



DEVELOPMENT REVIEW BOARD PANEL B AGENDA

August 22, 2022 at 6:30 PM

Wilsonville City Hall & Remote Video Conferencing

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. 406
to Cindy Luxhoj, AICP, Associate Planner at
luxhoj@ci.wilsonville.or.us
by 2:00 PM on August 22, 2022.

CALL TO ORDER

CHAIR'S REMARKS

ROLL CALL

Nicole Hendrix
Michael Horn
John Andrews

Jason Abernathy
Katie Dunwell

CITIZEN INPUT

CONSENT AGENDA

1. Approval of minutes of July 25, 2022 DRB Panel B meeting

PUBLIC HEARINGS

2. **Resolution No. 406 Frog Pond Terrace Subdivision.** The applicant is requesting approval of Annexation of approximately 11.17 acres and Zone Map Amendment from Rural Residential Farm Forest 5-Acre (RRFF-5) to Residential Neighborhood (RN) of approximately 10.94 acres, a Stage 1 Preliminary Plan, Stage 2 Final Plan, Site Design Review of parks and open space, Tentative Subdivision Plat, Type C Tree Plan, Abbreviated SROZ Map Verification, and Abbreviated SRIR Review for a 19-lot residential subdivision.

Case Files:

DB22-0003 Frog Pond Terrace
-Annexation (ANNX22-0002)

- Zone Map Amendment (ZONE22-0003)
- Stage 1 Preliminary Plan (STG122-0003)
- Stage 2 Final Plan (STG222-0003)
- Site Design Review of Parks and Open Space (SDR22-0003)
- Tentative Subdivision Plat (SUBD22-0002)
- Type C Tree Plan (TPLN22-0002)
- SROZ Map Verification (SROZ22-0005)
- SRIR Review (SRIR22-0003)

The DRB Action on the Annexation and Zone Map Amendment is a recommendation to the City Council.

BOARD MEMBER COMMUNICATIONS

- [3.](#) Results of the August 8, 2022 DRB Panel A meeting
- [4.](#) 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   int  rpretes disponibles para aqu  llas personas que no hablan Ingl  s, previo acuerdo. Comun  quese al 503-682-4960.

DEVELOPMENT REVIEW BOARD MEETING

**MONDAY, AUGUST 22, 2022
6:30 PM**

Consent Agenda:

1. Approval of minutes from the July 25, 2022 DRB Panel B meeting



**DEVELOPMENT REVIEW BOARD PANEL B
MEETING MINUTES**

July 25, 2022 at 6:30 PM

City Hall Council Chambers & Remote Video Conferencing

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, July 25, 2022. Chair Nicole Hendrix called the meeting to order at 6:30 p.m., followed by roll call.

CHAIR'S REMARKS

ROLL CALL

Present for roll call were: Nicole Hendrix, Katie Dunwell, and John Andrews. Michael Horn and Jason Abernathy were absent.

Staff present: Daniel Pauly, Amanda Guile-Hinman, Amy Pepper, Kimberly Rybold, Cindy Luxhoj, and Shelley White

CITIZENS' 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 May 23, 2022 DRB Panel B meeting

Katie Dunwell made a motion to approve the May 23, 2022 DRB Panel B meeting minutes as presented. John Andrews seconded the motion, which passed unanimously.

PUBLIC HEARINGS

2. **Resolution No. 404 Wilsonville Industrial Yard: AAI Engineering – Applicant's Representative for Davidsons Boones Ferry Industrial LLC – Owner/Applicant.** The applicant is requesting approval of a Zone Map Amendment from Future Development Agricultural-Holding (FDA-H) to Planned Development Industrial (PDI) for 0.55 acre (Tax Lot 800), and adopting findings and conditions approving a Stage 1 Master Plan, Stage 2 Final Plan, and Site Design Review for a 54,664-square-foot industrial yard. The subject site is located at 28505 and 28635 SW Boones Ferry Road on Tax Lots 800 and 900, Section 14A, Township 3 South, Range 1 West, Willamette Meridian, Clackamas County, Oregon. Staff: Cindy Luxhoj, AICP, Associate Planner

Case Files:

- DB22-0001 Wilsonville Industrial Yard
 - Zone Map Amendment (ZONE22-0001)
 - Stage 1 Master Plan (STG122-0001)

- Stage 2 Final Plan (STG222-0001)
- Site Design Review (SDR22-0001)

Chair Hendrix called the public hearing to order at 6:35 p.m. and read the conduct of hearing format into the record. Chair Hendrix, Katie Dunwell, and John Andrews declared for the record that they 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.

Ms. Luxhoj presented the Staff report via PowerPoint, briefly noting the site's location and surrounding features and reviewing the requested applications with these key comments:

- Both tax lots that comprised the site were designated Industrial in the Comprehensive Plan, located in Area of Special Concern E in the Comprehensive Plan, and subject to requirements of the Screening and Buffering (SB) Overlay Zone along the north, west, and southwest property boundaries, which were areas shared with the mobile home park.
- Prior to 2011, there was a house on each tax lot. In 2011, the house on Tax Lot 900 was demolished and replaced with a manufactured dwelling. In 2021, the manufactured dwelling was removed. The house on Tax Lot 800 was retained and proposed to remain; however, no improvements were proposed to the house, and it would not be used as part of the current application.
 - In 2021, 11 trees were removed from both parts of the property, and the property was cleared, graded, and covered in gravel by the prior owner without City permits. The previous owner subsequently applied for a retroactive Tree Removal Permit, Case File No. TR21-0002 and replanted trees on the site in accordance with an approved mitigation plan.
- The current application by the new owner of the property was intended to bring the property into compliance with applicable City standards for an industrial yard within the PDI Zone located adjacent to a residential use in Area of Special Concern E of the Comprehensive Plan.
- Proper noticing was followed for this application. Notice of Public Hearing was mailed to all property owners within 250 ft of the subject property and published in the newspaper. Additional posting was placed on the site and on the City's website. The notice included clarifying background information about the project and outlined adaptations for the hearing process and providing testimony that were adopted by the City in response to Covid-19. No public comments were received during the comment period for the project.
- The four requests before the DRB tonight, included a Zone Map Amendment, which was a recommendation to City Council. The remaining three requests were objective in nature as they involved the verification of compliance with Code standards. No requests in the current application required discretionary review.
- Tax Lot 800, which included 0.55 acre on the northern part of the subject property, shown in black hatching, was zoned FDA-H. The Applicant proposed to rezone the tax lot from FDA-H to PDI as part of the current application. The southern part of the subject property was .79 acre and was zoned PDI. The rezone was consistent with the Comprehensive Plan designation of Industrial. (Slide 6)
- City Council would review the Zone Map Amendment Ordinance No. 865 and Case File No. ZONE22-0001 at public hearing and first reading on August 1, 2022. Second reading was scheduled for August 15, 2022. The other requests in the current application were contingent on City Council action on the Zone Map Amendment request.
- The Stage 1 Preliminary Plan proposed to use the subject property for a 54,664 sq ft industrial storage yard with an existing house and site improvements. The existing house was not proposed to be used as part of the storage yard in the current application. An outdoor storage yard was an allowed use in the PDI Zone.

- The Stage 2 Final Plan reviewed the function and design of the Stage 1 Preliminary Plan, including assuring the proposal met all the performance standards of the PDI Zone. Since no new structures were proposed on the site, site design review for the project was focused on landscaping, screening, and buffering intended to bring the property into compliance with applicable City standards.
 - Landscaping included plantings in the SB Overlay Zone along the north, west and southwest property boundaries adjacent to the mobile home park; preservation and protection of three mature existing trees on the east side of the site; preservation of 11 maple trees, shrubs, and groundcover planted as required mitigation for the retroactive tree removal permit, Case File No. TR21-0002; landscaping required to screen and buffer the outdoor storage yard from adjacent properties and public right-of-way; and fencing location and design.
- Screening and Buffering Overlay Zone. Concerns for Area of Special Concern E included continuity in design with other developments and protection of the Walnut Mobile Home Park, which was zoned FDA-H and located immediately to the north, west and southwest of the proposed industrial yard. Due to its location, the property also met the criteria for application of the SB Overlay Zone along all property boundaries shared with the mobile home park. (Slide 9)
 - Conditions of approval had been included to ensure that the proposed project met the intent of Area E and complied with the requirements of the SB Overlay Zone:
 - For the Zone Map Amendment, PDA 1 and PDA 2 related to continuity and design, buffering to minimize disturbance for residents of the mobile home park, and minimizing truck traffic conflicts with residential activities and pedestrians.
 - For the Stage 1 Preliminary Plan, PDB 2, PDB 3, and PDB 4, related to screening and buffering to assure adequate separation of potentially conflicting land use, application of the SB Overlay Zone adjacent to the mobile home park, and prohibiting vehicle access in landscaped areas required in the Overlay Zone.
 - For the Stage 2 Final Plan, PDC 5 related to screening the part of the south property boundary adjacent to the mobile home park to the SB Overlay Zone standards.
 - To comply with the requirements of the Overlay Zone and landscaping standards for outdoor storage yards, the Applicant proposed a 6-ft tall fence with privacy slats around the perimeter of the storage yard.
 - In Area A, on the east side of the site, proposed landscaping included the three preserved mature trees and two additional trees, shrubs along the fence, and groundcover.
 - In Areas B and C, on the north and west sides of the site, a 20-ft-wide buffer with trees planted 30 ft on center, shrubs, and groundcover. Area C also included the proposed stormwater facility with additional plantings.
 - In Area D, on the south side of the site, trees, shrubs, and groundcover were required. In addition, at the southwest corner of the site, screening and buffering compliant with the SB Overlay Zone, must be provided. The Applicant's plans did not show landscaping that met the standards. Therefore, conditions had been included to ensure that the standards were met.
 - Condition of Approval PDC 4 required screening of the industrial yard on all sides, and PDC 5, discussed above, was specific to providing required landscaping at the southwest corner of the site in the SB Overlay Zone Area.
- Noise Abatement. Staff noted that the industrial performance standards required limitations on noise that may be generated by truck circulation and loading or unloading activities within 100 ft of residential areas, particularly related to night operations. As noted, the Walnut Mobile Home Park shares the north, west, and part of the south project boundaries. As no new buildings were proposed on the subject property, the Applicant's Code response narrative did not address night operations.

- The proposed driveway, which provided access to the storage yard and was the entry point for trucks, and the truck circulation area within the site, were located within 100 ft of residential areas on the north and west property boundaries, which was shown in the shaded area on Slide 10.
- To minimize noise intrusion into the mobile home park, and to ensure compliance with the industrial performance standard, Condition of Approval PDC 2 had been included. This condition prohibited truck circulation and maneuvering between the hours of 10:00 pm and 7:00 am within this noise abatement area so long as the property to the north, west, and southwest was used for residential purposes. In addition, this area must be clearly marked with signs or by other means indicating this limitation. Any noises produced in violation of the Noise Ordinance were subject to enforcement procedures established in the Code.
- As noted, no discretionary review requests were included as part of the proposed application.

John Andrews stated the south property line did not show any plantings other than grass and on the southeast corner, motorists could see into the car repair shop due to lack of tall plantings. He asked if the installation of screening and buffering plantings was required.

Ms. Luxhoj confirmed conditions of approval required both screening at the southwest corner to comply with the SB Overlay Zone, as well as landscaping trees, shrubs, and groundcover along that south property boundary to comply with the screening requirements for an outdoor storage yard.

Mr. Andrews understood drivers would not be able to see directly into the storage yard.

Ms. Luxhoj confirmed that essentially, the Applicant was required to provide sight-obscuring screening. For the subject property, it would be similar to a 6-ft tall fence with privacy slats, and interior to the yard, there would likely be arborvitae, or a hedge and trees 30 ft on center.

Mr. Andrews asked if there was a way to obscure the asphalt and the houses from view at the entry point to make it more aesthetic and avoid looking at the bare building visual in front of the entryway.

Ms. Luxhoj replied she was not sure if that was required.

Mr. Andrews replied that was fine but thought since the site was going to be made more aesthetically pleasing anyway, perhaps that area could also receive attention.

Chair Hendrix asked if some Walnut Mobile Home Park residents did not receive notice of the application as their homes did not fall within the required 250 ft.

Ms. Luxhoj noted when the DP Nicolai site north of the mobile home park was developed, notice was provided to all mobile home park owners, but this time, she believed notice was provided solely to the mobile home park owner.

Chair Hendrix noted those residents would be impacted as they were still within the same neighborhood. She asked under what circumstances Staff went above the minimum 250 ft required when noticing surrounding entities.

Daniel Pauly, Planning Manager, replied that although Staff had worked with the applicant of the Nicoli project who agreed to expand noticing given the circumstances, the Code was clear and objective and did not address situational circumstances. Typically, there was really not any variation. Staff was consistent in maintaining the 250 ft Code criteria for noticing.

Ms. Luxhoj elaborated that with the Nicolai project, several of the mobile homes had been right against the property line, so there was concern about the property on the east side that fronted Boones Ferry Rd being developed because it would have resulted in substantial impacts to those adjacent mobile homeowners.

Katie Dunwell stated that on the Notice of Administrative Decision for Case File No. TR21-0002, also received by DRB Panel B, it appeared notice had gone to William Davidson from Davidson' Boones Ferry Industrial, the current owners of that block. [Walnut Mobile Home Park] She understood the mobile home residents were tenants and not considered owners.

Ms. Luxhoj confirmed the mobile home park residents leased their properties and were not considered owners. As such, only a single owner, the owner of the mobile home park, was notified.

Ms. Dunwell asked if the owner of the mobile home park had any relationship to the owner of the subject property before the Board tonight.

Ms. Luxhoj confirmed the owner of the mobile home park also owned the subject property. She also confirmed that signage regarding tonight's hearing had been posted.

Ms. Dunwell stated she had driven through the mobile home park earlier in the morning to understand the site and look at the adjacent property, and she did not see any signage. She asked if signage would only have been placed on the subject location and not on any of the adjacent locations.

Ms. Luxhoj replied that generally a posting would be on the property itself.

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

Teresa Long, Landscape Architect, AAI Engineering, representing the Applicant, addressed Mr. Andrews' comment regarding the driveway entrance and privacy screening explaining the intent was to have the 6-ft privacy fence extend all along Boones Ferry Rd, including the entrance. Future tenants would have access, but otherwise it would remain closed.

William Davidson corrected Ms. Long, stating that the fence would extend back to the house.

Ms. Luxhoj indicated a gate on the "Plant Schedule/Site Plan", which Ms. Long confirmed.

Ms. Long stated she had misspoken. She continued the Applicant was asking for a Zone Amendment, along with two Site Plan Reviews, and the Final Site Design Review. The Zone Amendment was to bring the northern property into the same zone as the southern property, which was a part of the City's Comprehensive Plan. Currently, the property was graveled with buffering plantings that had been required as a part of the previous owner's unpermitted tree removal. The subject proposal would bring the property into conformance with the City's current zoning codes once the Zone Amendment was passed by Council. Bringing the property into conformance would consist of 20-ft buffers on the north and west borders, as well as a small portion of the southern border, and a 20-ft landscape buffer along Boones Ferry Rd as part of the landscape requirements.

Ms. Dunwell stated she had reviewed the application and Staff report after visiting the site and there was a note in a document regarding an unclear understanding of what type of industrial storage would be performed at the site. It appeared that spaces would be rented out to various companies to use as storage. She asked if the site would be open and accessible 24/7.

Ms. Long replied she could not address that clearly as there were no tenants yet; however, she understood a condition of approval would restrict truck movement between the hours of 10 p.m. to 7 a.m. Tenants may have access to the site 24 hours a day, but no truck movements could occur due to noise restrictions.

Ms. Dunwell understood the mobile home park was an Area of Special Concern in Wilsonville as it was one of the few locations for affordable housing, which raised the question about whether those individuals have a voice in the decision. When reviewing the case file, she noticed the prior owner was Jeff Davidson, who had made the changes to the site without notification to the City, including graveling. Now that ownership was transferred to Davidson Boones Ferry Industrial and William Davidson, she wondered about the relationship between the two. She understood mitigation had taken place that had all been approved through the City, but because the area was populated with senior citizens and children, she wanted to make sure they were represented since the owner of the mobile home park was the same individual who now owned the proposed industrial space. While the Board's role was to ensure compliance to Code, she wanted to alert the other members of the Board that this was an Area of Special Concern.

Kim Rybold, Senior Planner, clarified the prior graveling and tree removal was done under a prior property owner, not the current property owner, who had brought forward the subject application and was not the same person.

Ms. Long noted the last name of the previous owner was Davenport, not Davidson.

Ms. Rybold confirmed the prior owner was Jeff Davenport, not Jeff Davidson.

Ms. Dunwell thanked Ms. Long and Ms. Rybold for the clarification.

Mr. Andrews stated along the southern border, especially the eastern corner, the site would still be visible from the highway as he did not see a good visual barrier. He asked if the black dots on Slide 8 represented plantings that would grow tall enough to create a visual barrier to prevent motorists driving down the highway from seeing stored equipment.

Ms. Long replied that because the Applicant had not yet gotten approval, the landscape plan did not presently show the condition of approval that would require shrubs that would grow to a minimum of 6 ft in height and trees at every 30 ft on center. Once the application was approved and the landscape plan was revised and submitted for permitting, the City Planners would ensure the Applicant had addressed that condition of approval. The current plan before the DRB was drawn before the Applicant was aware of the condition of approval. She confirmed the southern border would not get any wider but would have more plantings in it.

Ms. Dunwell read an excerpt from the TR21-002 decision, dated October 7, 2021, noting that it stated the previous property owner of the subject property was named Jeff Davidson.

Mr. Pauly replied that it was a typo.

Ms. Rybold also confirmed the name Davidson in the TR21-002 decision was a typo.

Chair Hendrix called for public testimony regarding the application and confirmed with Staff that no one was present at City Hall to testify and no one on Zoom indicated they wanted to testify.

Mr. Andrews understood the only changes to the property would be around the edge and then making use of the property.

Chair Hendrix believed that covered it, noting it was listed on the agenda and the resolution showed the different items the DRB would approve, such as the Zone Map Amendment, etc. [44:07]

Ms. Dunwell stated given that the subject property was adjacent to the mobile home park, which was an Area of Special Concern whose residents were lessees and not owners, and the owner of the mobile home park was also the Applicant for the subject property, as a concerned citizen of Wilsonville, she wanted to know the justification or reasoning behind not notifying the individual mobile home park residents as a courtesy, and whether an amendment could be made to do so, so they were aware of the project. She asked if the owner had made any attempt to notify the residents that the adjacent property would be converted to an industrial storage area.

