:20 PM	0	0	43	37	0	0	60	41	0	30	0	18	0	0	0	0	229	
5:25 PM	0	0	69	38	0	0	55	31	0	22	0	19	0	0	0	0	234	
5:30 PM	0	0	48	39	0	0	68	29	0	22	0	18	0	0	0	0	224	
5:35 PM	1	0	43	32	0	0	67	25	0	33	0	29	0	0	0	0	230	
5:40 PM	0	0	45	42	0	0	50	41	0	36	0	17	0	0	0	0	231	
5:45 PM	0	0	64	29	0	0	42	34	0	27	0	14	0	0	0	0	210	
5:50 PM	0	0	58	24	0	0	55	33	0	21	0	15	0	0	0	0	206	
5:55 PM	0	0	69	43	0	0	48	35	0	15	0	14	0	0	0	0	224	
Count Total	1	0	1,355	930	0	0	1,691	913	0	680	0	476	0	0	0	0	6,046	
Peak Hour	0	0	700	481	0	0	931	507	0	354	0	250	0	0	0	0	3,223	

**Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk**

Item 2.

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	4	5	0	0	9	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	3	1	0	4	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	4	2	2	0	8	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	4	1	1	0	6	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	5	7	7	0	19	4:20 PM	1	0	0	0	1	4:20 PM	0	0	0	0	0
4:25 PM	3	4	2	0	9	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	5	5	1	0	11	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	2	4	4	0	10	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	4	1	3	0	8	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	3	6	2	0	11	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	3	3	3	0	9	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	5	0	0	0	5	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	1	2	1	0	4	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	4	2	2	0	8	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	7	0	0	0	7	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	3	2	3	0	8	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	4	1	0	5	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	2	4	3	0	9	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	4	1	4	0	9	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	3	2	2	0	7	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	2	1	1	0	4	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	2	3	3	0	8	5:45 PM	0	0	1	0	1	5:45 PM	0	0	0	0	0
5:50 PM	1	1	3	0	5	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	1	2	2	0	5	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	72	65	51	0	188	Count Total	1	0	1	0	2	Count Total	0	0	0	0	0
Peak Hour	43	37	28	0	108	Peak Hour	1	0	0	0	1	Peak Hour	0	0	0	0	0



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Location: 3 PARKWAY AVE & ELLIGSEN RD PM

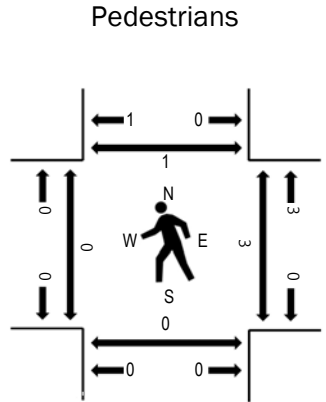
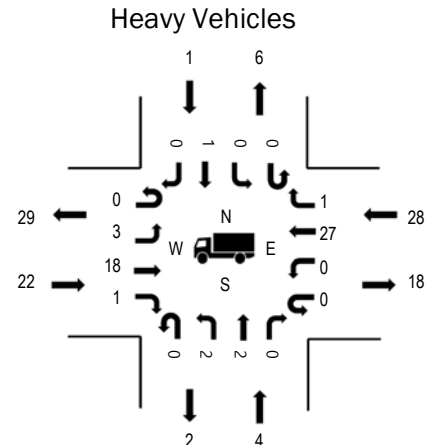
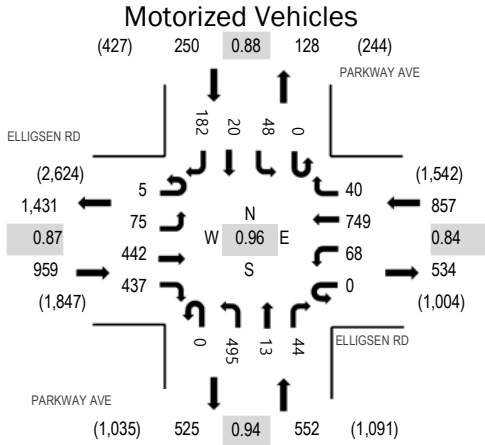
Date: Tuesday, April 4, 2023

Peak Hour: 04:10 PM - 05:10 PM

Peak 15-Minutes: 04:55 PM - 05:10 PM

Item 2.

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	2.3%	0.87
WB	3.3%	0.84
NB	0.7%	0.94
SB	0.4%	0.88
All	2.1%	0.96

Traffic Counts - Motorized Vehicles

Interval Start Time	ELLIGSEN RD Eastbound				ELLIGSEN RD Westbound				PARKWAY AVE Northbound				PARKWAY AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	4	55	40	0	3	56	3	0	43	1	7	0	5	3	18	238	2,573
4:05 PM	1	6	43	25	0	0	48	5	0	36	4	1	0	5	2	15	191	2,534
4:10 PM	0	4	47	42	0	5	64	0	0	42	1	0	0	4	1	24	234	2,618
4:15 PM	1	12	42	37	0	5	39	4	0	39	1	2	0	4	1	10	197	2,567
4:20 PM	0	6	37	48	0	0	60	6	0	46	3	2	0	3	0	11	222	2,589
4:25 PM	0	9	49	45	0	11	55	7	0	33	1	4	0	3	3	10	230	2,546
4:30 PM	0	7	36	36	0	4	51	2	0	43	2	5	0	3	1	12	202	2,500
4:35 PM	0	4	32	32	0	5	58	1	0	44	0	3	0	2	2	23	206	2,484
4:40 PM	1	5	19	30	0	5	73	4	0	32	0	7	0	5	4	11	196	2,457
4:45 PM	1	7	34	39	0	2	58	2	0	57	2	4	0	5	2	17	230	2,438
4:50 PM	0	6	42	39	0	7	62	3	0	37	1	4	0	5	1	12	219	2,385
4:55 PM	1	7	33	34	0	14	58	2	0	36	1	6	0	2	3	11	208	2,356
5:00 PM	1	4	26	23	0	6	70	1	0	47	1	0	0	4	2	14	199	2,334
5:05 PM	0	4	45	32	0	4	101	8	0	39	0	7	0	8	0	27	275	
5:10 PM	1	1	17	26	0	1	53	3	0	52	1	5	0	7	4	12	183	
5:15 PM	0	4	43	36	0	12	74	1	0	31	2	3	0	0	0	13	219	
5:20 PM	1	8	23	31	0	8	49	4	0	43	0	6	0	0	1	5	179	
5:25 PM	1	5	29	43	0	7	40	4	0	40	5	0	0	1	3	6	184	
5:30 PM	3	5	25	37	0	6	53	3	0	33	1	5	0	3	2	10	186	
5:35 PM	2	6	27	36	0	7	40	2	0	45	1	2	0	3	1	7	179	
5:40 PM	1	1	30	34	0	4	40	1	0	44	5	3	0	2	0	12	177	
5:45 PM	2	8	34	32	0	3	46	2	0	28	2	6	0	3	1	10	177	
5:50 PM	0	5	30	42	0	6	52	2	0	35	0	4	0	3	1	10	190	
5:55 PM	0	4	35	46	0	7	37	3	0	37	4	4	0	1	0	8	186	
Count Total	17	132	833	865	0	132	1,337	73	0	962	39	90	0	81	38	308	4,907	
Peak Hour	5	75	442	437	0	68	749	40	0	495	13	44	0	48	20	182	2,618	

**Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk**

Item 2.