Chair Hendrix understood the individual residents were not notified because the Code required notification to the owner, and the Code had been followed. When or if Staff ever went above and beyond in terms of noticing could be discuss further. She if Ms. Dunwell wanted to add, remove, or modify a condition of approval.

Ms. Dunwell asked if now was the time to modify the condition that the residents be notified.

Mr. Pauly replied that was not a legal condition that could be defensible, unless the City Attorney disagreed or had any additional input. He noted if the residents had been notified and did not want the subject property to become an industrial storage yard, all the DRB could legally do was ensure implementation of the Special Overlay District and the special screening, which had already been done to the maximum required under the Code. He believed everyone present agreed with the sentiment, and the sensitivity of the mobile home park had long been discussed as it related to the surrounding industrial usage. He could not point to a reason why the individual residents were not notified in this case, but in the long-term, based on the clear and objective criteria and the standards in place, he did not envision a scenario in which neighbor comments could stop the project. The landscaping and screening were what would be done to address any concerns.

Ms. Dunwell said she understood Mr. Pauly's response and the role of the DRB but wanted to go on the record to state that marginalized people at times did not have a voice, and whether their opinions would make a difference in the outcome was a completely separate track of decision-making. She would have at least liked to have seen that their voices were heard, particularly because the owner of the proposed industrial property and the mobile home park were one in the same.

Mr. Pauly responded that her statement was on the record, and he did not believe anyone present, or anything on the record, disagreed with her.

Chair Hendrix confirmed there were no additional questions or discussion and closed the public hearing at 7:20 pm.

John Andrews moved to adopt the Staff report as presented. Katie Dunwell seconded the motion, which passed unanimously.

Katie Dunwell moved to approve Resolution No. 404. John Andrews seconded the motion, which passed 2 to 1 with Katie Dunwell opposed.

Chair Hendrix read the rules of appeal into the record.

BOARD MEMBER COMMUNICATIONS

3. Recent City Council Action Minutes

There were no comments.

STAFF COMMUNICATIONS

There were no comments.

ADJOURNMENT

The meeting adjourned at 7:24 p.m.

Respectfully submitted,

Paula Pinyerd, ABC Transcription Services, LLC.
for Shelley White, Planning Administrative Assistant

MONDAY, AUGUST 22, 2022
6:30 PM

Public Hearing:

2. **Resolution No. 406 Frog Pond Terrace**

Subdivision. The applicant is requesting approval of Annexation of approximately 11.17 acres and Zone Map Amendment from Rural Residential Farm Forest 5-Acre (RRFF-5) to Residential Neighborhood (RN) of approximately 10.94 acres, a Stage 1 Preliminary Plan, Stage 2 Final Plan, Site Design Review of parks and open space, Tentative Subdivision Plat, Type C Tree Plan, Abbreviated SROZ Map Verification, and Abbreviated SRIR Review for a 19-lot residential subdivision.

Case Files:

DB22-0003 Frog Pond Terrace

- Annexation (ANNX22-0002)
- Zone Map Amendment (ZONE22-0003)
- Stage 1 Preliminary Plan (STG122-0003)
- Stage 2 Final Plan (STG222-0003)
- Site Design Review of Parks and Open Space (SDR22-0003)
- Tentative Subdivision Plat (SUBD22-0002)
- Type C Tree Plan (TPLN22-0002)
- SROZ Map Verification (SROZ22-0005)
- SRIR Review (SRIR22-0003)

The DRB Action on the Annexation and Zone Map Amendment is a recommendation to the City Council.

**DEVELOPMENT REVIEW BOARD
RESOLUTION NO. 406**

A RESOLUTION ADOPTING FINDINGS RECOMMENDING APPROVAL TO CITY COUNCIL OF ANNEXATION OF APPROXIMATELY 11.17 ACRES AND ZONE MAP AMENDMENT FROM RURAL RESIDENTIAL FARM FOREST 5-ACRE (RRFF-5) TO RESIDENTIAL NEIGHBORHOOD (RN) OF APPROXIMATELY 10.94 ACRES, AND ADOPTING FINDINGS AND CONDITIONS APPROVING A STAGE 1 PRELIMINARY PLAN, STAGE 2 FINAL PLAN, SITE DESIGN REVIEW OF PARKS AND OPEN SPACE, TENTATIVE SUBDIVISION PLAT, TYPE C TREE PLAN, ABBREVIATED SROZ MAP VERIFICATION, AND ABBREVIATED SRIR REVIEW FOR A 19-LOT RESIDENTIAL SUBDIVISION.

WHEREAS, an application, together with planning exhibits for the above-captioned development, has been submitted by Dan Grimberg, West Hills Land Development LLC – Applicant and Donnie L. Martin (TLID 2800 and 3500) and Douglas E. and Colleen R. George (TLID 2801) – Owners in accordance with the procedures set forth in Section 4.008 of the Wilsonville Code, and

WHEREAS, the subject site is located at 7480 and 7500 SW Frog Pond Lane on Tax Lots 2800, 2801, and 3500, and a portion of SW Frog Pond Lane right-of-way, Section 12D, Township 3 South, Range 1 West, Willamette Meridian, Clackamas County, Oregon, and

WHEREAS, the Planning Staff has prepared the staff report on the above-captioned subject dated August 15, 2022, 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 22, 2022, 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 adopt the staff report dated August 15, 2022, attached hereto as Exhibit A1, with findings and recommendations contained therein, and authorizes the Planning Director to issue permits consistent with said recommendations for:

DB22-0003 Frog Pond Terrace: Annexation (ANNX22-0002), Zone Map Amendment (ZONE22-0003), Stage 1 Preliminary Plan (STG122-0003), Stage 2 Final Plan (STG222-0003), Site Design Review of Parks and Open Space (SDR22-0003), Tentative Subdivision Plat (SUBD22-0002), Type C Tree Plan (TPLN22-0002), Abbreviated SROZ Map Verification (SROZ22-0005), and Abbreviated SRIR Review (SRIR22-0003).

ADOPTED by the Development Review Board of the City of Wilsonville at a regular meeting thereof this 22nd day of August, 2022, and filed with the Planning Administrative Assistant on _____. This resolution is final on the 15th 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)*.

Nicole Hendrix, Chair - Panel B
Wilsonville Development Review Board

Attest:

Shelley White, Planning Administrative Assistant



Exhibit A1
Staff Report
Frog Pond Terrace 19-Lot Subdivision
Development Review Board Panel 'B'
Quasi-Judicial Public Hearing

Hearing Date:	August 22, 2022
Date of Report:	August 15, 2022
Application Nos.:	DB22-0003 Frog Pond Terrace 19-Lot Subdivision <ul style="list-style-type: none">- Annexation (ANNX22-0002)- Zone Map Amendment (ZONE22-0003)- Stage 1 Preliminary Plan (STG122-0003)- Stage 2 Final Plan (STG222-0003)- Site Design Review of Parks and Open Space (SDR22-0003)- Tentative Subdivision Plat (SUBD22-0002)- Type C Tree Removal Plan (TPLN22-0002)- Abbreviated SROZ Map Verification (SROZ22-0005)- Abbreviated SRIR Review (SRIR22-0003)
Request/Summary:	The requests before the Development Review Board include Annexation, Zone Map Amendment, Stage 1 Preliminary Plan, Stage 2 Final Plan, Site Design Review of Parks and Open Space, Tentative Subdivision Plat, Type C Tree Removal Plan, Abbreviated SROZ Map Verification, and Abbreviated SRIR Review
Location:	7480 and 7500 SW Frog Pond Lane. The property is specifically known as TLID 2800, 2801, and 3500, and a portion of SW Frog Pond Lane right-of-way, Section 12D, Township 3 South, Range 1 West, Willamette Meridian, Clackamas County, Oregon.
Owners:	Donnie L. Martin (TLID 2800 and 3500) Douglas E. and Colleen R. George, Trustees (TLID 2801)
Applicant:	West Hills Land Development LLC (Contact: Dan Grimberg)
Applicant's Rep.:	OTAK, Inc. (Contact: Li Alligood AICP)
Comprehensive Plan Designation:	Residential Neighborhood
Zone Map Classification (Current):	Rural Residential Farm Forest 5-Acre (RRFF-5; Clackamas County)
Zone Map Classification (Proposed):	Residential Neighborhood (RN)

Staff Reviewers: Cindy Luxhoj AICP, Associate Planner
 Amy Pepper, PE, Development Engineering Manager
 Kerry Rappold, Natural Resources Manager

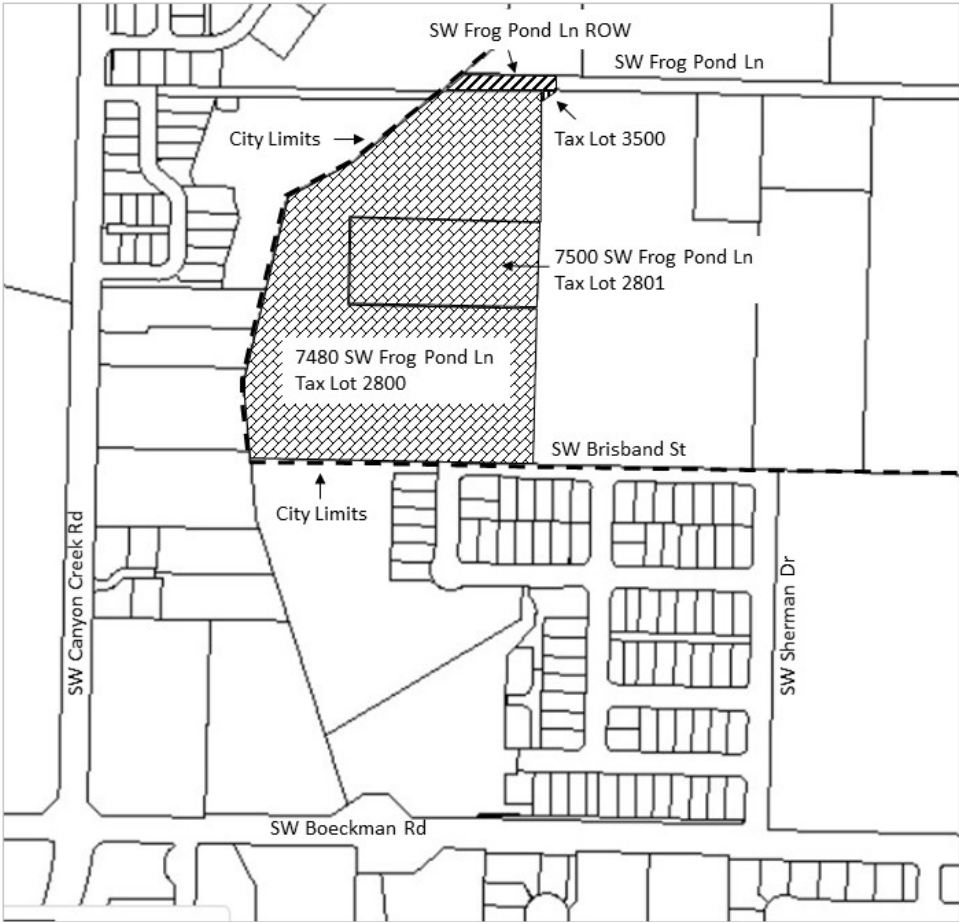
Staff Recommendation: Recommend approval to the City Council of the Annexation and Zone Map Amendment, approve with conditions the Stage 1 Preliminary Plan, Stage 2 Final Plan, Site Design Review of Parks and Open Space, Tentative Subdivision Plat, Type C Tree Plan, Abbreviated SROZ Map Verification, and Abbreviated SRIR Review, contingent on City Council approval of the Annexation and Zone Map Amendment.

Applicable Review Criteria:

<u>Development Code:</u>	
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
Section 4.033	Authority of City Council
Subsection 4.035 (.04)	Site Development Permit Application
Subsection 4.035 (.05)	Complete Submittal Requirement
Section 4.110	Zones
Section 4.113	Standards Applying to Residential Development in All Zones
Section 4.118	Standards Applying to Planned Development Zones
Section 4.127	Residential Neighborhood (RN) Zone
Section 4.139 through 4.139.11	Significant Resource Overlay Zone (SROZ)
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	Signs
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 4.197	Zone Changes
Sections 4.200 through 4.290	Land Divisions
Sections 4.300 through 4.320	Underground Utilities
Sections 4.400 through 4.440 as applicable	Site Design Review

Sections 4.600-4.640.20	Tree Preservation and Protection
Section 4.700	Annexation
<u>Comprehensive Plan and Sub-elements:</u>	
Citizen Involvement	
Urban Growth Management	
Public Facilities and Services	
Land Use and Development	
Plan Map	
Area of Special Concern L	
Transportation Systems Plan	
Frog Pond West Master Plan	
<u>Regional and State Law and Planning Documents</u>	
Metro Code Chapter 3.09	Local Government Boundary Changes
ORS 222.111	Authority and Procedures for Annexation
ORS 222.125	Annexation by Consent of All Land Owners and Majority of Electors
ORS 222.170	Annexation by Consent Before Public Hearing or Order for Election
Statewide Planning Goals	

Vicinity Map



Background:

The subject property has long been rural/semi-rural, adjacent to the growing City of Wilsonville. Metro added the 181-acre area now known as Frog Pond West to the Urban Growth Boundary in 2002 to accommodate future residential growth. To guide development of the area and the urban reserve areas to the east and southeast, the City of Wilsonville adopted the Frog Pond Area Plan in November 2015. The Frog Pond Area Plan envisions that: “The Frog Pond Area in 2035 is an integral part of the Wilsonville community, with attractive and connected neighborhoods. The community’s hallmarks are the variety of quality homes; open spaces for gathering; nearby services, shops and restaurants; excellent schools; and vibrant parks and trails. The Frog Pond Area is a convenient bike, walk, drive, or bus trip to all parts of Wilsonville.”

As a follow up to the Area Plan and in anticipation of forthcoming development, in July 2017 the City of Wilsonville adopted the Frog Pond West Master Plan for the area within the UGB. To guide development and implement the vision of the Area Plan, the Master Plan includes details on land use (including residential types and unit count ranges), residential and community

design, transportation, parks and open space, and community elements such as lighting, street trees, gateways, and signs. The Master Plan also lays out the infrastructure financing plan.

The proposed 19-lot subdivision is the ninth development proposal in Frog Pond West. The subdivision will connect to the concurrently proposed Frog Pond Overlook to the north, previously approved Frog Pond Vista subdivision to the northeast, and Morgan Farm subdivision to the south, blending together as one cohesive neighborhood consistent with the Frog Pond West Master Plan.

One nearby land use application has been submitted for a site near the subject property. Frog Pond Overlook (DB22-0002) is located north of Frog Pond Terrace and contains features such as street extensions, pedestrian connections, and street trees that will interface with this application. Staff have reviewed this application in the context of the property to ensure all shared components are consistently applied across both subdivisions.

Application Summary:

Annexation (ANNX22-0002)

The area proposed for annexation is contiguous to land currently in the City, within the UGB, and master planned for residential development. All property owners in TLID 2800, 2801, and 3500 have consented in writing to the annexation, and all electors reside within the area proposed for annexation.

Zone Map Amendment (ZONE22-0003)

Concurrent with the adoption of the Frog Pond West Master Plan, the City added a new zoning district, Residential Neighborhood (RN), intended for application to the Master Plan area. The applicant proposes applying the RN Zone to the annexed area consistent with this intention.

Stage 1 Preliminary Plan (STG122-0003)

The proposed residential use, number of lots, preservation of open space, and general block and street layout are consistent with the Frog Pond West Master Plan. Specifically in regards to residential land use unit count, the proposed Stage 1 Preliminary Plan area includes portions of, medium lot Sub-district 4 and large lot Sub-district 7. See Finding C17 for a more detailed discussion on how the proposal meets the required density in each sub-district consistent with the Master Plan recommendations.

The Frog Pond West Master Plan established range for medium-lot Sub-district 4 is 86-107 lots. Approximately 13.5% of Sub-district 4 is within the project area and the applicant proposes 16 lots, which is one (1) greater than the 15-lot maximum allowed with a 10% increase for SROZ boundary adjustment. The established range for Sub-district 7 is 24-30 lots. Approximately 16.4% of Sub-district 7 is within the project area and the applicant proposes 3 lots, which is one (1) lot fewer than the minimum density requirement for this part of the subdivision which is due to a

combination of factors related to topography, infrastructure needs, and provision of non-residential uses..

The proposed development of one (1) fewer lot in the Sub-district 7 portion of the site allows for future development that meets all dimensional standards for lots in this part of the site. Because the Sub-district 4 portion of the site has substantially fewer development constraints, it can easily accommodate the one (1) additional lot needed to satisfy the minimum density requirement for Sub-district 7. As proposed the total number of lots meets the overall minimum proportional density for the site when the two Sub-districts are combined.

Stage 2 Final Plan (STG222-0003)

The applicant proposes installing necessary facilities and services concurrent with development of the proposed subdivision.

Proposed lot layout and size, as well as block size and access, generally demonstrate consistency with development standards established for the Residential Neighborhood (RN) zone and in the Frog Pond West Master Plan.

Regarding the protection of natural features and other resources, the project design avoids disturbance of these features and resources. The site slopes to the northwest and west from an elevation of roughly 217 ft along the eastern property boundary, to 210 ft at the existing house, to 145 ft at Boeckman Creek. About 50% of the site is steeply sloped and within the SROZ or its impact area.

Site Design Review of Parks and Open Space (SDR22-0003)

The scope of the Site Design Review request includes design of common tracts and the streetscape. Overall, the design of these spaces is consistent with the Site Design Review standards and the Frog Pond West Master Plan. In particular, the proposed streetscape design conforms or will with Conditions of Approval to the street tree and street lighting elements of the Frog Pond West Master Plan. The design also includes a large open space tract consistent with the Master Plan. Among the additional specific elements reviewed include the trailheads consistent with the Master Plan along with the landscaping and site furnishings in the open space tract.

Tentative Subdivision Plat (SUBD22-0002)

The proposed tentative plat meets technical platting requirements, demonstrates consistency with the Stage 2 Final Plan, and thus the Frog Pond West Master Plan, and does not create barriers to future development of adjacent neighborhoods and sites.

Type C Tree Removal Plan (TPLN22-0002)

There are 250 on-site trees and one (1) off-site tree inventoried as part of the proposed development. The majority of the tree removal on site will take place toward the center of the site

and along the northeast property boundary where trees will be removed due to construction of proposed public streets, residential lots, and the trailhead park.

Of the trees inventoried on-site, 149 are proposed for removal. The applicant proposes planting 105 new trees in the form of 30 street trees, 41 trees in the Tract A open space including along the regional trail, within the trailhead park, and as part of the stormwater facility. Because it is not possible to plant the remaining trees on the site and no alternative location has been identified, the applicant proposes to pay \$13,200 into the City Tree Fund, an amount equivalent to a purchase and installation cost of \$300 per tree for the 44 replacement trees.

Abbreviated SROZ Map Verification (SROZ22-0005)

Consistent with the Development Code requirements, a verification of the SROZ boundary is required at the time an applicant requests a land use decision. The applicant conducted a detailed site analysis consistent with Development Code requirements, which the City's Natural Resources manager reviewed and approved.

Abbreviated SRIR Review (SRIR22-0003)

The applicant requests approval of a Significant Resource Impact Report (SRIR) for exempt development located within the Significant Resource Overlay Zone and its associated 25-foot impact area. The impacts to the SROZ are necessary for the construction of the Boeckman Creek trail and stormwater infrastructure.

Proposed exempt development in the SROZ and its associated 25-foot impact area include the following:

- 1) A regional pedestrian trail
- 2) A stormwater facility in the open space area; and
- 3) A stormwater outfall – installation of pipe and outfall structure

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.

Consistency with Statewide Planning Goals

The Statewide Planning Goals provide direction to local jurisdictions regarding the State's policies on land use. It is assumed the City's adopted Comprehensive Plan, which includes the adopted Frog Pond Area Plan and Frog Pond West Master Plan, is in compliance with the Statewide Planning Goals (specifically Goal 2, Land Use Planning), and that compliance with the Comprehensive Plan also demonstrates compliance with the Statewide Planning Goals. At the time of its adoption, the Frog Pond West Master Plan was found to be in compliance with all applicable Statewide Planning Goals, including Goals 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14.

Statewide Planning Goals particularly relevant to the Frog Pond Terrace application include Goals 10, 12, and 14.

Goal 10, Housing, identifies a need for “needed housing”, which is defined for cities having populations larger than 2,500, as attached and detached single-family housing, multiple-family housing, and manufactured homes. Annexation of the subject site into the Wilsonville City limits will provide lots that can be developed with attached and detached single-family housing, which is defined as “needed housing” in the City’s 2014 Residential Land Study.

Goal 12, Transportation, identifies the importance of a safe, convenient, and economic transportation system, and requires local jurisdictions to adopt a TSP. The proposed annexation area will comply with Wilsonville’s TSP, which has been updated to include the Frog Pond West area. Annexation of the subject site will allow for its development, including new street connections included in the TSP.

Goal 14, Urbanization, identifies the need for orderly and efficient growth, the need to accommodate housing and employment within the UGB, and the importance of livable communities. The Frog Pond West Master Plan area was added to the UGB to accommodate residential growth. The Master Plan complied with Goal 14 and Metro Title 11, Planning for New Urban Areas, and guides the orderly annexation of the subject site, which is located in the Frog Pond West Master Plan area, development of a livable community, and provision of additional housing within the UGB.

As demonstrated above, the proposed projects are consistent with the Comprehensive Plan and Frog Pond West Master Plan, which have been found to be consistent with Statewide Planning Goals.

Traffic Impacts

The Traffic Impact Analysis (see Exhibit B1) performed by the City’s consultant, DKS Associates, identifies the most probable used intersection for evaluation as:

- SW Boeckman Road/SW Sherman Drive

The SW Boeckman Road/SW Sherman Drive intersection is the only Frog Pond West access to the proposed development. Other study intersections, such as SW Stafford Road/SW 65th Avenue and SW Canyon Creek Road/SW Boeckman Road, were not included in this analysis as the trips through those intersections would be insignificant (around 10 peak hour trips). Additionally, the SW Stafford Road/SW 65th Avenue intersection was not included as it was found to already fail to meet County standards under existing 2021 conditions, as noted in the Frog Pond Crossing TIA and Frog Pond Vista TIA. As noted in both of those reports, an intersection improvement has already been identified in the County’s Capital Improvement Project List.

The study intersection meets the City of Wilsonville's operating standard for the existing conditions. The intersection will continue to perform at Level of Service D or better with the proposed project and thus meets City standards.

Balancing Uses in Planter Strips

Many design elements compete for space within the planter strips between sidewalks and streets. These elements include street trees, stormwater facilities, and streetlights while accommodating appropriate spacing from underground utilities and cross access by pedestrians. For various reasons, it is not practical to place street trees and streetlights in stormwater swales. To balance these uses, the City recommends that the applicant's plans prioritize street tree and street lighting placement with appropriate spacing from utility laterals and water meters, then placing stormwater facilities where space remains available and placement is desirable. The applicant's plans achieve the desired balance with all street trees placed within the planter strip, with stormwater facilities and other elements located in the remaining space.

Boeckman Creek Trail and Connections

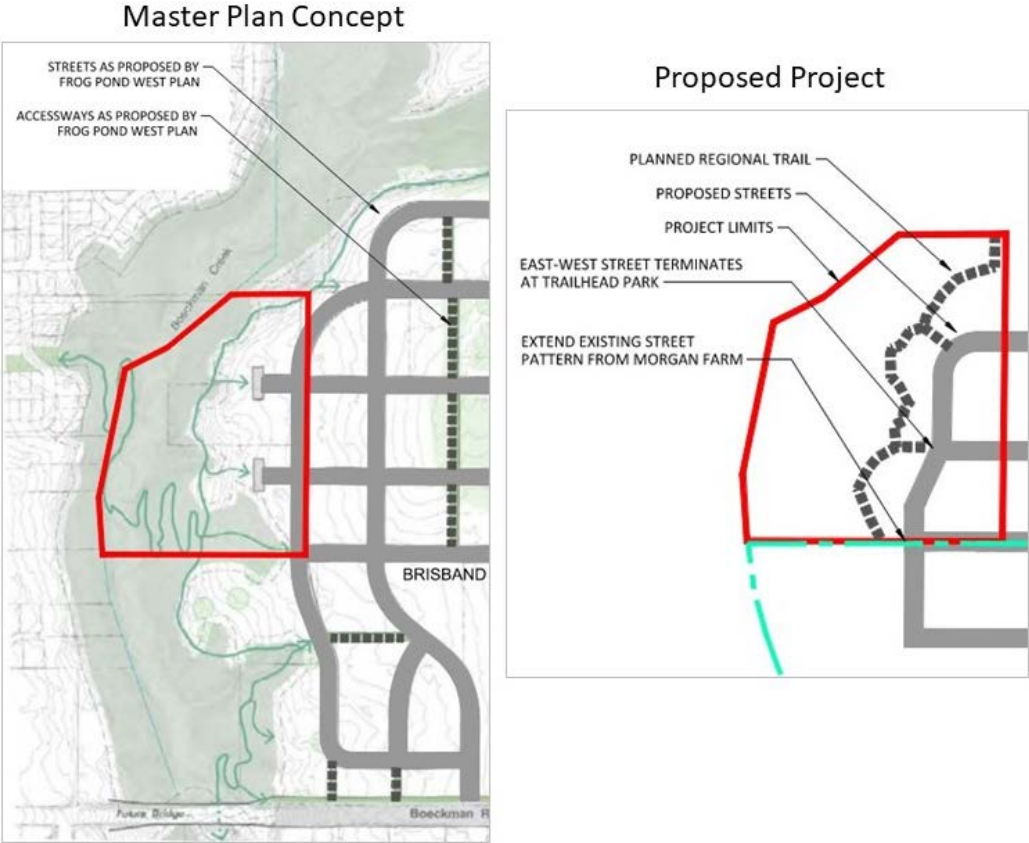
The applicant will construct a portion of the Boeckman Creek Regional Trail along the western portion of the property. As noted in the Frog Pond West Master Plan, this trail will run along the western edge of the Frog Pond neighborhood, with access provided via trailheads at the termination of east-west streets in Frog Pond. The Boeckman Creek Regional Trail will be located in Tract A, an open space tract including the SROZ and adjacent areas. The applicant proposes dedication of this tract to the City of Wilsonville. A Condition of Approval ensures that the dedication of this tract does not take place until environmental site assessments are completed and provided to the City.

Street Demonstration Plan Compliance

The Street Demonstration Plan (Figure 18 of the Frog Pond West Master Plan), is an illustrative layout of the desired level of connectivity in the Frog Pond West neighborhood. The Street Demonstration Plan is intended to be guiding, not binding, allowing for flexibility provided overall connectivity goals are met. The block size and shape, access, and connectivity of the proposed subdivision complies with Figure 18 of the Frog Pond West Master Plan or is an allowed variation as illustrated below and described in more detail elsewhere in this staff report.

SW Brisband Street is extended west on the south side of the subdivision as shown on the Street Demonstration Plan. Existing slopes and the presence of the SROZ preclude extending SW Frog Pond Lane farther to the west in a broad radius as anticipated by the Street Demonstration Plan. Rather, SW Frog Pond Lane is proposed to terminate in an "eyebrow" allowing for a turn to the south that aligns with a future extension of SW Painter Drive from the Morgan Farm development. SW Woodbury Loop is extended north from Morgan Farm into the proposed development, curving east at its northern extent to intersect with the future extension of SW Painter Drive north from Morgan Farm to SW Frog Pond Lane. The proposed modifications do not require out-of-direction pedestrian or vehicular travel nor do they result in greater distances

for pedestrian access to the proposed subdivision from the surrounding future streets than would otherwise be the case if the Street Demonstration Plan were adhered to.



Tree Removal and Preservation

There are 250 on-site and one (1) off-site tree inventoried for the proposed development. Of the 251 trees, 149 trees are proposed for removal with 102 trees preserved. Large mature trees are located within the subject property within the SROZ and will be preserved within Tract A. The applicant proposes planting 30 street trees, 41 trees in the Tract A open space, and 34 trees around the stormwater facility in Tract A for a total of 105 mitigation trees. This is 44 trees fewer than the required one-to-one mitigation ratio. Because it is not possible to plant the remaining trees on the site and no alternative location has been identified, the applicant proposes to pay \$13,200 into the City Tree Fund, an amount equivalent to a purchase and installation cost of \$300 per tree for the 44 replacement trees.

Discussion Points – Discretionary Review:

The Development Review Board may approve or deny items in this section based upon a review of evidence submitted by the applicant. There are no discretionary review requests included as part of the proposed application.

Public Comments and Responses:

No public comments were received during the comment period.

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 recommend approval to City Council or approve, as relevant, the proposed application (DB22-0003) with the following conditions:

Planning Division Conditions:

Request A: Annexation (ANNX22-0002)

This action recommends to the City Council approval of Annexation for the subject properties. The Zone Map Amendment (ZONE22-0003) and all approvals contingent on it are contingent on annexation.	
PDA 1.	<u>Prior to issuance of any Public Works permits by the City within the annexation area:</u> The developer shall be subject to a Development and Annexation Agreement with the City of Wilsonville as required by the Frog Pond West Master Plan. The developer shall enter into the Development and Annexation Agreement prior to issuance of any public works permits by the City within the annexation area.

Request B: Zone Map Amendment (ZONE22-0003)

This action recommends to the City Council adoption of the Zone Map Amendment for the subject properties. This action is contingent upon annexation of the subject properties to the City of Wilsonville (ANNX22-0002). Case files STG122-0003, STG222-0003, SDR22-0003, SUBD22-0002, TPLN22-0002, SROZ22-0005, and SRIR22-0003 are contingent on City Council action on the Zone Map Amendment request.	
No conditions for this request.	

Request C: Stage 1 Preliminary Plan (STG122-0003)

Approval of Stage 1 Preliminary Plan (STG122-0003) is contingent on City Council approval of the Zone Map Amendment request (ZONE22-0003).	
No conditions for this request	

Request D: Stage 2 Final Plan (STG222-0003)

Approval of the Stage 2 Final Plan (STG222-0003) is contingent on City Council approval of the Zone Map Amendment request (ZONE22-0003).	
PDD 1.	<u>General:</u> The approved Stage 2 Final Plan (Final Plan) shall control the issuance of all building permits and shall restrict the nature, location and design of all uses. The Planning Director through the Class 1 Administrative Review Process may approve minor changes to the Final Plan if such changes are consistent with the purposes and general character of the Final Plan. All other modifications shall be processed

	in the same manner as the original application and shall be subject to the same procedural requirements. See Finding D4.
PDD 2.	<u>Prior to Final Plat Approval:</u> On the Final Subdivision Plat, public pedestrian and bicycle access easements, including egress and ingress, shall be established across the entirety of all pathways located in private tracts. See Finding D13.
PDD 3.	<u>General:</u> All crosswalks shall be clearly marked with contrasting paint or paving materials (e.g., pavers, light-colored concrete inlay between asphalt, or similar contrast). See Finding D16.
PDD 4.	<u>General:</u> Any area, whether in a garage or in a driveway, counted as a required parking space shall have the minimum dimensions of 9 feet by 18 feet. See Finding D19.
PDD 5.	<u>Prior to Final Plat Approval:</u> A waiver of remonstrance against formation of a local improvement district (LID) shall be recorded in the County Recorder’s Office as well as the City’s Lien Docket as part of the recordation of the final plat. In light of the developer’s obligation to pay an Infrastructure Supplemental Fee and Boeckman Bridge Fee in accordance with the Development and Annexation Agreement required by Condition of Approval PDA 1, the LID Waiver for a specific parcel within the Frog Pond Terrace development shall be released upon official recording of the release of the waiver only after payment of the Infrastructure Supplemental Fee and Boeckman Bridge Fee. Further, the developer shall pay all costs and fees associated with the City’s release of the LID Waiver. See Finding D32.
PDD 6.	<u>General:</u> All travel lanes shall be constructed to be capable of carrying a twenty-three (23) ton load. See Finding D28.

Request E: Site Design Review of Parks and Open Space (SDR22-0003)

	Approval of Site Design Review of Parks and Open Space (SDR22-0003) is contingent on City Council approval of the Zone Map Amendment request (ZONE22-0003).
PDE 1.	<u>General:</u> Construction, site development, and landscaping shall be carried out in substantial accord with the Development Review Board 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 E3.
PDE 2.	<u>Prior to Final Plat Approval:</u> All landscaping and site furnishings required and approved by the Development Review Board for common tracts shall be installed prior to Final Plat Approval 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 installation within six (6) months of Final Plat Approval. "Security" is cash, certified check, time certificates of deposit, assignment of a savings account, an irrevocable letter of credit, 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 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/owner. See Finding E13.
PDE 3.	<u>Prior to Final Plat Approval:</u> The applicant shall either (1) enter into a Residential Subdivision Development Compliance Agreement with the City that covers installation of street trees and right-of-way landscaping or (2) install all street trees and other right-of-way landscaping. See Finding E13.
PDE 4.	<u>Ongoing:</u> 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 Development Review Board, pursuant to the applicable sections of Wilsonville’s Development Code. See Finding E14.
PDE 5.	<u>Ongoing:</u> 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 Findings E15 and E16.
PDE 6.	<p><u>General:</u> The following requirements for planting of shrubs and ground cover shall be met:</p> <ul style="list-style-type: none"> • Non-horticultural plastic sheeting or other impermeable surface shall not be placed under landscaping mulch. • Native topsoil shall be preserved and reused to the extent feasible. • 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. • 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-inch to 12-inch spread. • Shrubs shall reach their designed size for screening within three (3) years of planting. • 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-inch on center minimum. • No bare root planting shall be permitted. • Ground cover shall be sufficient to cover at least 80% of the bare soil in required landscape areas within three (3) years of planting. • Appropriate plant materials shall be installed beneath the canopies of trees and large shrubs to avoid the appearance of bare ground in those locations. • Compost-amended topsoil shall be integrated in all areas to be landscaped, including lawns. See Finding E20.
PDE 7.	<u>General:</u> All trees shall be balled and burlapped and conform in size and grade to “American Standards for Nursery Stock” current edition. See Finding E20.

PDE 8.	Ongoing: Plant materials shall be installed 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 E21.
PDE 9.	General: A note shall be added to the Landscape Plans (Sheet 2.00) in the construction plan set specifying that all landscape areas shall be watered by a fully automatic underground irrigation system. See Finding E21.
PDE 10.	Prior to issuance of any Public Works permits: The applicant / owner shall submit information demonstrating compliance with the Public Works Standards and Frog Pond West Master Plan. The street lighting shall be Aurora style streetlights, as Westbrook is no longer approved by PGE. The applicant/owner 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. See Finding E24.
PDE 11.	Prior to Final Plat Approval: All street signs shall be installed and utilize the City-approved sign cap on street name signs throughout the entirety of the subdivision, matching the design used in the previously approved subdivisions within Frog Pond West. The developers will buy the signs from the City. See Finding E28.

Request F: Tentative Subdivision Plat (SUBD22-0002)

Approval of the Tentative Subdivision Plat (SUBD22-0002) is contingent on City Council approval of the Zone Map Amendment request (ZONE22-0003).	
PDF 1.	Prior to Final Plat Approval: Any necessary easements or dedications shall be identified on the Final Subdivision Plat.
PDF 2.	Prior to Final Plat Approval: The Final Subdivision Plat shall indicate dimensions of all lots, lot area, minimum lot size, easements, proposed lot and block numbers, parks/open space by name and/or type, and any other information that may be required as a result of the hearing process for the Stage 2 Final Plan or the Tentative Plat.
PDF 3.	Prior to Final Plat Approval: Where any street will be extended signs stating “street to be extended in the future” or similar language approved by the City Engineer shall be installed. See Finding D33 and F13.
PDF 4.	Prior to Final Plat Approval: The applicant/owner shall submit for review and approval by the City Attorney CC&R’s, bylaws, etc. related to the maintenance of the open space tracts. Such documents shall assure the long-term protection and maintenance of the open space tracts.
PDF 5.	Prior to Final Plat Approval: For all public pipeline easements, public access easements, and other easements, as required by the city, shown on the Final Subdivision Plat, the applicant/owner and the City shall enter into easement agreements on templates established by the City specifying details of the rights and responsibilities associated with said easements and such agreements will be recorded in the real property records of Clackamas County. See Finding F17.
PDF 6.	Prior to Final Plat Approval: Prior to transfer of Tract A to the City, the

applicant/owner shall provide a Phase I Environmental Site Assessment (ESA) addressed to the City. Should the Phase I ESA determine a likelihood of site contamination, the applicant/owner shall provide a Phase II ESA. At this time, the applicant/owner may either work with the City on a remediation plan, if needed, or provide a public easement for the trail within Tract A and maintain possession of Tract A. See Finding F24.

Request G: Type C Tree Plan (TPLN22-0002)

Approval of the Type C Tree Plan (TPLN22-0002) is contingent on City Council approval of the Zone Map Amendment request (ZONE22-0003).