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	3	0	1	0	4	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	1	1	2	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	2	0	3	0	5	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	1	0	1	0	2	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	2	1	7	0	10	4:20 PM	1	0	0	0	1	4:20 PM	0	0	0	0	0
4:25 PM	2	0	2	0	4	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	1	1	1	1	4	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	1	0	3	0	4	4:35 PM	0	0	0	0	0	4:35 PM	0	0	2	0	2
4:40 PM	2	0	3	0	5	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	3	0	2	0	5	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	2	0	3	0	5	4:50 PM	0	0	0	0	0	4:50 PM	0	0	1	0	1
4:55 PM	3	2	1	0	6	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	1	0	1	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	1	1
5:05 PM	3	0	1	0	4	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	3	0	0	0	3	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	0	2	0	3	5:15 PM	0	0	0	0	0	5:15 PM	0	0	3	1	4
5:20 PM	0	0	1	0	1	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	3	0	3	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	3	0	5	0	8	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	2	0	2	1	5	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	1	1	0	0	2	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	1	0	4	0	5	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	1	1	2	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	1	0	1	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	36	5	49	4	94	Count Total	1	0	0	0	1	Count Total	0	0	6	2	8
Peak Hour	22	4	28	1	55	Peak Hour	1	0	0	0	1	Peak Hour	0	0	3	1	4

## APPENDIX C: STAGE II LIST

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Updated by D. Pauly 08.09.23

Stage II Approved									
Project	Land Use	Status	Size	Total PM Peak Trips	Trip Allocation Percentage		Net New (Primary + Diverted) PM Peak Hour Trips not yet active		
					Internal	Pass-By	In	Out	Total
Hydro-Temp: Recent agreement with the City, the project is vested and so are the traffic trips	Office/Flex-Space	Not built	60.8 KSF				44	46	90
Mercedes Benz (Phase 2)	Auto Dealership	Not built					20	26	46
Town Center Ph III and trip dedication to Miller Point store <i>Uses marked with *** have not been built and PM peak hr trip sum exceeds remaining vested trip level by 2 trips. It has yet to be determined how to allocate trips between remaining buildings.</i>	*High Turnover Restaurant (Pad 1)	Not built	7.5 KSF				24	17	47*
	Remaining Approved Total								47
Wilsonville Road Business Park Phase II	Phase 2 - office (2-story building on west parcel)	Partially Built	21.7 KSF				15	71	86
Frog Pond Ridge	Residential	12 homes built and occupied	71 units				35	24	59
Frog Pond Crossing	Residential	Under construction, no homes occupied	29 units				19	9	28
Frog Pond Estates	Residential	Approved	17 units				11	7	18
Frog Pond Oaks	Residential	Under construction, no homes occupied	41 units				27	14	41
Frog Pond Vista	Residential	Under construction, no homes occupied	38 units				27	17	44
Frog Pond Overlook	Residential	Approved	12 Units				8	5	13
Frog Pond Terrace	Residential	Approved	19 Units				12	8	20
Canyon Creek III	Residential	Under Construction	5 units (traffic study was for 11)				2	3	5
Boones Ferry Gas Station/Convenience Store	Commercaill	Under Construction	3,460 sf store, 12 gas pumps	240		134	53	53	106
Frog Pond Primary School	Public	Under Construction	550 students	88			39	48	87
Delta Logistics	Industrial	Under Construction	56,100 sf warehouse	33			9	24	33
Building W5 Boeckman and Kinsman	Industrial	Approved	80,000 sf manufacturing	54			17	37	54
Precision Countertops	Industrial	Approved	65800 square feet	43			13	30	43
Town Center Mixed Use	Mixed Use Residential/Commercial	Approved	114 units, 4,000 square feet retail	55			31	24	55
Frog Pond Cottage Park Place	Residential	Approved	34 attached units	16			8	7	15
Frog Pond Petras	Residential	Approved	22 attached units	9			5	4	9

Stage II Approved - Villebois													
Project	Phase	Status	Land Use					Total PM Peak Trips	Trip Allocation Percentage		Net New (Primary + Diverted) PM Peak Hour Trips not yet active		
			SF	Town.	Apt.	Retail	School		Internal	Pass-By	In	Out	Total
North (Entirety)	Residential	Partially built, 383 homes sold and occupied	451								41	27	68
Central	Residential	Partially Built, 991 homes (102 single family, 319 condo/row homes, 365 apartments) occupied	102	391	510						60	30	90
FOR REFERENCE SAP EAST			560										
FOR REFERENCE SAP SOUTH (Includes PDP 7 Grande Pointe)				537	42								

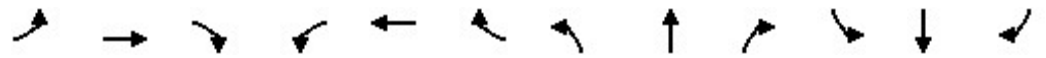
Pending Projects for Which Traffic Analysis has been completed										
Project	Land Use	Status	Size	Total PM Peak	Trip Allocation Percentage			Net New (Primary) PM Peak Hour Trips		
					Internal	Pass-By	Diverted	In	Out	Total
Parkway Woods Expansion	Public	under review	80,000 sf manufac	52				16	36	52
CIS Oregon	Industrial	under review	Need to fill in							

Intersection	Count	Date	ak	Hr	Sl	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
<b>Stage II Trips</b>																	
I-5 SB Ramps/Elligsen Rd						0	0	0	18	0	30	0	33	13	0	22	5
I-5 NB Ramps/Elligsen Rd						19	0	4	0	0	0	0	25	26	0	8	21
Parkway Ave/Elligsen Rd						0	1	8	1	1	24	18	11	0	6	5	1

# APPENDIX D: HCM REPORT - EXISTING

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HCM 6th Signalized Intersection Summary  
 1: I-5 SB Ramp & Boones Ferry Rd/Elligsen Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑	↗				↘	↖	↖
Traffic Volume (veh/h)	0	877	704	0	798	505	0	0	0	328	123	528
Future Volume (veh/h)	0	877	704	0	798	505	0	0	0	328	123	528
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1841	0	1811	1885				1841	1781	1678
Adj Flow Rate, veh/h	0	904	0	0	823	0				232	275	148
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	3	4	0	6	1				4	8	15
Cap, veh/h	0	2590		0	2528					315	320	254
Arrive On Green	0.00	1.00	0.00	0.00	1.00	0.00				0.18	0.18	0.18
Sat Flow, veh/h	0	3618	1560	0	3532	1598				1753	1781	1415
Grp Volume(v), veh/h	0	904	0	0	823	0				232	275	148
Grp Sat Flow(s),veh/h/ln	0	1763	1560	0	1721	1598				1753	1781	1415
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				13.1	15.7	10.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				13.1	15.7	10.1
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2590		0	2528					315	320	254
V/C Ratio(X)	0.00	0.35		0.00	0.33					0.74	0.86	0.58
Avail Cap(c_a), veh/h	0	2590		0	2528					417	424	337
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(l)	0.00	0.84	0.00	0.00	0.89	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				40.7	41.8	39.4
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.3	0.0				3.5	11.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.1	0.0				5.8	7.6	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.3	0.0	0.0	0.3	0.0				44.2	53.1	40.7
LnGrp LOS	A	A		A	A					D	D	D
Approach Vol, veh/h		904			823						655	
Approach Delay, s/veh		0.3			0.3						47.2	
Approach LOS		A			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		81.1		23.9		81.1						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		70.0		25.0		42.0						
Max Q Clear Time (g_c+I1), s		2.0		17.7		2.0						
Green Ext Time (p_c), s		8.5		1.2		7.2						