PDG 1. General: This approval for removal applies only to the 149 trees identified in the applicant’s submitted Tree Maintenance and Protection Plan, see Exhibit B2 All other trees on the property shall be maintained unless removal is approved through separate application.

PDG 2. Prior to Grading Permit Issuance: The applicant/owner shall submit an application for a Type C Tree Removal Permit on the Planning Division’s Development Permit Application form, together with the applicable fee. In addition to the application form and fee, the applicant/owner shall provide the City’s Planning Division an accounting of trees to be removed within the project site, corresponding to the approval of the Development Review Board. The applicant/owner shall not remove any trees from the project site until the tree removal permit, including the final tree removal plan, have been approved by the Planning Division staff. See Finding G19.

PDG 3. Prior to Issuance of Type C Tree Removal Permit Required in Condition of Approval PDG 2: The applicant shall pay an amount of \$13,200 (\$300 per tree for 44 trees) into the City’s Tree Fund as mitigation for 44 trees removed from the site for which insufficient space exists on site and another desirable off-site location is not currently available. See Findings G22 and G24.

PDG 4. Prior to Final Plat Approval: The applicant/owner shall install the required mitigation trees, as shown in the applicant’s sheets L2.00-L2.20 per Section 4.620 WC. See Finding G22.

PDG 5. General: 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 Finding G23.

PDG 6. Prior to Commencing Site Grading: The applicant/owner shall install 6-foot-tall chain-link fencing around the drip line of preserved trees. The fencing shall comply with Wilsonville Public Works Standards Detail Drawing RD-1230. See Finding G25.

Request H: Abbreviated SROZ Map Verification (SROZ22-0005)

Approval of the SROZ Map Verification (SROZ22-0005) is contingent on City Council approval of the Zone Map Amendment request (ZONE22-0003).

No conditions for this request.

Request I: Abbreviated SRIR Review (SRIR22-0003)

Approval of the SRIR Review (SRIR22-0003) is contingent on City Council approval of the Zone Map Amendment request (ZONE22-0003).
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, 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 D: Stage 2 Final Plan (STG222-0003)

PFD 1.	Ongoing: Public Works Plans and Public Improvements shall conform to the “Public Works Plan Submittal Requirements and Other Engineering Requirements” in Exhibit C1 and to specifics as found in the Frog Pond West Master Plan (July 17, 2017).
PFD 2.	General: Streets shall be primarily constructed per the street type and cross-section as show in the Frog Pond West Master Plan.
PFD 3.	Prior to issuance of a Public Works Permit: Applicant shall be required to enter into a Development and Annexation Agreement with the City.
PFD 4.	Prior to Issuance of Public Works Permit: Submit site plans to Engineering showing street improvements including pavement, curb, planter strip, street trees, sidewalk, and driveway approaches along site frontage on SW Woodbury Loop, W Brisband Street and Street B. Street improvements shall be constructed in accordance with the Public Works Standards.
PFD 5.	Prior to Issuance of Public Works Permit: 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. The stormwater report shall also include conveyance calculations to demonstrate that any downstream impacts can be mitigated and demonstrate that any upstream areas can be conveyed through the storm system.
PFD 6.	Prior to the Issuance of the Public Works Permit: The applicant shall obtain an NPDES 1200C permit from the Oregon Department of Environmental Quality and a Local Erosion Control Permit from the City of Wilsonville. All erosion control measures shall be in place prior to starting any construction work, including any

	demolition work. Permits shall remain active until all construction work is complete and the site has been stabilized. Permits will be closed out when home construction is completed and final certificates of occupancy have been issued for all homes in the subdivision.
PFD 7.	<u>With the Public Works Permit:</u> The applicant shall provide to the City a copy of correspondence that plans have been distributed to the franchise utilities. <u>Prior to the issuance of the Public Works Permit:</u> The applicant shall coordinate the proposed locations and associated infrastructure design for the franchise utilities. Should permanent/construction easement or right-of-way be required to construct or relocate a franchise utility, the applicant shall provide a copy of the recorded documents.
PFD 8.	<u>Prior to final completeness of the Public Works Permit:</u> Submit documentation that the existing on-site septic system was properly decommissioned per the requirements of OAR 340-071-0185.
PFD 9.	<u>Prior to final completeness of the Public Works Permit:</u> Submit documentation that the existing well serving this property was properly abandoned in accordance with OAR 690-240 and the Water Resources Department requirements.
PFD 10.	<u>Prior to the issuance of the Public Works Permit:</u> The applicant shall submit design and construction plans including the Trailhead Park and the Boeckman Creek Trail with signage. The trail cross-section shall be compliant with Figure 32 of the Frog Pond West Master Plan and designed in conformance with the City Public Works Standards. The applicant shall be credited for costs of design and construction of the Trailhead Park and the Boeckman Creek Trail and associated amenities through the Parks SDC credits as provided in the Development and Annexation Agreement.

Request F: Tentative Subdivision Plat (SUBD22-0002)

	The following conditions are in addition to the dedications and easements shown on the Tentative Subdivision Plat
PFF 1.	<u>Prior to Final Plat Approval:</u> Show dedication of a 20-foot right-of-way along SW Brisband Street right-of-way frontage.
PFF 2.	<u>Prior to Final Plat Approval:</u> Show dedication of a 6-foot public utility easement along the SW Brisband Street, SW Woodbury Loop, Street B, and SW Frog Pond Lane right-of-way frontages.
PFF 3.	<u>Prior to Final Plat Approval:</u> All public infrastructure improvements including but not limited to street, stormwater drainage, water quality and flow control, sanitary sewer, and water facilities shall be substantially complete with approval from the Community Development Director pursuant to Section 4.220 of the Development Code.

Natural Resources Division Conditions:

All Requests

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

Building Division Conditions:

All Requests

BD1.	<p><u>Prior to Construction of the Subdivision's Residential Homes:</u> Designated through approved planning procedures, the following conditions must be met and approved through the Building Official:</p> <ol style="list-style-type: none"> a. Street signs shall be installed at each street intersection and approved per the public works design specifications and their required approvals. b. All public access roads and alleys shall be complete for access to the residential home sites. c. All public and service utilities to the private building lots must be installed, tested and approved by the City of Wilsonville's Engineering/Public Works Department or other service utility designee. d. All required fire hydrants and the supporting piping system shall be installed, tested, and approved by the Fire Code Official prior to model home construction. (OFC 507.5).
BD2.	<p><u>Prior to Occupancy:</u> New and existing buildings shall have approved address labels. Building numbers or approved building identification shall be placed in a position that is plainly legible and visible from the street or road fronting the property, including monument signs. These numbers shall contrast with their background. Numbers shall be a minimum of 4 inches high with a minimum stroke width of 1/2 inch. (OFC 505.1) Where vehicle access is from a private drive or alley, provide a physical address on the new home, as well as near the intersection of the private drive and public road. The address must be visible from any approaches by a monument, pole or other sign used to identify the structure. (ORSC R319)</p>
BD1.	<p><u>Prior to Demolition of Structures:</u></p> <ol style="list-style-type: none"> a. Photos must be taken of any structures on the site that are to be demolished. Photos must be a clear resolution (when printed, a minimum resolution of 300 dpi or greater) and should include a representative sample of the exterior of the structure from each direction. A demolition permit must be obtained from the Building Division and photos must be submitted with the demolition permit application. (Wilsonville Code 9.270) b. An NPDES 1200-C permit must be obtained from DEQ with a copy provided to the City.

Master Exhibit List:

The entry of the following exhibits into the public record by the Development Review Board confirms its consideration of the application as submitted. The exhibit list below includes exhibits for Planning Case File DB22-0003. The exhibit list below 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. Applicant's Narrative and Materials – Available Under Separate Cover**
 - Land Use Application Forms
 - Land Use Narrative
 - Appendix A: Annexation Documents
 - Appendix B: Preliminary Storm Drainage Report
 - Appendix C: Wetland Delineation and Abbreviated Significant Resource Impact Report
 - Appendix D: Traffic Memorandum
 - Appendix E: Arborist Report and Tree Plan
 - Appendix F: Geotechnical Engineering and Infiltration Testing Report
 - Appendix G: Stafford Meadows PUD Recorded CC&Rs and Bylaws
 - Appendix H: Example Building Elevations
 - Appendix I: Republic Services Service Provider Letter
 - Appendix J: TVF&R Permit and Approved Plans
- B2. Full Size Drawings and Plans – Available Under Separate Cover**
 - P0.00 Cover Sheet
 - P1.00 Existing Conditions - Aerial
 - P1.10 Existing Conditions – Survey Mapping
 - P2.00 Preliminary Site Plan
 - P2.10 Preliminary Street Cross Sections
 - P3.00 Preliminary Plat
 - P4.00 Preliminary Utility Plan
 - P5.00 Preliminary Grading Plan
 - P6.00 Annexation Plan
 - P7.00 Zoning Map
 - P8.00 Proposed Circulation and Connectivity

P9.00 Shadow Plat Street Layout
 P10.00 Subdistricts and Density
 P11.00 Sight Lines to Boeckman Creek Corridor
 L1.00 Tree Protection-Removal Plan
 L1.10 Tree Inventory
 L1.20 Tree Inventory
 L2.00 Overall Landscape Plans
 L2.10 Tract Landscape Plans
 L2.20 Raingarden and LIDA Planting Plans
 L2.30 Landscape Details
 L3.00 Landscape Notes and Details
 IL-1 Illumination Notes
 IL-2 Illumination Details
 IL-3 Illumination Plan

- B3.** Incompleteness Response Letter Dated May 18, 2022
- B4.** Memorandum from Applicant Regarding Tree Removal, Replacement and Mitigation Dated August 11, 2022

Development Review Team Correspondence

- C1.** Engineering Division Conditions
- C2.** Natural Resources Conditions

Procedural Statements and Background Information:

- 1. The statutory 120-day time limit applies to this application. The applicant first submitted the application on March 17, 2022. Staff conducted a completeness review within the statutorily allowed 30-day review period and found the application to be incomplete on April 11, 2022. The applicant submitted additional material on May 19, 2022. Staff conducted a completeness review within the statutorily allowed 30-day review period and deemed the application complete on June 16, 2022. The City must render a final decision for the request, including any appeals, by October 14, 2022.
- 2. Surrounding land uses are as follows:

Compass Direction	Zone:	Existing Use:
North	RRFF-5 and PDR5	Rural Residential/Agriculture (Clackamas County) Residential
East	RRFF-5	Rural Residential/Agriculture (Clackamas County)
South	RN	Residential (Morgan Farm)
West	FDA-H and PDR5	Residential

- 3. Previous City Planning Approvals: None
- 4. The applicant has complied with Sections 4.013-4.031 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:

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 City's processing of the application is in accordance with the applicable general procedures of this Section.

Initiating Application

Section 4.009

The owners of all property included in the application signed the application forms. West Hills Land Development LLC initiated the application with their approval.

Pre-Application Conference

Subsection 4.010 (.02)

Following a request from the applicant, the City held a pre-application conference for the proposal on September 16, 2021 (PA21-0021), 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 general development regulations listed in Sections 4.150 through 4.199, applied in accordance with this Section.

Request A: Annexation (ANNX22-0002)

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

Comprehensive Plan-Annexation and Boundary Changes

Consistent with Future Planned Public Services
Implementation Measure 2.2.1.a.

- A1.** The Frog Pond West Master Plan establishes the future planned public services and funding plan for the subject property. The development of public services and funding will be consistent with the Frog Pond West Master Plan thus allowing the annexation to proceed. West Hills Land Development LLC and the City will enter into a Development and Annexation Agreement detailing provision and development of public services as required by Conditions of Approval.

Demonstrated Need for Immediate Urban Growth
Implementation Measure 2.2.1.a.

- A2.** Metro brought the subject area into the Urban Growth Boundary (UGB) in 2002 to meet demonstrated regional housing needs. With adoption for the Frog Pond West Master Plan the subject area is now primed for development to help meet regional housing needs.

Adherence to State and Metro Annexation Laws and Standards
Implementation Measure 2.2.1.e.

- A3.** This review applies all applicable Metro and State rules, regulations, and statutes as seen in findings below.

Orderly, Economic Provision of Public Facilities and Services
Implementation Measure 2.2.1.e. 1.

- A4.** The Frog Pond Area Plan includes implementation measures to ensure the orderly and economic provision of public facilities and services for the Frog Pond Area, including Frog Pond West. The applicant proposes site development with concurrent applications for Stage 1 and Stage 2 Planned Unit Development and Land Division, which proposes the extension of public facilities and services to the Frog Pond Terrace site. These proposed services are generally consistent with the Frog Pond Area Plan and Frog Pond West Master Plan, and the City's Finance Plan and Capital Improvements Plan.

Availability of Sufficient Land for Uses to Insure Choices over 3-5 Years
Implementation Measure 2.2.1.e. 2.

- A5.** The inclusion of the Frog Pond area within the UGB and the adoption of the Frog Pond Area Plan demonstrate the need for residential development in the Frog Pond area.

Annexation of the subject site will allow development of the uses envisioned by the adopted Frog Pond West Master Plan.

Wilsonville Development Code-Annexation

Authority to Review Quasi-Judicial Annexation Requests

Subsections 4.030 (.01) A. 11, 4.031 (.01) K, 4.033 (.01) F., and 4.700 (.02)

- A6.** The review of the quasi-judicial annexation request by DRB and City Council is consistent with the authority established in the Development Code.

Procedure for Review, Etc.

Subsections 4.700 (.01). and (.04)

- A7.** The submission materials from the applicant include an annexation petition signed by the necessary parties, a legal description and map of the land to be annexed, and a narrative describing conformance with applicable criteria. City Council, upon recommendation from the DRB, will declare the subject property annexed.

Adoption of Development Agreement with Annexation

Subsection 4.700 (.05)

- A8.** Subject to requirements in this subsection and the Frog Pond West Master Plan, Conditions of Approval require the necessary parties enter into a Development and Annexation Agreement with the City covering the annexed land.

Metro Code

Local Government Boundary Changes

Chapter 3.09

- A9.** The request is within the UGB, meets the definition of a minor boundary change, satisfies the requirements for boundary change petitions, and is consistent with both the Comprehensive Plan and the Frog Pond West Master Plan.

Oregon Revised Statutes (ORS)

Authority and Procedure for Annexation

ORS 222.111

- A10.** The request meets the applicable requirements in State statute including the facts that the subject property is within the UGB and is contiguous to the City, the request has been initiated by the property owners of the land being annexed, and all property owners and a majority of electors within the annexed area consent in writing to the annexation.

Procedure Without Election by City Electors
ORS 222.120

A11. The City charter does not require elections for annexation, the City is following a public hearing process defined in the Development Code, and the request meets the applicable requirements in State statute including the facts that all property owners and a majority of electors within the annexed area consent in writing to the annexation. Annexation of the subject property thus does not require an election.

Annexation by Consent of All Owners and Majority of Electors
ORS 222.125

A12. All property owners and a majority of electors within the annexed area have provided their consent in writing. However, the City is following a public hearing process as prescribed in the City's Development Code concurrent with a Zone Map Amendment request and other quasi-judicial land use applications.

Oregon Statewide Planning Goals

Planning Goals – Generally
Goals 1, 2, 5, 6, 8, 9, 11, 12, 13, 14

A13. The area proposed for annexation will be developed consistent with the City's Comprehensive Plan and the Frog Pond West Master Plan, both of which have been found to meet the Statewide Planning Goals.

Housing
Goal 10

A14. The proposed Comprehensive Plan map amendments will continue to allow the City to meet its housing goals and obligations reflected in the Comprehensive Plan. Specifically:

- The City has an existing Housing Needs Analysis and Buildable Lands Inventory adopted in 2014 collectively known as the Wilsonville Residential Land Study. The key conclusions of this study are that Wilsonville: (1) may not have a 20-year supply of residential land and (2) the City's residential policies meet Statewide Planning Goal 10 requirements.
- Under the Metro forecast, Wilsonville is very close to having enough residential land to accommodate expected growth. Wilsonville could run out of residential land by 2032.
- If Wilsonville grows faster than the Metro forecast, based on historic City growth rates, the City will run out of residential land before 2030.
- Getting residential land ready for development is a complex process that involves decisions by Metro, City decision makers, landowners, the Wilsonville community,

and others. The City has started the master planning process for Frog Pond East and South neighborhoods to ensure that additional residential land is available within the City. The City also adopted a new plan and development standards for more multi-family units in the Wilsonville Town Center. Finally, the City provides infill opportunities, allowing properties with existing development at more rural densities to be re-zoned for more housing, which this application falls under.

- Wilsonville is meeting Statewide Planning Goal 10 requirements to “provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing” and to “provide for an overall density of 8 or more dwelling units per net buildable acre.”
- Wilsonville uses a two-map system, with a Comprehensive Plan Map designating a density for all residential land and Zone Map with zoning to implement the Comprehensive Plan designation. Rezoning the subject property to a higher density zone consistent with the Comprehensive Plan will ensure related Zone Map Amendment and development approvals support the Comprehensive Plan and Goal 10.
- The proposal increases density allowed and development capacity within the existing urban growth boundary and improving the capacity identified in the 2014 study. The type of housing is anticipated to be single-family; however, the approval will allow middle housing consistent with House Bill 2001 and newly implemented City code to allow middle housing types.
- The proposal directly impacts approximately 2.9% of the developable residential land identified in the 2014 Wilsonville Residential Land Study (approximately 10.9 of 477 acres).

Request B: Zone Map Amendment (ZONE22-0003)

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

Comprehensive Plan

“Residential Neighborhood” on Comprehensive Plan Map, Purpose of “Residential Neighborhood” Designation

Policy 4.1.7.a.

- B1.** The subject area has a Comprehensive Plan Map Designation of “Residential Neighborhood”. The designation enables development of the site consistent with the purpose of this designation as set forth in the legislatively adopted Frog Pond West Master Plan, resulting in an attractive, cohesive and connected residential neighborhood with high

quality architecture and community design, transportation choices, and preserved and enhanced natural resources.

“Residential Neighborhood” Zone Applied Consistent with Comprehensive Plan Implementation Measure 4.1.7.c.

- B2.** The applicant requests the subject area receive the zoning designation of Residential Neighborhood (RN) as required for areas with the Comprehensive Plan Map Designation of “Residential Neighborhood”.

Safe, Convenient, Healthful, and Attractive Places to Live

Implementation Measure 4.1.4.c.

- B3.** The proposed RN zoning allows the use of planned developments consistent with the legislatively adopted Frog Pond West Master Plan, enabling development of safe, convenient, healthful, and attractive places to live.

Residential Density

Implementation Measure 4.1.4.u.