Intersection Summary

HCM 6th Ctrl Delay	13.2
HCM 6th LOS	B

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

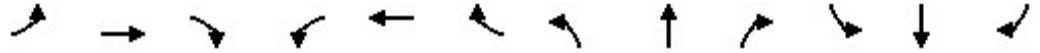
HCM 6th Signalized Intersection Summary  
2: I-5 NB Ramp & Elligsen Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑	↗	↗↗		↗			
Traffic Volume (veh/h)	0	700	505	0	931	532	372	0	263	0	0	0
Future Volume (veh/h)	0	700	505	0	931	532	372	0	263	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1811	0	1885	1856	1781	0	1856			
Adj Flow Rate, veh/h	0	714	0	0	950	0	380	0	0			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	2	6	0	1	3	8	0	3			
Cap, veh/h	0	2729		0	2750		466	0				
Arrive On Green	0.00	1.00	0.00	0.00	1.00	0.00	0.14	0.00	0.00			
Sat Flow, veh/h	0	3647	1535	0	3676	1572	3291	0	1572			
Grp Volume(v), veh/h	0	714	0	0	950	0	380	0	0			
Grp Sat Flow(s),veh/h/ln	0	1777	1535	0	1791	1572	1646	0	1572			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.0			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2729		0	2750		466	0				
V/C Ratio(X)	0.00	0.26		0.00	0.35		0.81	0.00				
Avail Cap(c_a), veh/h	0	2729		0	2750		1113	0				
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.90	0.00	0.00	0.89	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.7	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.3	0.0	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.1	0.0	4.8	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.2	0.0	0.0	0.3	0.0	45.9	0.0	0.0			
LnGrp LOS	A	A		A	A		D	A				
Approach Vol, veh/h		714			950			380				
Approach Delay, s/veh		0.2			0.3			45.9				
Approach LOS		A			A			D				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		85.6				85.6		19.4				
Change Period (Y+Rc), s		5.0				5.0		4.5				
Max Green Setting (Gmax), s		60.0				60.0		35.5				
Max Q Clear Time (g_c+I1), s		2.0				2.0		13.8				
Green Ext Time (p_c), s		6.1				9.1		1.1				

Intersection Summary		
HCM 6th Ctrl Delay		8.8
HCM 6th LOS		A

**Notes**  
Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
3: Parkway Ave & Elligsen Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	451	437	68	786	40	495	13	44	48	20	182
Future Volume (veh/h)	75	451	437	68	786	40	495	13	44	48	20	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1900	1900	1841	1870	1900	1678	1900	1900	1826	1900
Adj Flow Rate, veh/h	78	470	304	71	819	38	526	0	7	50	21	6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	0	0	4	2	0	15	0	0	5	0
Cap, veh/h	100	1928	1144	91	2680	124	619	0	274	75	57	16
Arrive On Green	0.02	0.18	0.18	0.10	1.00	1.00	0.17	0.00	0.17	0.04	0.04	0.04
Sat Flow, veh/h	1753	3497	1575	1810	4922	228	3619	0	1602	1810	1358	388
Grp Volume(v), veh/h	78	470	304	71	557	300	526	0	7	50	0	27
Grp Sat Flow(s),veh/h/ln	1753	1749	1575	1810	1675	1799	1810	0	1602	1810	0	1746
Q Serve(g_s), s	4.7	12.1	11.0	4.0	0.0	0.0	14.8	0.0	0.4	2.9	0.0	1.6
Cycle Q Clear(g_c), s	4.7	12.1	11.0	4.0	0.0	0.0	14.8	0.0	0.4	2.9	0.0	1.6
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	100	1928	1144	91	1824	980	619	0	274	75	0	73
V/C Ratio(X)	0.78	0.24	0.27	0.78	0.31	0.31	0.85	0.00	0.03	0.66	0.00	0.37
Avail Cap(c_a), veh/h	175	1928	1144	181	1824	980	1034	0	458	259	0	249
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.94	0.94	0.94	0.90	0.90	0.90	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.9	24.2	10.1	46.7	0.0	0.0	42.2	0.0	36.2	49.6	0.0	49.0
Incr Delay (d2), s/veh	4.6	0.3	0.5	4.8	0.4	0.7	1.5	0.0	0.0	3.7	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	5.7	7.6	1.8	0.1	0.2	6.8	0.0	0.2	1.4	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	24.5	10.7	51.5	0.4	0.7	43.7	0.0	36.2	53.2	0.0	50.1
LnGrp LOS	E	C	B	D	A	A	D	A	D	D	A	D
Approach Vol, veh/h		852			928			533				77
Approach Delay, s/veh		22.4			4.4			43.6				52.2
Approach LOS		C			A			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	62.9		9.4	10.5	62.2		23.0				
Change Period (Y+Rc), s	4.5	5.0		5.0	4.5	5.0		5.0				
Max Green Setting (Gmax), s	10.5	30.0		15.0	10.5	30.0		30.0				
Max Q Clear Time (g_c+l1), s	6.0	14.1		4.9	6.7	2.0		16.8				
Green Ext Time (p_c), s	0.0	2.0		0.0	0.0	2.2		0.7				

Intersection Summary

HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.

Intersection ID and Name	NB PhasingType	SB PhasingType	EB PhasingType	WB PhasingType	Cycle Length	Lost Time	Use Overlap Calculator
1: I-5 SB Ramp & Boones Ferry Rd/Elligsen Rd		Split			105	14	
2: I-5 NB Ramp & Elligsen Rd	Protected				105	10	
3: Parkway Ave & Elligsen Rd	Split	Split	Protected	Protected	105	19.5	

Item 2.

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		WBL/EBT	EBL/WBT	NBL/SBT	SBL/NBT	V/S E/W	V/S N/S
Adj Flow Rate, veh/l	0	904	0	0	823	0	0	0	0	232	275	148	Protected	0.25	0.23	0.15	0.13		
Sat Flow, veh/h	0	3618	1560	0	3532	1598	0	0	0	1753	1781	1415	Permitted or Split	0.25	0.23	0.15	0.00		
V/S	0.00	0.25	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.13	0.15	0.10	selected phasing	0.25	0.23	0.15	0.00	0.25	0.15
Adj Flow Rate, veh/l	0	714	0	0	950	0	380	0	0	0	0	0	Protected	0.20	0.26	0.12	0.00		
Sat Flow, veh/h	0	3647	1535	0	3676	1572	3291	0	1572	0	0	0	Permitted or Split	0.20	0.26	0.00	0.12		
V/S	0.00	0.20	0.00	0.00	0.26	0.00	0.12	0.00	0.00	0.00	0.00	0.00	selected phasing	0.20	0.26	0.12	0.12	0.26	0.12
Adj Flow Rate, veh/l	78	470	304	71	819	38	526	0	7	50	21	6	Protected	0.23	0.21	0.16	0.03		
Sat Flow, veh/h	1753	3497	1575	1810	4922	228	3619	0	1602	1810	1358	388	Permitted or Split	0.19	0.17	0.03	0.15		
V/S	0.04	0.13	0.19	0.04	0.17	0.17	0.15	0.00	0.00	0.03	0.02	0.02	selected phasing	0.23	0.21	0.03	0.15	0.23	0.17

Overlap Critical Flow Calculator	NBR OV	NB OV V/S	SBR OV	SB OV V/S	EBR OV	EB OV V/S	WBR OV	WB OV V/S	V/S Overlap	Intersection VI	HCM 6th Ctrl Dela	HCM 6th LO	Synchro ID
Right Turn Overlap	No	0.00	No	0.00	No	0.00	No	0.00	0.00	0.00			
Right Turn Approach Phasing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No OV				
Overlap Approach Phasing	0.00	0.25	0.00	0.25	0.00	0.15	0.00	0.15	N/A	0.46	13	B	1
Right Turn Overlap	No	0.00	No	0.00	No	0.00	No	0.00	0.00	0.00			
Right Turn Approach Phasing	Protected	0.12	Protected	0.12	0.00	0.00	0.00	0.00	No OV				
Overlap Approach Phasing	0.00	0.26	0.00	0.26	Protected	0.00	Protected	0.00	N/A	0.41	9	A	2
Right Turn Overlap	No	0.00	No	0.00	No	0.00	No	0.00	0.00	0.00			
Right Turn Approach Phasing	Split	0.03	Split	0.15	Protected	0.04	Protected	0.04	No OV				
Overlap Approach Phasing	Protected	0.19	Protected	0.19	Split	0.03	Split	0.15	N/A	0.50	21	C	3

# APPENDIX E: HCM REPORT – EXISTING + PROJECT

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# HCM 6th Signalized Intersection Summary

## 1: I-5 SB Ramp & Boones Ferry Rd/Elligsen Rd

Existing + Project - PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑	↗				↘	↖	↖
Traffic Volume (veh/h)	0	884	704	0	809	518	0	0	0	339	123	528
Future Volume (veh/h)	0	884	704	0	809	518	0	0	0	339	123	528
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1841	0	1811	1885				1841	1781	1678
Adj Flow Rate, veh/h	0	911	0	0	834	0				238	282	205
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	3	4	0	6	1				4	8	15
Cap, veh/h	0	2573		0	2511					323	329	261
Arrive On Green	0.00	1.00	0.00	0.00	1.00	0.00				0.18	0.18	0.18
Sat Flow, veh/h	0	3618	1560	0	3532	1598				1753	1781	1415
Grp Volume(v), veh/h	0	911	0	0	834	0				238	282	205
Grp Sat Flow(s),veh/h/ln	0	1763	1560	0	1721	1598				1753	1781	1415
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				13.5	16.1	14.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				13.5	16.1	14.5
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2573		0	2511					323	329	261
V/C Ratio(X)	0.00	0.35		0.00	0.33					0.74	0.86	0.79
Avail Cap(c_a), veh/h	0	2573		0	2511					417	424	337
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.83	0.00	0.00	0.88	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				40.4	41.5	40.8
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.3	0.0				3.8	11.7	7.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.1	0.0				5.9	7.9	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.3	0.0	0.0	0.3	0.0				44.2	53.2	48.3
LnGrp LOS	A	A		A	A					D	D	D
Approach Vol, veh/h		911			834						725	
Approach Delay, s/veh		0.3			0.3						48.9	
Approach LOS		A			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		80.6		24.4		80.6						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		70.0		25.0		42.0						
Max Q Clear Time (g_c+I1), s		2.0		18.1		2.0						
Green Ext Time (p_c), s		8.6		1.3		7.4						

### Intersection Summary

HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

### Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



# HCM 6th Signalized Intersection Summary

## 2: I-5 NB Ramp & Elligsen Rd

Existing + Project - PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑	↑↑		↑			
Traffic Volume (veh/h)	0	718	505	0	955	548	372	0	272	0	0	0
Future Volume (veh/h)	0	718	505	0	955	548	372	0	272	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1811	0	1885	1856	1781	0	1856			
Adj Flow Rate, veh/h	0	733	0	0	974	0	380	0	0			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	2	6	0	1	3	8	0	3			
Cap, veh/h	0	2729		0	2750		466	0				
Arrive On Green	0.00	1.00	0.00	0.00	1.00	0.00	0.14	0.00	0.00			
Sat Flow, veh/h	0	3647	1535	0	3676	1572	3291	0	1572			
Grp Volume(v), veh/h	0	733	0	0	974	0	380	0	0			
Grp Sat Flow(s),veh/h/ln	0	1777	1535	0	1791	1572	1646	0	1572			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.0			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2729		0	2750		466	0				
V/C Ratio(X)	0.00	0.27		0.00	0.35		0.81	0.00				
Avail Cap(c_a), veh/h	0	2729		0	2750		1113	0				
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.90	0.00	0.00	0.87	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.7	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.3	0.0	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.1	0.0	4.8	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.2	0.0	0.0	0.3	0.0	45.9	0.0	0.0			
LnGrp LOS	A	A		A	A		D	A				
Approach Vol, veh/h		733			974			380				
Approach Delay, s/veh		0.2			0.3			45.9				
Approach LOS		A			A			D				
Timer - Assigned Phs		2			6			8				
Phs Duration (G+Y+Rc), s		85.6			85.6			19.4				
Change Period (Y+Rc), s		5.0			5.0			4.5				
Max Green Setting (Gmax), s		60.0			60.0			35.5				
Max Q Clear Time (g_c+I1), s		2.0			2.0			13.8				
Green Ext Time (p_c), s		6.4			9.4			1.1				

### Intersection Summary

HCM 6th Ctrl Delay	8.6
HCM 6th LOS	A

### Notes

Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

# HCM 6th Signalized Intersection Summary

## 3: Parkway Ave & Elligsen Rd

Existing + Project - PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗↗		↘	↗	↘	↘	↗	↘
Traffic Volume (veh/h)	102	451	437	68	786	47	495	15	44	59	23	222
Future Volume (veh/h)	102	451	437	68	786	47	495	15	44	59	23	222
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1900	1900	1841	1870	1900	1678	1900	1900	1826	1900
Adj Flow Rate, veh/h	106	470	300	71	819	45	527	0	6	61	24	42
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	0	0	4	2	0	15	0	0	5	0
Cap, veh/h	133	1869	1118	91	2481	136	620	0	275	105	34	60
Arrive On Green	0.02	0.18	0.18	0.10	1.00	1.00	0.17	0.00	0.17	0.06	0.06	0.06
Sat Flow, veh/h	1753	3497	1575	1810	4875	267	3619	0	1602	1810	589	1032
Grp Volume(v), veh/h	106	470	300	71	562	302	527	0	6	61	0	66
Grp Sat Flow(s),veh/h/ln	1753	1749	1575	1810	1675	1792	1810	0	1602	1810	0	1621
Q Serve(g_s), s	6.3	12.2	11.1	4.0	0.0	0.0	14.8	0.0	0.3	3.4	0.0	4.2
Cycle Q Clear(g_c), s	6.3	12.2	11.1	4.0	0.0	0.0	14.8	0.0	0.3	3.4	0.0	4.2
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	133	1869	1118	91	1705	912	620	0	275	105	0	94
V/C Ratio(X)	0.80	0.25	0.27	0.78	0.33	0.33	0.85	0.00	0.02	0.58	0.00	0.70
Avail Cap(c_a), veh/h	175	1869	1118	181	1705	912	1034	0	458	259	0	232
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.93	0.93	0.93	0.88	0.88	0.88	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.4	25.1	10.9	46.7	0.0	0.0	42.2	0.0	36.2	48.2	0.0	48.5
Incr Delay (d2), s/veh	12.0	0.3	0.5	4.7	0.5	0.9	1.6	0.0	0.0	1.9	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	5.7	7.5	1.8	0.1	0.2	6.8	0.0	0.1	1.6	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4	25.4	11.5	51.4	0.5	0.9	43.8	0.0	36.2	50.0	0.0	52.0
LnGrp LOS	E	C	B	D	A	A	D	A	D	D	A	D
Approach Vol, veh/h		876			935			533				127
Approach Delay, s/veh		25.1			4.5			43.7				51.0
Approach LOS		C			A			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	61.1		11.1	12.5	58.4		23.0				
Change Period (Y+Rc), s	4.5	5.0		5.0	4.5	5.0		5.0				
Max Green Setting (Gmax), s	10.5	30.0		15.0	10.5	30.0		30.0				
Max Q Clear Time (g_c+I1), s	6.0	14.2		6.2	8.3	2.0		16.8				
Green Ext Time (p_c), s	0.0	1.9		0.1	0.0	2.2		0.7				

### Intersection Summary

HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C

### Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.