- B4.** The subject area will be zoned RN allowing application of the adopted residential densities of the Frog Pond West Master Plan. The sub-districts established in the Frog Pond West Master Plan govern the allowed residential densities. See also Request C, Stage 1 Preliminary Plan.

Development Code

Zoning Consistent with Comprehensive Plan

Section 4.029

- B5.** The applicant requests a zone change concurrently with a Stage 1 Preliminary Plan, Stage 2 Final Plan, and other related development approvals. The proposed zoning designation of RN is consistent with the Comprehensive Plan “Residential Neighborhood” designation. See also Finding B2 above.

Base Zones

Subsection 4.110 (.01)

- B6.** The requested zoning designation of RN is among the base zones identified in this subsection.

Residential Neighborhood (RN) Zone

Purpose of the Residential Neighborhood (RN) Zone

Subsection 4.127 (.01)

- B7.** The request to apply the RN Zone on lands designated “Residential Neighborhood” on the Comprehensive Plan Map enables a planned development process implementing the

“Residential Neighborhood” policies and implementation measures of the Comprehensive Plan and the Frog Pond West Master Plan.

Permitted Uses in the Residential Neighborhood (RN) Zone
Subsection 4.127 (.02)

- B8.** Concurrent with the Zone Map Amendment request the applicant requests approval of a 19-lot residential subdivision. Single-family dwelling units, Duplex, Triplex, Quadplex, Cluster Housing, Cohousing, Cluster Housing (Frog Pond West Master Plan), open space, and public and private parks are among the permitted uses in the RN Zone.

Residential Neighborhood (RN) Zone Sub-districts and Residential Density
Subsection 4.127 (.05) and (.06)

- B9.** The proposed uses, number of lots, preservation of open space, and general block and street layout are generally consistent with the Frog Pond West Master Plan. Specifically in regards to residential land use lot count, the proposed Stage 1 area includes a portion of medium lot Sub-district 4 and a portion of large lot Sub-district 7. A full discussion of compliance with the sub-districts and residential density is included under Request C, Stage 1 Preliminary Plan.

Request C: Stage 1 Preliminary Plan (STG122-0003)

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

Comprehensive Plan

City Supports Development of Land within City Consistent with Land Use Designation Goal 2.1, Policy 2.1.1., Implementation Measure 2.1.1.a., Policy 2.2.1.

- C1.** The City’s Comprehensive Plan, Frog Pond Area Plan, and Frog Pond West Master Plan designate the subject property for residential use. The Frog Pond West Master Plan specifically identifies procedures for development of the subject and surrounding land, thus supporting its development for residential lots so long as proposed development meets applicable policies and standards.

Urbanization for Adequate Housing for Workers Employed in Wilsonville, Jobs and Housing Balance
Implementation Measures 2.1.1.b., 4.1.4.l., 4.1.4.p.

- C2.** The proposal provides for urbanization of an area planned for residential use to provide additional housing within the City available to workers employed within the City. However, no special provisions or programs target the units to workers employed within the City.

Encouraging Master Planning of Large Areas Implementation Measure 2.1.1.f.2.

- C3. The proposed development is part of a larger area covered by the Frog Pond West Master Plan consistent with the City's policies and encouragement related to master planning.

City Obligated to do its Fair Share to Increase Development Capacity within UGB Implementation Measure 2.2.1.b.

- C4. The property is within the urban growth boundary and available for use consistent with its residential designation. Allowing development of the property for additional residential lots supports the further urbanization and increased capacity of residential land within the UGB.

Urban Development Only Where Necessary Facilities can be Provided Implementation Measure 3.1.2.a.

- C5. As can be found in the findings for the Stage 2 Final Plan, the proposed development provides all necessary facilities and services consistent with the Frog Pond West Master Plan.

Provision of Usable Open Space Implementation Measures 3.1.11.p., 4.1.5.kk.

- C6. The proposal is located within medium- and large-lot sub districts and does not require usable open space. However, the Frog Pond Area Plan and Frog Pond West Master Plan includes a portion of the Boeckman Creek Regional Trail alignment within the subject property. The applicant proposes open space Tract A that contains the required portion of the Boeckman Creek Trail alignment as well as a trailhead park.

Consistency with Street Demonstration Plans May Be Required Implementation Measure 3.2.2.

- C7. Section 4.127 requires the area subject to the Stage 1 Preliminary Plan be consistent with the street demonstration plan in Figure 18 of the Frog Pond West Master Plan. The proposed street layout is generally consistent with the street demonstration plan with variations as noted in Finding D15.

Wide Range of Housing Choices, Planning for a Variety of Housing Policy 4.1.4., Implementation Measures 4.1.4.b., 4.1.4.c., 4.1.4.d., 4.1.4.j., 4.1.4.o.

- C8. The Frog Pond Area Plan and the Frog Pond West Master Plan identify a variety of single-family homes and middle housing as the appropriate housing types for the subject area as part of the broader mix of housing in Wilsonville.

Accommodating Housing Needs of Existing Residents Implementation Measure 4.1.4.f.

- C9. The applicant intends to provide a housing product attractive to existing residents of the City as a whole, including current homeowners and current renters looking to purchase in

a medium to high price range, similar to other nearby homes. The applicant proposes medium and large-sized lots to accommodate detached dwelling units. Within the Residential Neighborhood zone a variety of middle housing types is also permitted.

Planned Development Regulations

Planned Development Lot Qualifications

Subsection 4.140 (.02)

C10. The planned 19-lot subdivision will accommodate residential building lots, provide functional public streets, and be surrounded by open space and recreational opportunities consistent with the purpose of Section 4.140. The proposed subdivision is 10.9 acres and is suitable for planning and development. The property is not currently nor is it proposed to be zoned “PD” (Planned Development). Concurrently with the request for a Stage 1 Preliminary Plan, the applicant proposes to rezone the property to RN (Residential Neighborhood). Pursuant to the Frog Pond West Master Plan development in the RN zone follows the same planned development procedure as PDR zones.

Ownership Requirements

Subsection 4.140 (.03)

C11. The owners of the subject property have signed an application form included with the application.

Professional Design Team

Subsection 4.140 (.04)

C12. Li Alligood, AICP, of Otak is the coordinator of a professional design team with all the necessary disciplines including engineers, a landscape architect, and a planner, among other professionals.

Planned Development Application Requirements

Subsection 4.140 (.07)

C13. Review of the proposed Stage 1 Preliminary Plan has been scheduled for a public hearing before the DRB 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 an application by the property owners.
- The applicant submitted a Stage 1 Preliminary Plan request on a form prescribed by the City.
- The applicant identified a professional design team and coordinator. See Finding C12.
- The applicant has stated the uses involved in the Stage 1 Preliminary Plan and their locations.
- The applicant provided boundary information.
- The applicant has submitted sufficient topographic information.
- The applicant provided a tabulation of the land area to be devoted to various uses.

- Any necessary performance bonds will be required.

Standards for Residential Development in Any Zone

Outdoor Recreational Area and Open Space Land Area Requirements

Subsection 4.113 (.01)

- C14.** The Frog Pond West Master Plan controls outdoor recreational area and open spaces for the subject and surrounding areas. The subject property contains land within the R-7 medium lot sub-district and the R-10 large lot sub-district. These sub-districts do not require outdoor recreational area and open space, therefore this subsection does not apply. However, the proposed development contains Tract A that includes a portion of the Boeckman Creek Trail and a trailhead park providing non-required open space area.

Residential Neighborhood Zone

Permitted Uses

Subsection 4.127 (.02)

- C15.** The applicant proposes residential lots and open spaces, which are or will accommodate allowed uses in the RN Zone.

Residential Neighborhood Sub-districts

Subsection 4.127 (.05)

- C16.** The proposed Stage 1 Preliminary Plan area includes all a portion of medium lot Sub-district 4 and a portion of large lot Sub-district 7.

Minimum and Maximum Residential Lots

Subsection 4.127 (.06)

- C17.** The proposed number of residential lots, preservation of open space, and general block and street layout are generally consistent with the Frog Pond West Master Plan. Specifically in regards to residential lot count, the proposed Stage 1 area includes a portion of medium lot Sub-district 4 and a portion of large lot Sub-district 7. The following table summarizes how the proposed residential lots in each Sub-district are consistent with the Master Plan recommendations.

The applicant proposes 16 lots in Sub-district 4, which is two (2) greater than the maximum allowed, and three (3) lots in Sub-district 7, which is one (1) lot fewer than the minimum proportional density calculation. However, the total number of 19 lots proposed is within the proportional range of 16-19 lots for the entire site.

Subdistrict and Land Use Designation	Gross Site Area (ac)	Percent of Sub-district	Established lot range for Sub-district	Lot Range for Site	Proposed Lots	Total lots within Sub-district - Approved and Proposed
4 – R-7	3.4	13.5%	86-107	12-14 ^{*1}	16	32 Approved 16 Proposed 48 Total
7 – R-10	1.6	16.4%	24-30	4-5 ^{*2}	3	5 Approved 3 Proposed 8 Total
Total	5.0			16-19	19	

^{*1} Per Section 4.127 (.06) A. 2., up to an additional 10% of maximum density is allowed based on a SROZ boundary verification; this allows one (1) additional lot for a maximum of 15 lots.
^{*2} Per Section 4.127 (.06) B., the City may allow a reduction in the minimum density for a sub-district when it is demonstrated that the reduction is necessary due to topography, protection of trees, wetlands and other natural resources, constraints posed by existing development, infrastructure needs, provision of non-residential uses and similar physical conditions

With regard to Sub-district 4, per Section 4.127 (.06) A. 2., the City may allow an increase in the maximum density up to a maximum of 10% of what would otherwise be permitted based on an adjustment to an SROZ boundary that is consistent with Section 4.139.06. As a result of SROZ map verification in Sub-district 4, the maximum of 14 lots may be increased by one (1) lot to 15 allowed. The applicant proposes 16 lots in Sub-district 4, one (1) greater than the maximum with the allowed additional lot.

With regard to Sub-district 7, per Section 4.127 (.06) B., the City may allow a reduction in the minimum density for a sub-district when it is demonstrated that the reduction is necessary due to topography, protection of trees, wetlands and other natural resources, constraints posed by existing development, infrastructure needs, provision of non-residential uses and similar physical conditions. One (1) fewer lot than the minimum density is proposed in Sub-district 7 due to a combination of factors related to topography, infrastructure needs, and provision of non-residential uses.

The proposed development of one (1) fewer lot in the Sub-district 7 portion of the site allows for future development that meets all dimensional standards for lots in this part of the site. Because the Sub-district 4 portion of the site has substantially fewer development constraints, it can easily accommodate the one (1) additional lot needed to satisfy the minimum density requirement for Sub-district 7. As proposed the total number of lots meets the overall minimum proportional density for the site when the two Sub-districts are combined.

The configuration of lots as proposed, which meet all dimensional requirements for the individual lots, will allow for buildout of these sub-districts consistent with the Master Plan recommendations.

Parks and Open Space beyond Master Planned Parks
Subsection 4.127 (.09) B.

C18. The proposed Stage 1 Preliminary Plan only includes land within the R-7 medium lot sub-district and the R-10 large lot sub-district. Properties within these sub-districts are exempt from the requirements of this section.

Request D: Stage 2 Final Plan (STG222-0003)

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

Stage 2 Final Plan Submission Requirements and Process

Consistency with Comprehensive Plan and Other Plans
Subsection 4.140 (.09) J. 1.

D1. As demonstrated in Findings C1 through C9 under the Stage 1 Preliminary Plan the project is consistent with the Comprehensive Plan. This review includes review for consistency with the Frog Pond West Master Plan.

Traffic Concurrency
Subsection 4.140 (.09) J. 2.

D2. The Traffic Impact Analysis (see Exhibit B1) performed by the City's consultant, DKS Associates, identifies the most probable used intersection for evaluation as:

- SW Boeckman Road/SW Sherman Drive

The SW Boeckman Road/SW Sherman Drive intersection is the only Frog Pond West access to the proposed development. Other study intersections, such as SW Stafford Road/SW 65th Avenue and SW Canyon Creek Road/SW Boeckman Road, were not included in this analysis as the trips through those intersections would be insignificant (around 10 peak hour trips). Additionally, the SW Stafford Road/SW 65th Avenue intersection was not included as it was found to already fail to meet County standards under existing 2021 conditions, as noted in the Frog Pond Crossing TIA and Frog Pond Vista TIA. As noted in both of those reports, an intersection improvement has already been identified in the County's Capital Improvement Project List.

The study intersection meets the City of Wilsonville's operating standard for the existing conditions. The intersection will continue to perform at Level of Service D or better with the proposed project and thus meets City standards.

Facilities and Services Concurrency Subsection 4.140 (.09) J. 3.

- D3.** The applicant proposes sufficient facilities and services, including utilities, concurrent with development of the residential subdivision.

Adherence to Approved Plans Subsection 4.140 (.09) L.

- D4.** Conditions of Approval ensure adherence to approved plans except for minor revisions approved by the Planning Director.

General Residential Development Standards

Effects of Compliance Requirements and Conditions on Cost of Needed Housing Subsection 4.113 (.13)

- D5.** No parties have presented evidence nor has staff discovered evidence that provisions of this section are such that additional conditions, either singularly or cumulatively, have the effect of unnecessarily increasing the cost of housing or effectively excluding a needed housing type.

Underground Utilities Required Subsection 4.118 (.02) and Sections 4.300 to 4.320

- D6.** The applicant proposes installation of all new utilities underground. The applicant will underground all existing utility lines facing the subject property.

Habitat Friendly Development Practices to be Used to the Extent Practicable Subsection 4.118 (.09)

- D7.** The applicant has designed the project to minimize grading to only what is required to install site improvements and build homes. The applicant has designed, and will construct, water, sewer, and stormwater infrastructure in accordance with the applicable City requirements in order to minimize adverse impacts on the site, adjacent properties, and surrounding resources. The project avoids impacts to Boeckman Creek, which is within the Significant Resource Overlay Zone (SROZ). The applicant has included the Abbreviated Significant Resource Impact Report (SRIR) in Exhibit B1.

Residential Neighborhood (RN) Zone

General Lot Development Standards Subsection 4.127 (.08) Table 2.

- D8.** The applicant proposes lots reviewed for consistency with applicable development code standards and the Frog Pond West Master Plan. The proposed lots meet or exceed the standards of Table 2, or the applicant can meet or exceed the standards with final design, as follows:

Standard	R-7 Medium Lot Sub-district 4		R-10 Large Lot Sub-district 7		Compliance Notes
	Required	Proposed	Required	Proposed	
Min. Lot Size	6,000 sf	6,013-7,043 sf	8,000 sf	8,021-9,262 sf	Standard is met.
Min. Lot Depth	60 ft	60+ ft	60 ft	80+ ft	Standard is met.
Min. Lot Width	35 ft	35+ ft	40 ft	55+ ft	Standard is met.
Max. Lot Coverage	45%	45% max	40%	40% max	Standard can be met. Example floor plan footprint shows range of 1,268 sf to 2,480 sf. One or more could be placed on each proposed lot without exceeding max lot coverage.
Max. Bldg Height	35 ft	35 ft max	35 ft	35 ft max	Standard can be met. Per applicant's materials, houses will be max 35 ft height.
Min. Front Setback	15 feet	15 ft min	20 ft	20 ft min	Standard can be met.
Min. Rear Setback	15 feet	15 ft min	20 ft	20 ft min	Standard can be met.
Min. Side Setback	5 feet (10 feet for corner lots)	5 ft min (10 ft min on corner lots)	5 feet (10 feet for corner lots)	5 ft min (10 ft min on corner lots)	Standard can be met.
Min. Garage Setback from Alley	18 ft	18 ft. min	18 ft	18 ft. min	Standard can be met.
Min. Garage Setback from Street	20 ft	20 ft min	20 ft	20 ft min	Standard can be met.

Frog Pond West-Specific Lot Development Standards
 Subsection 4.127 (.08) C. and D.

D9. The proposed lots meet standards specific to Frog Pond West, or the applicant can meet or the standards with final design, as follows:

Standard				Compliance Notes	
Small-lot Subdistricts (include at least one element)	Sufficient Information Provided to Determine Compliance	Compliance to be Determined at Building Permit Review	N/A		Subject property does not contain land within the small-lot sub-district.
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Wall and landscaping for lots adjacent to Stafford and Boeckman Road	Provided	Not Provided	N/A		The subject property does not abut Stafford or Boeckman Road.
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
No driveway access to collectors for small and medium lots	Met	Not Met	N/A		Subject property does not include collectors.
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

Open Space Requirements

Subsection 4.127 (.09)

D10. As stated in Finding C18 (Subsection 4.127 (.09) B.), the R-10 and R-7 sub-districts involved in the proposal are exempt from open space requirements.

Block, Access, and Connectivity Consistent with Frog Pond West Neighborhood Plan
Subsection 4.127 (.10) and Figure 18. Frog Pond West Master Plan

D11. The Street Demonstration Plan is an illustrative layout of the desired level of connectivity in the Frog Pond West neighborhood and is intended to be guiding, not binding, allowing for flexibility provided that overall connectivity goals are met. The block size and shape, access, and connectivity of the proposed subdivision complies with Figure 18 of the Frog Pond West Master Plan or is an allowed variation as follows:

Street Segment	Generally Consistent with Figure 18	Allowed Variation	Explanation of Variation
SW Brisband Street	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SW Woodbury Loop	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See explanation below.
Street B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See explanation below.

SW Brisband Street is extended west on the south side of the subdivision as shown on the Street Demonstration Plan. Existing slopes and the presence of the SROZ preclude extending SW Frog Pond Lane farther to the west in a broad radius as anticipated by the Street Demonstration Plan. Rather, SW Frog Pond Lane is proposed to terminate in an “eyebrow” allowing for a turn to the south that aligns with a future extension of SW Painter Drive from the Morgan Farm development. SW Woodbury Loop is extended north from Morgan Farm into the proposed development, curving east at its northern extent to intersect with the future extension of SW Painter Drive north from Morgan Farm to SW Frog Pond Lane. The proposed modifications do not require out-of-direction pedestrian or vehicular travel nor do they result in greater distances for pedestrian access to the proposed subdivision from the surrounding future streets than would otherwise be the case if the Street Demonstration Plan were adhered to.