Item 2.

Intersection ID and Name	NB PhasingType	SB PhasingType	EB PhasingType	WB PhasingType	Cycle Length	Lost Time	Use Overlap Calculator
1: I-5 SB Ramp & Boones Ferry Rd/Elligsen Rd		Split			105	14	
2: I-5 NB Ramp & Elligsen Rd	Protected				105	10	
3: Parkway Ave & Elligsen Rd	Split	Split	Protected	Protected	105	19.5	

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		WBL/EBT	EBL/WBT	NBL/SBT	SBL/NBT	V/S E/W	V/S N/S
Adj Flow Rate, veh/l	0	911	0	0	834	0	0	0	0	238	282	205	Protected	0.25	0.24	0.16	0.14		
Sat Flow, veh/h	0	3618	1560	0	3532	1598	0	0	0	1753	1781	1415	Permitted or Split	0.25	0.24	0.16	0.00		
WS	0.00	0.25	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.14	0.16	0.14	selected phasing	0.25	0.24	0.16	0.00	0.25	0.16
Adj Flow Rate, veh/l	0	733	0	0	974	0	380	0	0	0	0	0	Protected	0.20	0.26	0.12	0.00		
Sat Flow, veh/h	0	3647	1535	0	3676	1572	3291	0	1572	0	0	0	Permitted or Split	0.20	0.26	0.00	0.12		
WS	0.00	0.20	0.00	0.00	0.26	0.00	0.12	0.00	0.00	0.00	0.00	0.00	selected phasing	0.20	0.26	0.12	0.12	0.26	0.12
Adj Flow Rate, veh/l	106	470	300	71	819	45	527	0	6	61	24	42	Protected	0.23	0.23	0.19	0.04		
Sat Flow, veh/h	1753	3497	1575	1810	4875	267	3619	0	1602	1810	589	1032	Permitted or Split	0.19	0.17	0.04	0.15		
WS	0.06	0.13	0.19	0.04	0.17	0.17	0.15	0.00	0.00	0.03	0.04	0.04	selected phasing	0.23	0.23	0.04	0.15	0.23	0.19

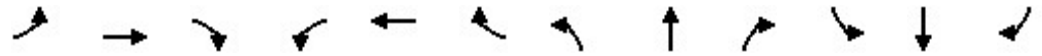
	NBR OV	NB OV V/S	SBR OV	SB OV V/S	EBR OV	EB OV V/S	WBR OV	WB OV V/S	V/S Overlap	Intersection VI	HCM 6th Ctrl Dela	HCM 6th LO	Synchro ID
Right Turn Overlap	No	0.00	No	0.00	No	0.00	No	0.00	0.00				
Right Turn Approach Phasing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No OV				
Overlap Approach Phasing	0.00	0.25	0.00	0.25	0.00	0.16	0.00	0.16	N/A	<b>0.47</b>	<b>15</b>	<b>B</b>	<b>1</b>
Right Turn Overlap	No	0.00	No	0.00	No	0.00	No	0.00	0.00				
Right Turn Approach Phasing	Protected	0.12	Protected	0.12	0.00	0.00	0.00	0.00	No OV				
Overlap Approach Phasing	0.00	0.26	0.00	0.26	Protected	0.00	Protected	0.00	N/A	<b>0.42</b>	<b>9</b>	<b>A</b>	<b>2</b>
Right Turn Overlap	No	0.00	No	0.00	No	0.00	No	0.00	0.00				
Right Turn Approach Phasing	Split	0.04	Split	0.15	Protected	0.06	Protected	0.06	No OV				
Overlap Approach Phasing	Protected	0.19	Protected	0.19	Split	0.04	Split	0.15	N/A	<b>0.51</b>	<b>23</b>	<b>C</b>	<b>3</b>

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## **APPENDIX F: HCM REPORT – EXISTING + STAGE II**

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HCM 6th Signalized Intersection Summary  
 1: I-5 SB Ramp & Boones Ferry Rd/Elligsen Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑	↗				↘	↖	↖
Traffic Volume (veh/h)	0	910	717	0	820	510	0	0	0	346	123	558
Future Volume (veh/h)	0	910	717	0	820	510	0	0	0	346	123	558
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1841	0	1811	1885				1841	1781	1678
Adj Flow Rate, veh/h	0	938	0	0	845	0				242	288	265
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	3	4	0	6	1				4	8	15
Cap, veh/h	0	2482		0	2422					369	375	298
Arrive On Green	0.00	1.00	0.00	0.00	1.00	0.00				0.21	0.21	0.21
Sat Flow, veh/h	0	3618	1560	0	3532	1598				1753	1781	1416
Grp Volume(v), veh/h	0	938	0	0	845	0				242	288	265
Grp Sat Flow(s),veh/h/ln	0	1763	1560	0	1721	1598				1753	1781	1416
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				13.3	16.0	19.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				13.3	16.0	19.1
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2482		0	2422					369	375	298
V/C Ratio(X)	0.00	0.38		0.00	0.35					0.66	0.77	0.89
Avail Cap(c_a), veh/h	0	2482		0	2422					417	424	337
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(l)	0.00	0.81	0.00	0.00	0.88	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				38.0	39.1	40.3
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.3	0.0				2.5	6.6	21.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.1	0.0				5.7	7.4	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.4	0.0	0.0	0.3	0.0				40.5	45.7	61.7
LnGrp LOS	A	A		A	A					D	D	E
Approach Vol, veh/h		938			845						795	
Approach Delay, s/veh		0.4			0.3						49.5	
Approach LOS		A			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		77.9		27.1		77.9						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		70.0		25.0		42.0						
Max Q Clear Time (g_c+I1), s		2.0		21.1		2.0						
Green Ext Time (p_c), s		9.0		1.0		7.5						

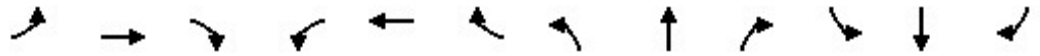
Intersection Summary

HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
2: I-5 NB Ramp & Elligsen Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑	↗	↖↖		↗			
Traffic Volume (veh/h)	0	725	531	0	939	553	391	0	267	0	0	0
Future Volume (veh/h)	0	725	531	0	939	553	391	0	267	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1811	0	1885	1856	1781	0	1856			
Adj Flow Rate, veh/h	0	740	0	0	958	0	399	0	0			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	2	6	0	1	3	8	0	3			
Cap, veh/h	0	2707		0	2728		486	0				
Arrive On Green	0.00	1.00	0.00	0.00	1.00	0.00	0.15	0.00	0.00			
Sat Flow, veh/h	0	3647	1535	0	3676	1572	3291	0	1572			
Grp Volume(v), veh/h	0	740	0	0	958	0	399	0	0			
Grp Sat Flow(s),veh/h/ln	0	1777	1535	0	1791	1572	1646	0	1572			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	12.3	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	12.3	0.0	0.0			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2707		0	2728		486	0				
V/C Ratio(X)	0.00	0.27		0.00	0.35		0.82	0.00				
Avail Cap(c_a), veh/h	0	2707		0	2728		1113	0				
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.89	0.00	0.00	0.88	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.4	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.3	0.0	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.1	0.0	5.0	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.2	0.0	0.0	0.3	0.0	45.6	0.0	0.0			
LnGrp LOS	A	A		A	A		D	A				
Approach Vol, veh/h		740			958			399				
Approach Delay, s/veh		0.2			0.3			45.6				
Approach LOS		A			A			D				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		85.0				85.0		20.0				
Change Period (Y+Rc), s		5.0				5.0		4.5				
Max Green Setting (Gmax), s		60.0				60.0		35.5				
Max Q Clear Time (g_c+I1), s		2.0				2.0		14.3				
Green Ext Time (p_c), s		6.4				9.2		1.2				

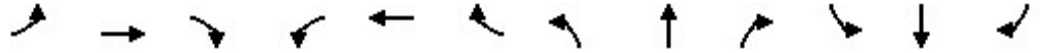
Intersection Summary

HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Notes

Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
3: Parkway Ave & Elligsen Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	462	437	74	791	41	495	14	52	49	21	206
Future Volume (veh/h)	93	462	437	74	791	41	495	14	52	49	21	206
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1900	1900	1841	1870	1900	1678	1900	1900	1826	1900
Adj Flow Rate, veh/h	97	481	298	77	824	39	527	0	12	51	22	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	0	0	4	2	0	15	0	0	5	0
Cap, veh/h	123	1907	1135	98	2604	123	620	0	275	78	48	26
Arrive On Green	0.02	0.18	0.18	0.11	1.00	1.00	0.17	0.00	0.17	0.04	0.04	0.04
Sat Flow, veh/h	1753	3497	1575	1810	4917	232	3619	0	1602	1810	1102	601
Grp Volume(v), veh/h	97	481	298	77	561	302	527	0	12	51	0	34
Grp Sat Flow(s),veh/h/ln	1753	1749	1575	1810	1675	1799	1810	0	1602	1810	0	1703
Q Serve(g_s), s	5.8	12.4	10.8	4.4	0.0	0.0	14.8	0.0	0.7	2.9	0.0	2.0
Cycle Q Clear(g_c), s	5.8	12.4	10.8	4.4	0.0	0.0	14.8	0.0	0.7	2.9	0.0	2.0
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	123	1907	1135	98	1775	953	620	0	275	78	0	74
V/C Ratio(X)	0.79	0.25	0.26	0.78	0.32	0.32	0.85	0.00	0.04	0.65	0.00	0.46
Avail Cap(c_a), veh/h	175	1907	1135	181	1775	953	1034	0	458	259	0	243
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.5	24.7	10.4	46.2	0.0	0.0	42.2	0.0	36.3	49.4	0.0	49.0
Incr Delay (d2), s/veh	8.5	0.3	0.5	4.5	0.4	0.8	1.6	0.0	0.0	3.4	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	5.8	7.4	2.0	0.1	0.2	6.8	0.0	0.3	1.4	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.0	25.0	10.9	50.7	0.4	0.8	43.7	0.0	36.3	52.8	0.0	50.7
LnGrp LOS	E	C	B	D	A	A	D	A	D	D	A	D
Approach Vol, veh/h		876			940			539				85
Approach Delay, s/veh		23.9			4.7			43.6				52.0
Approach LOS		C			A			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	62.3		9.5	11.8	60.6		23.0				
Change Period (Y+Rc), s	4.5	5.0		5.0	4.5	5.0		5.0				
Max Green Setting (Gmax), s	10.5	30.0		15.0	10.5	30.0		30.0				
Max Q Clear Time (g_c+I1), s	6.4	14.4		4.9	7.8	2.0		16.8				
Green Ext Time (p_c), s	0.0	2.0		0.0	0.0	2.2		0.7				

Intersection Summary												
HCM 6th Ctrl Delay				21.8								
HCM 6th LOS				C								

**Notes**  
 User approved volume balancing among the lanes for turning movement.  
 User approved changes to right turn type.

Intersection ID and Name	NB Phasing Type	SB Phasing Type	EB Phasing Type	WB Phasing Type	Cycle Length	Lost Time	Use Overlap Calculator
1: I-5 SB Ramp & Boones Ferry Rd/Elligsen Rd		Split			105	14	
2: I-5 NB Ramp & Elligsen Rd	Protected				105	10	
3: Parkway Ave & Elligsen Rd	Split	Split	Protected	Protected	105	19.5	

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		WBL/EBT	EBL/WBT	NBL/SBT	SBL/NBT	V/S E/W	V/S N/S
Adj Flow Rate, veh/l	0	938	0	0	845	0	0	0	0	242	288	265	Protected	0.26	0.24	0.19	0.14		
Sat Flow, veh/h	0	3618	1560	0	3532	1598	0	0	0	1753	1781	1416	Permitted or Split	0.26	0.24	0.19	0.00		
V/S	0.00	0.26	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.14	0.16	0.19	selected phasing	0.26	0.24	0.19	0.00	0.26	0.19
Adj Flow Rate, veh/l	0	740	0	0	958	0	399	0	0	0	0	0	Protected	0.20	0.26	0.12	0.00		
Sat Flow, veh/h	0	3647	1535	0	3676	1572	3291	0	1572	0	0	0	Permitted or Split	0.20	0.26	0.00	0.12		
V/S	0.00	0.20	0.00	0.00	0.26	0.00	0.12	0.00	0.00	0.00	0.00	0.00	selected phasing	0.20	0.26	0.12	0.12	0.26	0.12
Adj Flow Rate, veh/l	97	481	298	77	824	39	527	0	12	51	22	12	Protected	0.23	0.22	0.17	0.04		
Sat Flow, veh/h	1753	3497	1575	1810	4917	232	3619	0	1602	1810	1102	601	Permitted or Split	0.19	0.17	0.03	0.15		
V/S	0.06	0.14	0.19	0.04	0.17	0.17	0.15	0.00	0.01	0.03	0.02	0.02	selected phasing	0.23	0.22	0.03	0.15	0.23	0.17

	NBR OV	NB OV V/S	SBR OV	SB OV V/S	EBR OV	EB OV V/S	WBR OV	WB OV V/S	V/S Overlap	Intersection VI	HCM 6th Ctrl Dela	HCM 6th LOS	Synchro ID
Right Turn Overlap	No	0.00	No	0.00	No	0.00	No	0.00	0.00				
Right Turn Approach Phasing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No OV				
Overlap Approach Phasing	0.00	0.26	0.00	0.26	0.00	0.19	0.00	0.19	N/A	<b>0.51</b>	<b>16</b>	<b>B</b>	<b>1</b>
Right Turn Overlap	No	0.00	No	0.00	No	0.00	No	0.00	0.00				
Right Turn Approach Phasing	Protected	0.12	Protected	0.12	0.00	0.00	0.00	0.00	No OV				
Overlap Approach Phasing	0.00	0.26	0.00	0.26	Protected	0.00	Protected	0.00	N/A	<b>0.42</b>	<b>9</b>	<b>A</b>	<b>2</b>
Right Turn Overlap	No	0.00	No	0.00	No	0.00	No	0.00	0.00				
Right Turn Approach Phasing	Split	0.03	Split	0.15	Protected	0.06	Protected	0.06	No OV				
Overlap Approach Phasing	Protected	0.19	Protected	0.19	Split	0.03	Split	0.15	N/A	<b>0.50</b>	<b>22</b>	<b>C</b>	<b>3</b>