Main Entrance, Garage, Residential Design, and Building Orientation Standards
 Subsections 4.127 (.14-.18)

D12. The proposed subdivision provides lots of sufficient size and of a typical orientation to meet the RN zone design standards, or the applicant can meet the standards at the time of building permit review, as follows:

Standard			Compliance Notes
Main Entrance Standards	Sufficient Information Provided to Determine Compliance	Compliance to be Determined at Building Permit Review	Standard can be met.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Garage Width Standards	Sufficient Information Provided to Determine Compliance	Compliance to be Determined at Building Permit Review	Standard can be met. Subdivision includes a mix of lots greater and less than 50 feet at the front lot line.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Garage Orientation Towards Alley or Shared Driveway	Alleys or Shared Driveways in Subdivision	No Alleys or Shared Driveways in Subdivision	Not applicable.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Residential Design Standards	Sufficient Information Provided to Determine Compliance	Compliance to be Determined at Building Permit Review	Standard can be met.
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Small-Lot Subdistricts – House Plan Variety	Required Duplex/Attached Units N/A	Provided Duplex/Attached Units N/A	Not applicable. Not within small lot sub-district.
Fences	Sufficient Information Provided to Determine Compliance <input type="checkbox"/>	Compliance to be Determined at Building Permit Review <input checked="" type="checkbox"/>	Standard can be met.
Homes Adjacent to School and Parks and Public Open Spaces	Sufficient Information Provided to Determine Compliance <input type="checkbox"/>	Compliance to be Determined at Building Permit Review <input checked="" type="checkbox"/>	Several lots face open space tracts and/or the Boeckman Creek Trail. Lot 4 is adjacent to, and Lots 10-12 are across the street from, the trailhead park.

On-site Pedestrian Access and Circulation

Continuous Pathway System

Section 4.154 (.01) B. 1.

D13. The submitted plans show sidewalks along the frontages of all lots providing a continuous pathway system throughout the proposed subdivision. In addition to the sidewalk system, pedestrian/bicycle connections are proposed through Tract A. These additional connections are consistent with Figure 18 of the Frog Pond West Master Plan. The proposal also enables connections to future adjacent development. To ensure full access and function of the planned pathway system for the public, a Condition of Approval requires public access easements across all pathways within private tracts.

Safe, Direct, and Convenient

Section 4.154 (.01) B. 2.

D14. The submitted plans show sidewalks and pathways providing safe, direct, and convenient connections consistent with Figure 18 of the Frog Pond West Master Plan.

Vehicle/Pathway Separation

Section 4.154 (.01) B. 3.

D15. The proposed design vertically and or horizontally separates all sidewalks and pathways from vehicle travel lanes except for driveways and crosswalks.

Crosswalks Delineation
Section 4.154 (.01) B. 4.

D16. A Condition of Approval requires all crosswalks shall be clearly marked with contrasting paint or paving materials (e.g., pavers, light-colored concrete inlay between asphalt, or similar contrast).

Pathway Width and Surface
Section 4.154 (.01) B. 5.

D17. The applicant proposes all pathways to be concrete, asphalt brick/masonry pavers, or other durable surface, and at least 5 feet wide, meeting or exceeding the requirement.

Parking Area Design Standards

Minimum and Maximum Parking
Subsection 4.155 (.03) G.

D18. Each dwelling unit requires one parking space. Between garages and driveways, each home will have at least two parking spaces.

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

D19. The applicable standards are met as follows:

Standard	Met	Explanation
Subsection 4.155 (.02) General Standards		
B. All spaces accessible and usable for parking	☒	Though final design of garages and driveways is not part of current review they are anticipated to meet minimum dimensional standards to be considered a parking space as well as fully accessible. A Condition of Approval requires the dimensional standards to be met.
I. Surfaced with asphalt, concrete or other approved material	☒	Garages and driveways will be surfaced with concrete.
Drainage meeting City standards	☒	Drainage is professionally designed and being reviewed to meet City standards.
Subsection 4.155 (.03) General Standards		
A. Access and maneuvering areas adequate	☒	Parking areas will be typical residential design adequate to maneuver vehicles and serve needs of homes.
A.2. To the greatest extent possible, vehicle and pedestrian traffic separated	☒	Pursuant to Section 4.154, pedestrian circulation is separate from vehicle circulation by vertical separation except at driveways and crosswalks.

Other General Regulations

Access, Ingress and Egress Subsection 4.167 (.01)

D20. Planned access points are typical of local residential streets. The City will approve final access points for individual driveways at the time of issuance of building permits.

Protection of Natural Features and Other Resources

General Terrain Preparation Section 4.171 (.02)

D21. The site has been planned and designed to avoid the natural features on the site, including tree groves, the SROZ, and the Boeckman Creek corridor. Grading, filling, and excavating will be conducted in accordance with the Uniform Building code. The site will be protected with erosion control measures and the creek corridor will be staked prior to commencement of site work to avoid damage to vegetation or injury to habitat. The removal of trees is necessary for site development, but replacement trees will be planted per the provisions of this code.

Trees and Wooded Areas Section 4.171 (.04)

D22. Existing vegetation will not be disturbed, injured or removed prior to land use and permit approvals. Existing trees have been retained wherever possible; however, trees will need to be removed to provide area for home construction. Trees are preserved within the SROZ in Tract A, which contains a portion of the Boeckman Creek Trail alignment.

Trees identified to be retained will be protected during site preparation and construction according to the City Public Works design specifications as outlined in the Arborist Report and a Condition of Approval.

Earth Movement Hazard Area Subsection 4.171 (.07)

D23. The applicant performed geotechnical investigations on all of the subject properties and found no earth movement hazards. A geotechnical report is provided in Exhibit B1.

Historic Resources Subsection 4.171 (.09)

D24. Neither the applicant nor the City have identified any historic, cultural, or archaeological items on the sites, nor does any available information on the history of the site compel further investigation.

Public Safety and Crime Prevention

Design for Public Safety, Addressing, Lighting to Discourage Crime
Section 4.175

D25. The design of the Frog Pond Terrace development deters crime and ensures public safety. The lighting of the streets allows for visibility and safety. The orientation of homes toward streets provides “eyes on the street.” All dwellings will be addressed per Building and Fire Department requirements to allow identification for emergency response personnel. Dwellings will have exterior porch lighting, which will support the streetlights to provide safety and visibility.

Landscaping Standards

Intent and Required Materials
Subsections 4.176 (.02) C. through I.

D26. Planting areas along the street and open spaces within the subdivision are generally open and are not required to provide any specific screening, thus the design of the landscaping follows the general landscaping standards. The plantings include a mixture of ground cover, shrubs, trees, and stormwater swale plantings. Proposed street trees are consistent with previously established trees in other Frog Pond subdivisions.

Types of Plant Material, Variety and Balance, Use of Natives When Practicable
Subsection 4.176 (.03)

D27. The applicant proposes a professionally designed landscape using a variety of plant material. There are no parking areas proposed and no parking area landscaping is required. The landscape plans included in the applicant’s materials (Sheets L2.00-2.20) illustrate the location and type of landscaping within public rights-of-way and tracts. The design includes a variety of native plants, particularly in the open space area.

Street Improvement Standards

Conformance with Standards and Plan
Subsection 4.177 (.01), Figures 19-27 Frog Pond West Master Plan

D28. The proposed streets appear to meet the City’s Public Works Standards and Transportation System Plan. Further review of compliance with Public Works Standards and Transportation System Plan will occur with review and issuance of the Public Works construction permit.

Street Design Standards-Future Connections and Adjoining Properties
Subsection 4.177 (.02) A.

D29. The street network has been designed per the Frog Pond West Master Plan Street Demonstration Plan. Future connections to adjacent sites are anticipated to the east. The proposed design provides for continuation of streets with Morgan Farm to the south and

Frog Pond Overlook to the north. SW Woodbury Loop is extended north and east, consistent with the Frog Pond West Master Plan. SW Brisband Street is extended west, and Street B provides an eastern connection to future development to the east consistent with the Street Demonstration Plan.

City Engineer Determination of Street Design and Width
Subsection 4.177 (.02) B.

D30. The City Engineering Division has preliminarily found the street designs and widths to be consistent with the cross sections shown in the Frog Pond West Master Plan. The Engineering Division will check final conformance with the cross sections shown in the Frog Pond West Master Plan during review of the Public Works permit.

Right-of-Way Dedication
Subsection 4.177 (.02) C. 1.

D31. The tentative subdivision plat shows right-of-way dedication. See Request F.

Waiver of Remonstrance Required
Subsection 4.177 (.02) C. 2.

D32. This Subsection requires that a waiver of remonstrance against formation of a local improvement district (LID) be recorded in the County Recorder's Office as well as the City's Lien Docket as a part of recordation of a final plat. This requirement is contained in the Development and Annexation Agreement and notes that in light of the developer's obligation to pay an Infrastructure Supplemental Fee and Boeckman Bridge Fee, release of the LID Waiver for a specific parcel within the Frog Pond Terrace development may occur upon official recording of the release of the waiver only after payment of these fees, and will require the developer to pay all costs and fees associated with the City's release of the waiver. A Condition of Approval outlines the process to be followed with respect to the required LID Waiver and its release for a specific parcel.

Dead-end Streets Limitations
Subsection 4.177 (.02) D.

D33. No dead-end streets are proposed in the development; however, the north end of SW Woodbury Loop and the eastern extent of Street B will temporary dead end until the property to the east develops (see Sheet P3.0).

Corner Vision Clearance
Subsection 4.177 (.02) E.

D34. Street locations and subdivision design allow the meeting of vision clearance standards.

Vertical Clearance

Subsection 4.177 (.02) F.

D35. Nothing in the proposed subdivision design would prevent the meeting of vertical clearance standards.

Interim Improvement Standards

Subsection 4.177 (.02) G.

D36. The City Engineer has or will review all interim improvements to meet applicable City standards.

Sidewalks Requirements

Subsection 4.177 (.03)

D37. The applicant proposes sidewalks along all public street frontages abutting proposed lots.

Bicycle Facility Requirements

Subsection 4.177 (.04)

D38. No on street bicycle facilities are required within the project area for Frog Pond Terrace. Condition of Approval PFD 2 requires all cross-sections to comply with the Frog Pond West Master Plan requirements prior to Final Plat approval. See Exhibit C1.

Pathways in Addition to, or in Lieu of, a Public Street

Subsection 4.177 (.05)

D39. No pedestrian and bicycle accessways are proposed in addition to, or in lieu of, public streets within the subdivision. The Boeckman Creek Trail in Tract A provides additional north-south connectivity through the development, connecting to the trail in Morgan Farm to the south and Frog Pond Overlook and Vista to the north.

Transit Improvements Requirements

Subsection 4.177 (.06)

D40. The applicant does not propose any transit improvements within the proposed subdivision. There is not currently transit service along SW Stafford Road or SW Boeckman Road; however, as the Frog Pond area develops, additional transit service may be added. Any transit improvements would be addressed at the time the need for additional transit service is identified.

Intersection Spacing

Offset Intersections Not Allowed

Subsection 4.177 (.09) A.

D41. The applicant does not propose any offset intersections.

Minimum Street Intersection Spacing in Transportation System Plan Table 3-2
Subsection 4.177 (.09) B.

D42. Streets within the development are local streets, which are not subject to minimum spacing standards.

Mixed Solid Waste and Recyclables Storage

Review by Franchise Garbage Hauler
Subsection 4.179 (.07)

D43. The proposed development does not contain multi-family residential or non-residential uses requiring the solid waste storage area to meet code requirements for size; however, the applicant has provided a letter from the franchised garbage hauler, Republic Services, to ensure the site plan provides adequate access for the hauler's equipment. The service provider letter is included in Exhibit B1. A turnaround with a stabilizing grass paving system is provided between Lots 16 and 17 at the north end of SW Woodbury Loop for the hauler's trucks; this turnaround is expected to be removed when future extension of the street occurs, providing needed connectivity. Homeowners of Lots 14-19 will be required to locate receptacles close to the turnaround and Lots 8-10 and 13 will be required to locate receptacles close to SW Woodbury Loop until these streets are extended east in the future.

Request E: Site Design Review of Parks and Open Space (SDR22-0003)

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

Objectives of Site Design Review

Proper Functioning of the Site, High Quality Visual Environment Meets Objectives
Subsections 4.400 (.02) A., 4.400 (.02) C.-J., and Subsection 4.421 (.03)

E1. Project elements subject to Site Design Review include: tracts and their landscaping; landscaping in the public right-of-way; retaining walls; and park or open space furnishings. The proposed development is intended to advance the vision for Frog Pond West by incorporating the natural areas on site, providing attractive streetscapes, and enhancing the existing neighborhood to the south and the future neighborhoods to the east and north. The proposed professionally designed landscaping provides stormwater, air quality, and other site functions while demonstrating consistency with the Frog Pond West Master Plan. The landscaping also adds to the high quality visual environment. By functioning properly and contributing to a high quality visual environment, the proposed design fulfills the objectives of Site Design Review.

Encourage Originality, Flexibility, and Innovation
Subsection 4.400 (.02) B. and Subsection 4.421 (.03)

- E2. The City code affords the applicant's design team flexibility to create an original design appropriate for the site while ensuring consistency with the Frog Pond West Master Plan.

Jurisdiction and Power of the DRB for Site Design Review

Development Review Board Jurisdiction
Section 4.420

- E3. A Condition of Approval ensures landscaping is carried out in substantial accord with the DRB-approved plans, drawings, sketches, and other documents. The City will issue no building permits prior to approval by the DRB. The applicant has not requested variances from site development requirements.

Design Standards

Preservation of Landscaping
Subsection 4.421 (.01) A. and Section 4.171

- E4. The site layout takes into consideration existing landscaping and preserving it where possible. The applicant has included an open space (Tract A) that allows for the preservation of a substantial area of SROZ within the development.

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

- E5. No structures are proposed by the proposed development at this time. Building design will be reviewed during the building permit review process.

Surface Water Drainage
Subsection 4.421 (.01) D.

- E6. As demonstrated in the applicant's plans, attention has been given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm drainage system. The location of LIDA facilities within the planter strips of the public streets, stormwater facilities within tracts, and details of LIDA facility planting are shown in Sheets P2.00 and L2.00-L2.20. Appendix B in Exhibit B1 includes the Preliminary Stormwater Drainage Report.

Above Ground Utility Installations
Subsection 4.421 (.01) E.

- E7. The applicant proposes no above ground utility installations. Existing overhead lines will be undergrounded. Each lot will be served by a sanitary sewer line (see Sheet P4.00). Storm sewage disposal is provided by a storm drain system connecting to each on-site stormwater facility.

Screening and Buffering of Special Features

Subsection 4.421 (.01) G.

- E8.** No exposed storage areas, exposed machinery installations, surface areas, truck loading areas, utility buildings and structures, and similar accessory areas and structures exist or are proposed that require screening.

Applicability of Design Standards

Subsection 4.421 (.02)

- E9.** This review applies the design standards to the proposed streetscape and open space areas, which are the portions of the proposed development subject to Site Design Review.

Conditions of Approval Ensuring Proper and Efficient Functioning of Development

Subsection 4.421 (.05)

- E10.** Staff recommends no additional conditions of approval to ensure the proper and efficient functioning of the development.

Site Design Review Submission Requirements

Submission Requirements

Section 4.440

- E11.** The applicant has provided a sufficiently detailed landscape plan and street tree plan to review the streetscape and open space areas subject to Site Design Review.

Time Limit on Site Design Review Approvals

Void after 2 Years

Section 4.442

- E12.** The applicant has indicated that they will pursue development within two years. The approval will expire after two years if not vested, or an extension is not requested and granted, consistent with City Code.

Installation of Landscaping

Landscape Installation or Bonding

Subsection 4.450 (.01)

- E13.** A Condition of Approval ensures all landscaping in common tracts shall be installed shall be installed prior to Final Plat Approval, 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 installation within six (6) months of occupancy. "Security" is cash, certified check, time certificates of deposit, assignment of a savings account, irrevocable letter of credit, 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 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 shall be returned to the applicant. A Condition of Approval further requires that the applicant, prior to Final Plat Approval, either (1) enter into a Residential Subdivision Development Compliance Agreement with the City that covers installation of street trees and right-of-way landscaping or (2) install all street trees and other right-of-way landscaping.

Approved Landscape Plan

Subsection 4.450 (.02)

E14. A Condition of Approval ensures the approved landscape plan is binding upon the applicant/owner. It prevents substitution of plant materials, irrigation systems, or other aspects of an approved landscape plan without official action of the Planning Director or DRB, as specified in this Code.

Landscape Maintenance and Watering

Subsection 4.450 (.03)

E15. A Condition of Approval ensures continual maintenance of the landscape, including necessary watering, weeding, pruning, and replacing, in a substantially similar manner as originally approved by the DRB, unless altered with appropriate City approval.

Modifications of Landscaping

Subsection 4.450 (.04)

E16. A Condition of Approval provides ongoing assurance by preventing modification or removal without the appropriate City review.

Natural Features and Other Resources

Protection

Section 4.171

E17. The proposed design of the site provides for protection of natural features and other resources consistent with the proposed Stage 2 Final Plan for the site as well as the purpose and objectives of Site Design Review. See Findings D21 through D24 under Request D.

Landscaping

Landscape Standards Code Compliance

Subsection 4.176 (.02) B.

E18. The applicant requests no waivers or variances to landscape standards. Thus, all landscaping and screening must comply with standards of this section.

Intent and Required Materials

Subsections 4.176 (.02) C. through I.

E19. The general landscape standard applies throughout different landscape areas of the site and the applicant proposes landscape materials to meet each standard in the different areas. Site Design Review is being reviewed concurrently with the Stage 2 Final Plan which includes an analysis of the functional application of the landscaping standards. See Finding D28 under Request D.

Quality and Size of Plant Material

Subsection 4.176 (.06)

E20. The quality of the plant materials must meet American Association of Nurserymen (AAN) standards as required by this Subsection. Trees as shown on the applicant's plans are specified at 2-inch caliper or greater than 6 feet for evergreen trees. Some shrubs are specified on the Landscape Plans (Sheet L2.00-L2.20) as one (1) gallon, rather than two (2) gallon or greater in size. Ground cover is specified as greater than 4 inches. Turf or lawn is used for a minimal amount of the proposed public landscape area. Conditions of Approval ensure the requirements of this subsection are met including use of native topsoil, mulch, and non-use of plastic sheeting.

Landscape Installation and Maintenance

Subsection 4.176 (.07)

E21. Installation and maintenance standards are or will be met by Conditions of Approval as follows:

- Plant materials are required to be installed to current industry standards and be properly staked to ensure survival.
- 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 narrative states that "As detailed on Sheet 2.00, all landscape areas will be watered by a fully automatic underground irrigation system". However, the sheet does not include a note to this effect. A Condition of Approval ensures the requirement is met.

Landscape Plans

Subsection 4.176 (.09)

E22. The applicant's submitted landscape plans, Sheets L2.00-L2.20, provide the required information.

Completion of Landscaping

Subsection 4.176 (.10)

E23. The applicant has not requested to defer installation of plant materials.