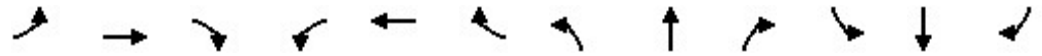


**APPENDIX G: HCM REPORT – EXISTING + PROJECT + STAGE II**

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HCM 6th Signalized Intersection Summary  
 1: I-5 SB Ramp & Boones Ferry Rd/Elligsen Rd

Wilsonville Lamborghini T Item 2.  
 Existing + Stage II + Project - PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑	↗				↘	↖	↖
Traffic Volume (veh/h)	0	917	717	0	831	523	0	0	0	357	123	558
Future Volume (veh/h)	0	917	717	0	831	523	0	0	0	357	123	558
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1841	0	1811	1885				1841	1781	1678
Adj Flow Rate, veh/h	0	945	0	0	857	0				248	296	276
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	3	4	0	6	1				4	8	15
Cap, veh/h	0	2459		0	2400					380	386	307
Arrive On Green	0.00	1.00	0.00	0.00	1.00	0.00				0.22	0.22	0.22
Sat Flow, veh/h	0	3618	1560	0	3532	1598				1753	1781	1416
Grp Volume(v), veh/h	0	945	0	0	857	0				248	296	276
Grp Sat Flow(s),veh/h/ln	0	1763	1560	0	1721	1598				1753	1781	1416
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				13.5	16.4	19.9
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				13.5	16.4	19.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2459		0	2400					380	386	307
V/C Ratio(X)	0.00	0.38		0.00	0.36					0.65	0.77	0.90
Avail Cap(c_a), veh/h	0	2459		0	2400					417	424	337
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.81	0.00	0.00	0.88	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				37.5	38.6	40.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.4	0.0				2.6	6.8	23.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.1	0.0				5.8	7.6	16.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.4	0.0	0.0	0.4	0.0				40.1	45.4	63.5
LnGrp LOS	A	A		A	A					D	D	E
Approach Vol, veh/h		945			857						820	
Approach Delay, s/veh		0.4			0.4						49.9	
Approach LOS		A			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		77.2		27.8		77.2						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		70.0		25.0		42.0						
Max Q Clear Time (g_c+I1), s		2.0		21.9		2.0						
Green Ext Time (p_c), s		9.1		0.9		7.6						

Intersection Summary

HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 2: I-5 NB Ramp & Elligsen Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑	↗	↗↗		↗			
Traffic Volume (veh/h)	0	743	531	0	963	569	391	0	276	0	0	0
Future Volume (veh/h)	0	743	531	0	963	569	391	0	276	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1811	0	1885	1856	1781	0	1856			
Adj Flow Rate, veh/h	0	758	0	0	983	0	399	0	0			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	2	6	0	1	3	8	0	3			
Cap, veh/h	0	2707		0	2728		486	0				
Arrive On Green	0.00	1.00	0.00	0.00	1.00	0.00	0.15	0.00	0.00			
Sat Flow, veh/h	0	3647	1535	0	3676	1572	3291	0	1572			
Grp Volume(v), veh/h	0	758	0	0	983	0	399	0	0			
Grp Sat Flow(s),veh/h/ln	0	1777	1535	0	1791	1572	1646	0	1572			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	12.3	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	12.3	0.0	0.0			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2707		0	2728		486	0				
V/C Ratio(X)	0.00	0.28		0.00	0.36		0.82	0.00				
Avail Cap(c_a), veh/h	0	2707		0	2728		1113	0				
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.89	0.00	0.00	0.86	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.4	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.3	0.0	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.1	0.0	5.0	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.2	0.0	0.0	0.3	0.0	45.6	0.0	0.0			
LnGrp LOS	A	A		A	A		D	A				
Approach Vol, veh/h		758			983			399				
Approach Delay, s/veh		0.2			0.3			45.6				
Approach LOS		A			A			D				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		85.0				85.0		20.0				
Change Period (Y+Rc), s		5.0				5.0		4.5				
Max Green Setting (Gmax), s		60.0				60.0		35.5				
Max Q Clear Time (g_c+I1), s		2.0				2.0		14.3				
Green Ext Time (p_c), s		6.6				9.6		1.2				

Intersection Summary

HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

# HCM 6th Signalized Intersection Summary

## 3: Parkway Ave & Elligsen Rd

Wilsonville Lamborghini T Item 2.  
Existing + Stage II + Project - PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	462	437	74	791	48	495	16	52	60	24	246
Future Volume (veh/h)	120	462	437	74	791	48	495	16	52	60	24	246
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1900	1900	1841	1870	1900	1678	1900	1900	1826	1900
Adj Flow Rate, veh/h	125	481	300	77	824	46	528	0	12	62	25	54
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	0	0	4	2	0	15	0	0	5	0
Cap, veh/h	154	1824	1098	98	2377	132	621	0	275	121	34	74
Arrive On Green	0.03	0.17	0.17	0.11	0.98	0.98	0.17	0.00	0.17	0.07	0.07	0.07
Sat Flow, veh/h	1753	3497	1575	1810	4871	271	3619	0	1602	1810	510	1101
Grp Volume(v), veh/h	125	481	300	77	566	304	528	0	12	62	0	79
Grp Sat Flow(s),veh/h/ln	1753	1749	1575	1810	1675	1792	1810	0	1602	1810	0	1610
Q Serve(g_s), s	7.4	12.5	11.3	4.4	0.6	0.6	14.9	0.0	0.7	3.5	0.0	5.1
Cycle Q Clear(g_c), s	7.4	12.5	11.3	4.4	0.6	0.6	14.9	0.0	0.7	3.5	0.0	5.1
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	154	1824	1098	98	1635	874	621	0	275	121	0	108
V/C Ratio(X)	0.81	0.26	0.27	0.78	0.35	0.35	0.85	0.00	0.04	0.51	0.00	0.73
Avail Cap(c_a), veh/h	175	1824	1098	181	1635	874	1034	0	458	259	0	230
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.93	0.93	0.93	0.88	0.88	0.88	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.1	26.0	11.6	46.2	0.7	0.7	42.2	0.0	36.3	47.3	0.0	48.1
Incr Delay (d2), s/veh	18.3	0.3	0.6	4.5	0.5	1.0	1.6	0.0	0.0	1.2	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	5.9	7.6	2.0	0.3	0.4	6.8	0.0	0.3	1.6	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	26.3	12.1	50.7	1.2	1.6	43.8	0.0	36.3	48.6	0.0	51.6
LnGrp LOS	E	C	B	D	A	A	D	A	D	D	A	D
Approach Vol, veh/h		906			947			540			141	
Approach Delay, s/veh		27.4			5.3			43.6			50.3	
Approach LOS		C			A			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	59.8		12.0	13.7	56.2		23.0				
Change Period (Y+Rc), s	4.5	5.0		5.0	4.5	5.0		5.0				
Max Green Setting (Gmax), s	10.5	30.0		15.0	10.5	30.0		30.0				
Max Q Clear Time (g_c+I1), s	6.4	14.5		7.1	9.4	2.6		16.9				
Green Ext Time (p_c), s	0.0	2.0		0.1	0.0	2.2		0.7				

### Intersection Summary

HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

### Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.