Public Lighting Plan

Lighting of Local Streets

Local Street, page 78 and Figure 42 of Frog Pond West Master Plan

- E24.** Sheet P4.00 in Exhibit B2 shows proposed street lights on local streets. The Frog Pond Master Plan requires PGE Option 'B' LED with Westbrook 35W LED and 18' decorative aluminum pole (20-foot mounting height with 4 foot mast arm). These are dark sky friendly and located with a professionally designed layout to minimize negative effects on future homes, provide for safety, and use a consistent design established by the Frog Pond West Master Plan. The applicant's materials specify the Aurora as the proposed fixture. As explained in the applicant's materials, the Westbrook is no longer available from PGE and the Aurora is now used as the closest matching design.

Lighting of Pathways

Pedestrian Connections, Trailheads and Paths, page 80 and Figure 42 of Frog Pond West Master Plan

- E25.** The Frog Pond West Master Plan requires a Public Lighting Plan and recommended light plan hierarchy to define various travel routes within Frog Pond. Pedestrian connections, trailheads, and paths are required to be uniformly illuminated and shall follow the Public Works Standards for Shared Use Path Lighting. The applicant has coordinated with the City about lighting along the Boeckman Creek Trail and, as a result, does not include any lighting of this pathway to minimize light pollution and discourage use of the trail after dark. However, lighting is provided at the trailhead park as required.

Street Tree Plan

Tree Lists for Primary Streets, Neighborhood Streets, and Pedestrian Connections

Pages 81-83 and Figure 43 of Frog Pond West Master Plan

- E26.** The Street Tree Plan provides guidance tied to the street typology for Frog Pond West, with an overall intent to beautify and unify the neighborhood while providing a variety of tree species. The Frog Pond West Master Plan intends to achieve continuity through consistent tree types and consistent spacing along both sides of a street.

The proposed street tree species comply with the Frog Pond West Master Plan or will with a condition of approval as follows:

Street Name	Street Type	Proposed Species	Compliance Notes
SW Brisband Street	Neighborhood	American Linden	On approved list; consistent with species established in Morgan Farm
SW Woodbury Loop (north-south segment)	Neighborhood	American Yellowwood	On approved list; consistent with species established in Morgan Farm
SW Woodbury Loop (east-west segment)	Neighborhood	Skyline Thornless Honey Locust	On approved list
Street B	Neighborhood	Glenleven Little Leaf Linden	On approved list

Gateways, Monuments and Signage

Unifying Frog Pond Name, Gateway Signs, Prohibition on Individual Subdivision Signs
Page 92 of the Frog Pond West Master Plan

E27. There are no neighborhood gateways planned within the area of Frog Pond Terrace; therefore, no monument signs or other permanent subdivision identification signs are permitted.

Unifying Frog Pond Name, Sign Caps on Street Signs
Page 92 of the Frog Pond West Master Plan

E28. As required by a Condition of Approval, all street name signs will be installed prior to Final Plat approval and utilize the City-approved sign cap throughout the subdivision, matching the design used in the previously approved subdivisions within Frog Pond. The developers will buy the signs from the City to ensure uniformity throughout the Frog Pond West neighborhood.

Request F: Tentative Subdivision Plat (SUBD22-0002)

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

Land Division Authorization

Plat Review Authority

Subsection 4.202 (.01) through (.03)

- F1.** The DRB is reviewing the tentative subdivision plat according to this subsection. The Planning Division will review the final plat under the authority of the Planning Director to ensure compliance with the DRB review of the tentative subdivision plat.

Undersized Lots Prohibited

Subsection 4.202 (.04) B.

- F2.** The proposed lots meet the dimensional standards of the RN zone and the R-7 and R-10 sub-districts. See Finding D8 under Request D.

Plat Application Procedure

Pre-Application Conference

Subsection 4.210 (.01)

- F3.** The applicant requested and attended a pre-application conference in accordance with this subsection.

Tentative Plat Preparation

Subsection 4.210 (.01) A.

- F4.** Following gathering information from Planning staff, the appropriate professionals from the applicant's design firm, Otak, prepared the tentative plat.

Tentative Plat Submission

Subsection 4.210 (.01) B.

- F5.** The applicant has submitted a tentative plat with all the required information.

Phases to Be Shown

Subsection 4.210 (.01) D.

- F6.** The applicant is proposing to construct the development in one phase and does not include a phasing plan along with the application materials.

Remainder Tracts

Subsection 4.210 (.01) E.

- F7.** The tentative plat accounts for all land within the plat area as lots, tracts, or right-of-way.

Street Requirements for Land Divisions

Master Plan or Map Conformance

Subsection 4.236 (.01)

- F8.** As found in other findings in this report, the land division conforms with the Transportation System Plan, Frog Pond West Master Plan, and other applicable plans.

Adjoining Streets Relationship

Subsection 4.236 (.02)

- F9.** The proposed plat enables the extension of streets consistent with the Frog Pond West Master Plan.

Streets Standards Conformance

Subsection 4.236 (.03)

- F10.** As part of the Stage 2 Final Plan approval, the streets conform with Section 4.177 and generally conform with block sizes established in the Frog Pond West Master Plan. See Request D.

Topography

Subsection 4.236 (.05)

- F11.** The street layout recognizes topographical conditions, including the location of the SROZ on site and no street alignment adjustments from the Frog Pond West Master Plan are necessary.

Reserve Strips

Subsection 4.236 (.06)

- F12.** The City is not requiring any reserve strips for the reasons stated in this subsection.

Future Street Expansion

Subsection 4.236 (.07)

- F13.** Where the Frog Pond West Master Plan shows street extensions, the tentative plat extends the right-of-way to the edge of the plat. A Condition of Approval requires signs stating “street to be extended in the future” or similar language approved by the City Engineer.

Additional Right-of-Way

Subsection 4.236 (.08)

- F14.** A Condition of Approval ensures dedication of sufficient right-of-way for planned improvements along SW Brisband Street.

Street Names

Subsection 4.236 (.09)

F15. None of the streets within the subdivision have been identified within the Frog Pond West Master Plan. The applicant includes extensions of or improvements to SW Brisband Street and SW Woodbury Loop established in Morgan Farm to the south names them accordingly. In addition to the existing streets, the applicant proposes Street B, which will be subject to naming and approval by the City Engineer who will check all street names to not be duplicative of existing street names and otherwise conform to the City's street name system at the time of Final Plat review.

General Land Division Requirements-Blocks

Blocks for Adequate Building Sites in Conformance with Zoning
Subsection 4.237 (.01)

F16. The proposed blocks substantially conform to Figure 18 of the Frog Pond West Master Plan. The proposed blocks allow for lots meeting the minimum size and other dimensional standards for the relevant sub-districts of the Frog Pond West Master Plan. See Finding D11 under Request D.

General Land Division Requirements-Easements

Utility Line Easements
Subsection 4.237 (.02) A.

F17. As will be further verified during the Public Works Permit review and Final Plat review, public utilities will be placed within public rights-of-way or within public utility easements (PUE) adjacent to the public streets. Stormwater facility easements are proposed where these facilities are located on private property and are intended to be shared between more than one lot. Franchise utility providers will install their lines within public utility easements established on the plat.

Water Courses
Subsection 4.237 (.02) B.

F18. The applicant proposes a dedicated tract for the drainage way and associated riparian area of the Boeckman Creek SROZ.

General Land Division Requirements-Pedestrian and Bicycle Pathways

Mid-block Pathways Requirement
Subsection 4.237 (.03)

F19. The proposed development does not include any pedestrian and bicycle pathways as required by the Frog Pond West Master Plan. See Finding D13 under Request D.

General Land Division Requirements-Tree Planting

Tree Planting Plan Review and Street Tree Easements
Subsection 4.237 (.04)

F20. The City is reviewing the tree planting plan concurrently with the tentative plat, see Requests D and E.

General Land Division Requirements-Lot Size and Shape

Lot Size and Shape Appropriate
Subsection 4.237 (.05)

F21. The size, width, shape, and orientation of lots comply with the identified sub-districts in the Frog Pond West Master Plan. See Finding D11 in Request D, and Request I.

General Land Division Requirements-Access

Minimum Street Frontage
Subsection 4.237 (.06)

F22. The full width of the front lot line of each lot fronts a public street. Each lot meets or exceeds the minimum lot width at the front lot line. See Finding D11 in Request D.

General Land Division Requirements-Other

Lot Side Lines
Subsection 4.237 (.08)

F23. Almost all side lot lines run at a 90-degree angle to the front line. Angles and curves of streets necessitate the exceptions, including Lots 17 and 19.

Land for Public Purposes
Subsection 4.237 (.12)

F24. The subject property contains SROZ land surrounding Boeckman Creek. The Frog Pond West Master Plan indicates that the Boeckman Creek Regional Trail shall be provided along the western portion of the subject property along the SROZ. This land will become part of the parks and open space system to be dedicated to the City. A Condition of Approval ensures that, prior to dedication of Tract A, the applicant/owner shall provide a Phase I Environmental Site Assessment, and if warranted, and Phase II Environmental Site Assessment, addressed to the City.

Corner Lots
Subsection 4.237 (.13)

F25. All corner lots have radii exceeding the 10-foot minimum.

Lots of Record

Lots of Record
Section 4.250

F26. The applicant provided documentation all subject lots are lots of record.

Request G: Type C Tree Removal Plan (TPLN22-0002)

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

Type C Tree Removal

Review Authority When Site Plan Review Involved
Subsection 4.610.00 (.03) B.

G1. The requested tree removal is connected to Site Plan Review by the DRB and, thus, is under their authority.

Reasonable Timeframe for Removal
Subsection 4.610.00 (.06) B.

G2. It is understood that tree removal will be completed by the time the applicant completes construction of all houses and other improvements in the subdivision, which is a reasonable time frame for tree removal.

Security for Permit Compliance
Subsection 4.610.00 (.06) C.

G3. As allowed by Subsection 1, the City is waiving the bonding requirement as the application is required to comply with WC 4.264 (.01).

General Standards for Tree Removal, Relocation or Replacement

Preservation and Conservation
Subsection 4.610.10 (.01)

G4. Proposed land clearing is limited to designated street rights-of-way and areas necessary for construction of homes. Homes will be designed and constructed, as much as possible, to blend into the natural areas on the site.

Per the arborist's report included on Sheet L1.00 in Exhibit B2, as amended in Exhibit B4, there are 250 on-site trees and one (1) off-site tree in the inventory. One hundred one (101) on-site trees and one (1) off-site tree will be preserved with 149 on-site trees proposed for removal.

As shown on Sheet L1.00 (as amended in Exhibit B4), most of the trees to be removed are located within the grading limits of SW Woodbury Loop, within the building envelopes of Lots 12-15 and 18-19, and in the proposed trailhead park. The location of proposed streets was determined by the Frog Pond West Master Plan and the City's block length and perimeter standards. Removal of the trees is necessary for construction of site improvements, including utilities, streets, and residential homes. In addition, grading of each lot is needed to accommodate residential development and associated site improvements (driveways and walkways, stormwater management, outdoor yard areas, etc.). Reducing building footprints by increasing height is not a viable alternative as the height limit in the RN zone is 35 ft., or 2.5 stories.

Development Alternatives

Subsection 4.610.10 (.01) C.

- G5.** The Frog Pond West Master Plan provides clear direction for street connections, residential densities, and preservation of the SROZ. Preservation and conservation of 101 out of 250 trees on site is proposed and one (1) additional off-site tree (#30482) is being preserved north of TLID 2800 in the Frog Pond Lane right-of-way. The applicant proposes tree protection fencing around all protected trees in order to ensure their preservation during construction. Conditions of Approval ensure this criterion is met.

Land Clearing Limited to Right-of-Way and Areas Necessary for Construction

Subsection 4.610.10 (.01) D.

- G6.** The proposed clearing is necessary for streets, alleys, houses, and related improvements.

Residential Development to Blend into Natural Setting

Subsection 4.610.10 (.01) E.

- G7.** New tree plantings, preservation of existing trees within the SROZ, and new native ground cover proposed within Tract A allow the development to blend with the natural elements of the property. The part of the project area east and outside of the SROZ is somewhat more gently sloped and without significant natural features with which to blend.

Compliance with All Applicable Statutes and Ordinances

Subsection 4.610.10 (.01) F.

- G8.** As found elsewhere in this report, the City is applying the applicable standards.

Tree Relocation and Replacement, Protection of Preserved Trees

Subsection 4.610.10 (.01) G.

- G9.** Reviews of tree removal, replacements, and protection is in accordance with the relevant sections of the Code.

Tree Removal Limitations
Subsection 4.610.10 (.01) H.

G10. The proposed tree removal is due to health or necessary for construction.

Additional Standards for Type C Permits

Tree Survey and Tree Maintenance and Protection Plan to be Submitted
Subsection 4.610.10 (.01) I. 1.-2.

G11. The applicant submitted the required Tree Maintenance and Protection Plan and Tree Survey (see Exhibit B2 and Sheets L1.00-L1.20; as amended in Exhibit B4).

Utilities Locations to Avoid Adverse Environmental Consequences
Subsection 4.610.10 (.01) I. 3.

G12. The Utility Plan (Sheet P4.00) shows a design to minimize impact on the environment to the extent feasible given existing conditions, particularly the SROZ. The City will further review utility placement in relation to the SROZ and preserved trees during review of construction drawings and utility easement placement on the final plat.

Type C Tree Plan Review

Tree Removal Related to Site Development at Type C Permit
Subsection 4.610.40 (.01)

G13. Review of the proposed Type C Tree Plan is concurrent with other site development applications.

Standards and Criteria of Chapter 4 Applicable
Subsection 4.610.40 (.01)

G14. As found elsewhere in this report, the City's review applies applicable standards.

Application of Tree Removal Standards Can't Result in Loss of Development Density
Subsection 4.610.40 (.01)

G15. The proposed subdivision allows residential lot counts consistent with the Frog Pond West Master Plan.

Development Landscape Plan and Type C Tree Plan to be Submitted Together
Subsection 4.610.40 (.01)

G16. The applicant submitted the Type C Tree Plan concurrently with the landscape plan for the proposed development.

Type C Tree Plan Review with Stage 2 Final Plan
Subsection 4.610.40 (.01)

G17. Review of the proposed Type C Tree Plan is concurrent with the Stage 2 Final Plan. See Request D.

Required Mitigation May Be Used to Meet Landscaping Requirements
Subsection 4.610.40 (.01)

G18. The applicant proposes counting the proposed street trees and other landscaping trees as mitigation for removal.

No Tree Removal Before Decision Final
Subsection 4.610.40 (.01)

G19. Review of the proposed Type C Tree Plan is concurrent with other necessary land use approvals. The City will not issue any tree removal permit prior to final approval of concurrent land use requests and annexation into the City. While the land is currently under jurisdiction of Clackamas County, a Condition of Approval binds the applicant to no tree removal on the properties, except for hazardous situations unrelated to development, prior to issuance of the post-annexation tree removal permit by the City.

Tree Maintenance and Protection Plan Submission Requirements
Section 4.610.40 (.02)

G20. The applicant submitted the necessary copies of a Tree Maintenance and Protection Plan.

Tree Relocation, Mitigation, or Replacement

Tree Replacement Required
Subsection 4.620.00 (.01)

G21. Consistent with the tree replacement requirements for Type C Tree Removal Permits established by this subsection, the applicant proposes to plant mitigation trees consistent with Subsection 4.620.00 (.06).

Replacement Requirement: 1 for 1, 2-inch Caliper
Subsection 4.620.00 (.02)

G22. The applicant proposes planting 105 trees, 44 trees fewer than the one-to-one ratio required by this subsection. Insufficient space exists on site to replant the remaining trees in a desirable manner. The City does not currently have another site identified as desirable to plant the additional mitigation trees. Therefore, the applicant proposes, based on current bid prices, paying into the City's Tree Fund as mitigation for the remaining 44 trees an amount for \$13,200, equivalent to \$300 per tree for purchase and installation of 44 trees. A Condition of Approval ensures the requirement is met. Staff does not recommend any mitigation on an inch-per-inch basis. Sheets L2.00-L2.20 show all trees proposed for planting as mitigation as 2-inch caliper, or the equivalent 6- to 8-foot for conifer trees.

Replacement Plan and Tree Stock Requirements

Subsections 4.620.00 (.03) and (.04)

G23. Review of the Tree Replacement and Mitigation Plan is prior to planting and in accordance with the Tree Ordinance, as established by other findings in this request. The applicant's landscape plans show tree stock meeting the tree stock requirements.

Replacement Trees, City Tree Fund

Subsection 4.620.00 (.05)

G24. As shown on the Landscape Plans (Sheet L2.00-L2.20), some of the proposed replacement trees consist of street trees. Trees will likely be planted on the individual dwelling lots at the time of site development but are not proposed to be included in the replacement tree plans. Because the applicant is planting 44 trees fewer than the one-to-one mitigation ratio required by this subsection, the proposes paying into the City's Tree Fund as mitigation for the 44 trees an amount of \$13,200, equivalent to \$300 per tree for purchase and installation of 44 trees. A Condition of Approval ensures the requirement is met.

Protection of Preserved Trees

Tree Protection During Construction

Section 4.620.10

G25. A Condition of Approval ensures tree protection measures, including fencing, are in place consistent with Public Works Standards Detail Drawing RD-1240.

Request H: Abbreviated SROZ Map Verification (SROZ22-0005)

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

H1. 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 I: Abbreviated SRIR Review (SRIR22-0003)

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 met 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. Boeckman Creek and its tributaries are located within the western portion of the development site (Site ID Number 1.02U). Designated as Tract A (i.e., 300,220 sf), the riparian corridor includes a locally significant wetland within the floodplain of Boeckman Creek.
3. The steeply sloped riparian corridor contains a mixed-deciduous forest. Native vegetation includes big-leaf maple, Douglas fir, red alder, beaked hazelnut, swordfern, fragrant fringe-cup, California blackberry and Pacific waterleaf. Non-native, invasive plant species, such as Himalayan blackberry, English ivy, and English holly, are present in the forest and upland area.
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 insure 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 abbreviated 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.

Exempt Uses in SROZ

Use and Activities Exempt from These Regulations

Subsection 4.118 (.03) A. and 4.130.04

- I1. The proposed exempt development will encroach into the Significant Resource Overlay Zone and its associated Impact Area. The impacts to the SROZ are necessary for site improvements.

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

1. A regional pedestrian trail;
2. A stormwater facility in the open space area; and
3. A stormwater outfall – installation of pipe and outfall structure.

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 proposed pedestrian trail is part of the future Boeckman Creek regional trail identified in the City’s Bicycle and Pedestrian Master Plan. The trail has been designed to minimize impacts to existing vegetation and prevent slope instability.