Intersection ID and Name	NB PhasingType	SB PhasingType	EB PhasingType	WB PhasingType	Cycle Leng	Lost Time	Use Overlap Calculator
1: I-5 SB Ramp & Boones Ferry Rd/Elligsen Rd		Split			105	14	
2: I-5 NB Ramp & Elligsen Rd	Protected				105	10	
3: Parkway Ave & Elligsen Rd	Split	Split	Protected	Protected	105	19.5	

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		WBL/EBT	EBL/WBT	NBL/SBT	SBL/NBT	VIS E/W	VIS N/S
Adj Flow Rate, veh/l	0	945	0	0	857	0	0	0	0	248	296	276	Protected	0.26	0.24	0.19	0.14		
Sat Flow, veh/h	0	3618	1560	0	3532	1598	0	0	0	1753	1781	1416	Permitted or Split	0.26	0.24	0.19	0.00		
W/S	0.00	0.26	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.14	0.17	0.19	selected phasing	0.26	0.24	0.19	0.00	0.26	0.19
Adj Flow Rate, veh/l	0	758	0	0	983	0	399	0	0	0	0	0	Protected	0.21	0.27	0.12	0.00		
Sat Flow, veh/h	0	3647	1535	0	3676	1572	3291	0	1572	0	0	0	Permitted or Split	0.21	0.27	0.00	0.12		
W/S	0.00	0.21	0.00	0.00	0.27	0.00	0.12	0.00	0.00	0.00	0.00	0.00	selected phasing	0.21	0.27	0.12	0.12	0.27	0.12
Adj Flow Rate, veh/l	125	481	300	77	824	46	528	0	12	62	25	54	Protected	0.23	0.24	0.19	0.04		
Sat Flow, veh/h	1753	3497	1575	1810	4871	271	3619	0	1602	1810	510	1101	Permitted or Split	0.19	0.17	0.05	0.15		
W/S	0.07	0.14	0.19	0.04	0.17	0.17	0.15	0.00	0.01	0.03	0.05	0.05	selected phasing	0.23	0.24	0.05	0.15	0.24	0.19

	NBR OV	NB OV V/S	SBR OV	SB OV V/S	EBR OV	EB OV V/S	WBR OV	WB OV V/S	V/S Overlap	Intersection VI	HCM 6th Ctrl Dela	HCM 6th LO	Synchro ID
Right Turn Overlap	No	0.00	No	0.00	No	0.00	No	0.00	0.00				
Right Turn Approach Phasing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No OV				
Overlap Approach Phasing	0.00	0.26	0.00	0.26	0.00	0.19	0.00	0.19	N/A	<b>0.52</b>	<b>16</b>	<b>B</b>	<b>1</b>
Right Turn Overlap	No	0.00	No	0.00	No	0.00	No	0.00	0.00				
Right Turn Approach Phasing	Protected	0.12	Protected	0.12	0.00	0.00	0.00	0.00	No OV				
Overlap Approach Phasing	0.00	0.27	0.00	0.27	Protected	0.00	Protected	0.00	N/A	<b>0.43</b>	<b>9</b>	<b>A</b>	<b>2</b>
Right Turn Overlap	No	0.00	No	0.00	No	0.00	No	0.00	0.00				
Right Turn Approach Phasing	Split	0.05	Split	0.15	Protected	0.07	Protected	0.07	No OV				
Overlap Approach Phasing	Protected	0.19	Protected	0.19	Split	0.05	Split	0.15	N/A	<b>0.54</b>	<b>24</b>	<b>C</b>	<b>3</b>

**DEVELOPMENT REVIEW BOARD MEETING**

**MONDAY, AUGUST 26, 2024  
6:30 PM**

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Board Member Communications:

3. Recent City Council Action Minutes

City Council Meeting Action Minutes  
June 17, 2024

Item 3.

**COUNCILORS PRESENT**

Mayor Fitzgerald  
Council President Akervall  
Councilor Linville  
Councilor Berry  
Councilor Dunwell

Andrea Villagrana, Human Resource Manager  
Kimberly Veliz, City Recorder  
Dan Pauly, Planning Manager  
Zoe Mombert, Assistant to the City Manager  
Dwight Brashear, Transit Director  
Zach Weigel, City Engineer  
Mike Nacrelli, Civil Engineer  
Miranda Bateschell, Planning Director  
Stephanie Davidson, Assistant City Attorney  
Kelsey Lewis, Grants & Programs Manager

**STAFF PRESENT**

Bryan Cosgrove, City Manager  
Amanda Guile-Hinman, City Attorney

AGENDA ITEM	ACTIONS
<b>WORK SESSION</b>	<b>START: 5:00 p.m.</b>
A. Statewide Transportation Improvement Fund (STIF) Plan for the FY26-27 Biennium	Staff presented and sought Council’s input on SMART’s plan for STIF expenditures for the FY 2026-2027 biennium.
B. Frog Pond East and South Master Plan Development Code	Council reviewed and provided feedback on draft City Code amendments to implement the 2022 Frog Pond East and South Master Plan prior to the upcoming public hearings.
<b>REGULAR MEETING</b>	
<u>Mayor’s Business</u>	
A. Upcoming Meetings	Upcoming meetings were announced by the Mayor as well as the regional meetings she attended on behalf of the City.
<u>Communications</u>	
A. None.	
<u>Consent Agenda</u>	The Consent Agenda was approved 5-0.
A. <b><u>Resolution No. 3149</u></b> A Resolution Of The City Of Wilsonville Authorizing The City Manager To Execute A Construction Contract With Tapani, Inc. For The West Side Level B Reservoir And Tooze Rd. Transmission Main Project (Capital Improvement Project #1149/1150/1151).	

**B. Resolution No. 3153**

A Resolution Of The City Of Wilsonville Authorizing The City Manager To Execute A Professional Services Agreement Contract Amendment With Century West Engineering For Engineering Services During Construction Of The 2024 Street Maintenance Project (Capital Improvement Project No. 4014, 4118, 4725).

**C. Resolution No. 3154**

A Resolution Adopting The Canvass Of Votes Of The May 21, 2024 Primary Election.

**D. Resolution No. 3157**

A Resolution Of The City Of Wilsonville Authorizing A Three Year Capital Interfund Loan From The Road Operating Fund To The Street Capital Projects Fund.

**E. Resolution No. 3158**

A Resolution Of The City Of Wilsonville Authorizing The City Manager To Execute The Amended And Restated Intergovernmental Agreement Of Regional Water Provider Consortium (2023).

**F. Resolution No. 3159**

A Resolution Of The City Of Wilsonville Authorizing The City Manager To Amend A Construction Contract With Woodburn Construction CM/GC, LLC., Inc. To Construct The Wilsonville Police Department Interim Renovations.

**G. Resolution No. 3160**

A Resolution Of The City Of Wilsonville Authorizing A Two Year Capital Interfund Loan From The Water Operating Fund To The Street Capital Projects Fund.

H. Minutes of the May 17, 2024 Special City Council Meeting.

**New Business**

**A. Resolution No. 3150**

A Resolution Of The City Of Wilsonville Adopting Administrative Rules Relating To Public Contracting Activities.

Resolution No. 3150 was adopted 5-0.

**B. Resolution No. 3151**

A Resolution Of The City Of Wilsonville Amending The Public Art Policy And Guidelines.

Resolution No. 3151 was adopted 5-0.



<u>Continuing Business</u> A. None.	
<u>Public Hearing</u> A. None.	
<u>City Manager's Business</u>	The City Manager informed Council of dates he would be out of the office on vacation.
<u>Legal Business</u>	Council moved to authorize City staff to file an appeal with the Land Use Board of Appeals on casefile number L240001-D(IND) if a decision adverse to the City is rendered. Passed 5-0.  The City Attorney informed Council of dates she would be out of the office on vacation.
<b>ADJOURN</b>	8:07 p.m.