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 degraded nature of the open space area, the placement and operation of a stormwater facility will provide a water quality and habitat benefit through the planting of stormwater facility vegetation and the installation of soil media.

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 tributary of Boeckman Creek.

Abbreviated SRIR Requirements

Site Development Permit Application Requirement

Subsection 4.139.06 (.01) A.

- I2. 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.

- I3. Preliminary plans have been submitted which include all of the proposed development.

Location of Wetlands or Water Bodies

Subsection 4.139.06 (.01) C.

- I4.** The SRIR includes a description of the tributary to Boeckman Creek and the results of a wetland delineation. No locally significant wetlands were identified.

Tree Inventory Requirement

Subsection 4.139.06 (.01) D.

- I5.** The preliminary plans include a tree inventory.

Location of SROZ and Impact Area Boundaries

Subsection 4.139.06(.01) E.

- I6.** The SROZ and Impact Area boundaries have been identified on the preliminary plans.

Slope Cross-Section Measurements

Subsection 4.139(.01) F.

- I7.** A slope analysis was included in the SRIR.

Metro Title 3 Boundary Delineation

Subsection 4.139(.01) G.

- I8.** The SRIR includes a delineation of the Metro Title 3 Water Quality Resource Area boundary.

Photos of Site Conditions

Subsection 4.139(.01) H.

- I9.** The SRIR includes representative site photographs.

Narrative Describing Impacts

Subsection 4.139(.01) I.

- I10.** The proposed development impacts have been documented in the SRIR. In addition, the SRIR includes a mitigation plan, which will be implemented in the open space tract.

Memorandum

To: Philip Bradford, Associate Planner, City of Wilsonville
From: Li Alligood, AICP, Senior Planner
Copies: Dan Grimberg, West Hills Land Development;
Project files
Date: May 18, 2022
Subject: Otak Responses to Frog Pond Terrace Subdivision (DB22-0003) – Land Use
Incompleteness Comments per letter dated April 15, 2022
Project No.: 20015.000

The purpose of this memorandum is to provide responses to the following plan set redline comments and other item comments as provided per the Application Is Not Complete letter listed above.

INCOMPLETENESS COMMENTS:

1. *Zone change legal description and sketch. See Subsections 4.035 (.04), 4.140 (.07), 4.200, and 4.197 WC.*

RESPONSE: Included with this submittal as Narrative Appendix A.

2. *Legible annexation sketch to accompany the legal description. The submitted annexation sketch is illegible and all text and numbers appear as dots.*

RESPONSE: Included with this submittal as Narrative Appendix A.

3. *Insufficient findings to demonstrate compliance with the minimum density target for Subdistrict 7 based on the subject site's percentage, and to substantiate the need for the requested reduction for one lot fewer than the minimum.*

RESPONSE: Additional findings have been added to the narrative to discuss the density calculations and request a waiver to minimum density in Subdistrict 7.

4. *Insufficient findings to explain deviations from the Street Demonstration Plan, particularly related to off-site impacts that would result from the proposed deviations. Staff recommends the applicant revise Sheet P 8.00 and P 9.00 to reflect approved subdivisions and the need to extend Sherman Drive to SW Frog Pond Lane to ensure deviations are feasible and allow other sites to develop.*

RESPONSE: Additional findings have been added to the narrative and Sheets P8.00 and P9.00 have been revised to address these requests.

5. *Insufficient information to determine compliance with minimum tree mitigation requirements. The applicant requests a tree credit of 91 trees for preserved trees. Subsection 4.176 (.06) F. allows a*

landscape tree credit for preserved trees. However, no code language establishes an allowance for tree credits to count as mitigation for tree removal. The typical application for this code is in parking areas where a certain number of trees are required based on the number of parking spaces. If proposals preserve a large tree in these cases, fewer new trees need to be planted. However, if an applicant has a grove of 6 mature trees, and removes 5, the code does not establish the ability to avoid mitigating for the 5 removed trees by applying a tree credit from the one preserved tree. Staff is not aware of any circumstances where preserved tree credits were used as mitigation for tree removal. Please revise findings Section 4.600 to address tree mitigation based on the information above and account for any potential payment into the City Tree Fund.

RESPONSE: Additional findings have been added to the narrative to clarify that tree credits are not being applied to mitigation landscaping and that a fee for 47 trees will need to be paid to tree fund.

ADDITIONAL COMMENTS:

Planning Comments:

A. *Where SW Woodbury Loop begins to curve east, select a new tree species to be utilized for the new east-west street.*

RESPONSE: Woodbury Loop will have American Yellowwood trees and the new east-west street will have Skyline Honey Locust trees.

B. *The Master Plan intends for clear sight lines between the interior of the neighborhood and the Boeckman Creek Corridor. It is also important to ensure plantings are compatible with the SROZ to maintain physical and visual access. Staff does not support the dense plantings along the trail at the rear of Lots 17 and 19. A revised landscaping plan shall be provided with fewer plantings to ensure visual access and public safety.*

RESPONSE: Many evergreen trees in this area have been removed from the plan to provide physical and visual access to the SROZ.

Parks and Recreation Comments:

A. *The picnic table model shown on Sheet L2.30 does not have an ADA accessibility option. Style 2063 is recommended as a replacement as this does offer ADA accessibility.*

RESPONSE: There are one standard table and one ADA table provided on the terrace.

B. *Further explore locating the Boeckman Creek Trail alignment along the rear of the existing home consistent with the Master Plan intent (see Engineering Comment E). As this is a Regional Trail, Parks does not support portions of the trail being located on private lots.*

RESPONSE: The Otak team has discussed the location of the trail with City staff, who have coordinated with Parks staff. Parks staff acknowledge that retaining the trees to the rear of the existing home is preferred, and the additional information memo provided by Portland Tree Service notes that removal of one tree will result in the loss of a second tree. After thoroughly exploring options, the trail remains in the same location. However, all portions of the trail are now located within public right-of-way rather than on private lots.

Engineering Comments

- A. *Revise the plans to show how and where Frog Pond Lane will logically terminate and the associated improvements along the frontage of this project, if any.*

RESPONSE: The terminus is shown on the Frog Pond Overlook project since it is wholly located on that project's frontage. The terminus will be an eyebrow with completion of the full eyebrow to be completed with development of properties east of Frog Pond Terrace.

- B. *Show temporary water line looping to Frog Pond Lane through Lots 18 and 19.*

RESPONSE: Plan sheets have been updated as requested.

- C. *No new storm main allowed on Brisband Street. Provide an alternative treatment and disposal location for Lots 6 and 7 and Brisband Street.*

RESPONSE: Storm line removed from plans. New storm line is proposed in rear of lots 5-7 to collect laterals and discharge to proposed storm facility on Frog Pond Terrace. A 15-foot-wide stormwater easement is provided.

- D. *Revise the drainage report to show how drainage from upstream areas will be accommodated through this site. With low infiltration rates, stormwater upstream likely flows overland across the project.*

RESPONSE: Offsite upstream basins have been delineated and routing of offsite flows through the onsite conveyance system discussed in the revised report.

- E. *The regional trail is intended to run along the top of the bank and along the edge of the vegetated corridor, not along the sidewalks. Relocate the trail to the back of the lots for Lot 16. Additionally, the regional trail shall be installed across the Frog Pond Lane right-of-way after the terminus of Frog Pond Lane. The Overlook and Terrace plans shall show how this regional trail will extend through this area, while providing driveway access to Tax Lot 601.*

RESPONSE: The Otak team has discussed the location of the trail with City staff, who have coordinated with Parks staff. Parks staff acknowledge that retaining the trees to the rear of the existing home is preferred, and the additional information memo provided by Portland Tree Service notes that removal of one tree will result in the loss of a second tree. After thoroughly exploring options, the trail remains in the same location. However, all portions of the trail are now located within public right-of-way rather than on private lots.

A trail connection to Frog Pond Lane is shown on Sheet P2.00.

Memorandum

To: Cindy Luxhoj, AICP, City of Wilsonville
From: Li Alligood, AICP; Gabriel Kruse, PLA
Copies: File; Client
Date: August 11, 2022
Subject: Additional information for DB22-0003 Frog Pond Terrace
Project No.: 20015.000

This memo provides additional information and clarification of the submitted land use application materials in response to questions from the City. City questions are in *italics*. See also updated Sheets L1.00, L1.10, L1.20, and L2.20 included with this memo.

What is the total number of trees inventoried on-site and off-site?

Response: 250 On Site Trees, 1 Off Site Tree

What is the number of the off-site tree? Is it #30482?

Response: Yes. See Sheet L1.10.

Of the total trees inventoried, how many are proposed for removal? For preservation?

Response: See updated Sheets L1.10 and L1.20.

- 101 Trees to Remain on site
- 1 Tree to be protected offsite
- 149 Trees to be removed on site

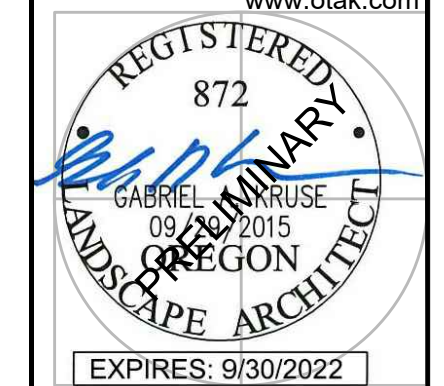
How many mitigation trees will be planted – as street trees, in Tract A, etc. – on-site?

Response: See Sheets L2.00 and L2.20.

- 30 Street Trees
- 41 Site Trees
- 34 Tract A Stormwater Planting Trees
- 105 Total Mitigation Trees

How many trees do you propose paying into the City Tree Fund for as mitigation?

Response: Mitigation for 44 trees will be paid into City Tree Fund. The total mitigation amount to be paid into the City Tree Fund will be \$13,200 using \$300 per tree installed.



TREE PLAN LEGEND

SYMBOL QTY DESCRIPTION

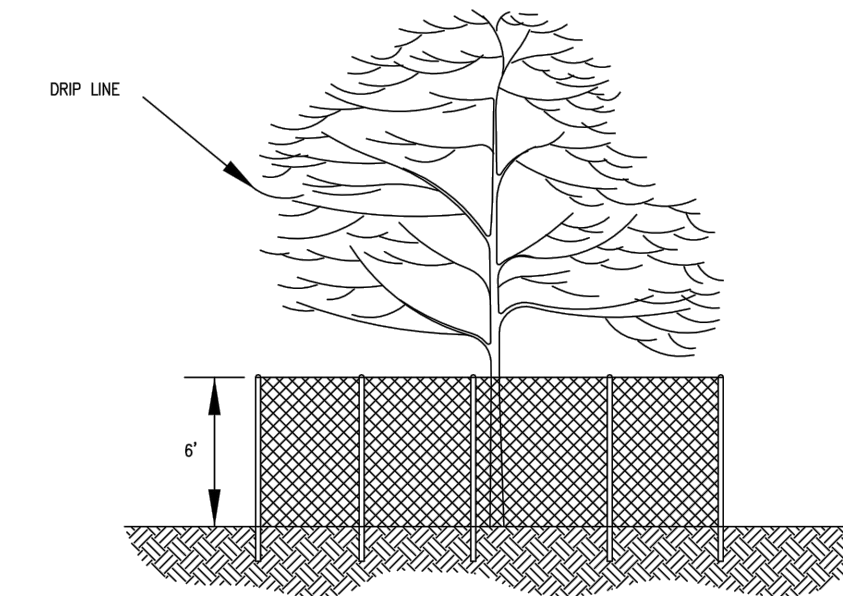
- 53995 149 EXISTING TREES TO BE REMOVED
- 53994 101 EXISTING TREES TO REMAIN
1 EXISTING OFF-SITE TREE TO BE PROTECTED
- 348 LF TREE PROTECTION FENCING
- TREE #
- TREE PROTECTION FENCING

SEE PLANTING PLAN L2.00 STREET/SITE TREES TO BE PLANTED

NOTES:

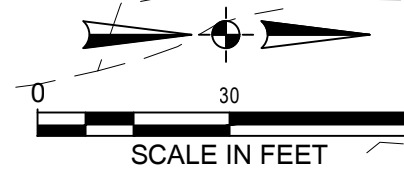
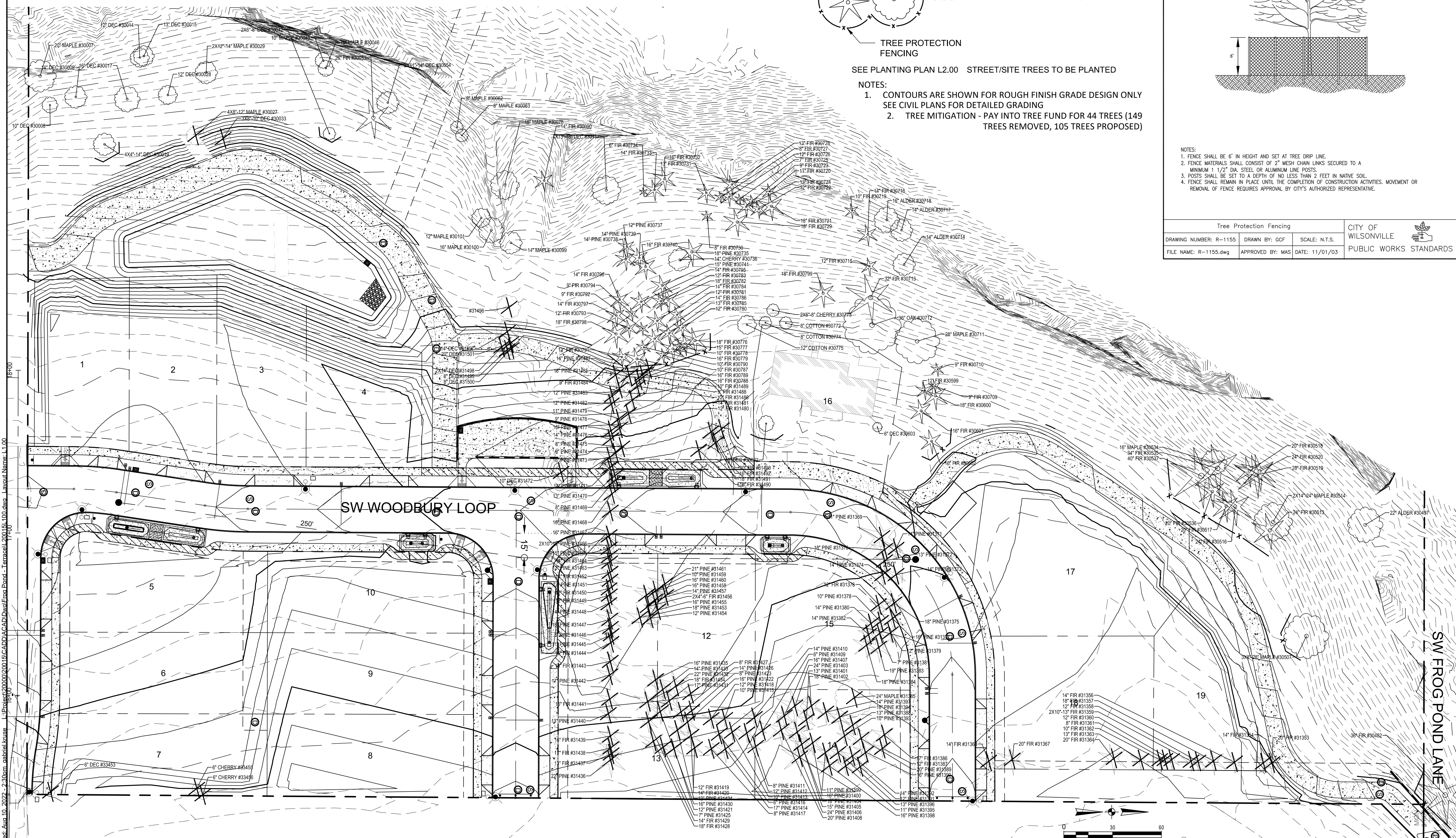
1. CONTOURS ARE SHOWN FOR ROUGH FINISH GRADE DESIGN ONLY
SEE CIVIL PLANS FOR DETAILED GRADING
2. TREE MITIGATION - PAY INTO TREE FUND FOR 44 TREES (149 TREES REMOVED, 105 TREES PROPOSED)

This Detail Drawing may not be offered or changed in any manner except by the City Engineer. It is the responsibility of the user to acquire the most current version.



- NOTES:**
1. FENCE SHALL BE 6' IN HEIGHT AND SET AT TREE DRIP LINE.
 2. FENCE MATERIALS SHALL CONSIST OF 2" MESH CHAIN LINKS SECURED TO A MINIMUM 1 1/2" DIA. STEEL OR ALUMINUM LINE POSTS.
 3. POSTS SHALL BE SET TO A DEPTH OF NO LESS THAN 2 FEET IN NATIVE SOIL.
 4. FENCE SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF CONSTRUCTION ACTIVITIES. MOVEMENT OR REMOVAL OF FENCE REQUIRES APPROVAL BY CITY'S AUTHORIZED REPRESENTATIVE.

Tree Protection Fencing		CITY OF WILSONVILLE	
DRAWING NUMBER: R-1155	DRAWN BY: GCF	SCALE: N.T.S.	PUBLIC WORKS STANDARDS
FILE NAME: R-1155.dwg	APPROVED BY: MAS	DATE: 11/01/03	



FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

TREE PROTECTION-REMOVAL PLAN

TITLE	#	DATE	DESCRIPTION
REVISIONS			
NAV/D88			
DATUM			
OTAK CAD			KJB
DRAWN BY			CHECKED BY
LAND USE SUBMITTAL			STATUS
MAY 17, 2022			DATE
20015			PROJECT NUMBER

L1.00
© 2021 OTAK, INC.
If this drawing is not 22" x 34", it has been reduced/enlarged. Scale accordingly.

Plotted: Aug 10, 2022, 2:30pm, gabriel.ruse... L:\Project\20015\CADD\CAD\Drawings\Road - Terraces\20015_L1.dwg, Layout Name: L1.00



Frog Pond Terrace (Martin and George Properties) Page 1 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30007	bigleaf maple	20"	18	2	in ravine	0	protect
30008	Oregon ash	10"	12	2	in ravine	0	protect
30009	Oregon ash	14"	15	2	in ravine	0	protect
30014	red alder	12"	0	2	in ravine	0	protect
30015	red alder	13"	0	2	in ravine	0	protect
30017	Oregon ash	16"	24	2	in ravine	0	protect
30019	Scouler willow	4X4"-14"	18	2	in ravine	0	protect
30027	bigleaf maple	4X8"-12"	15	2	in ravine	0	remove
30028	Oregon ash	12"	15	2	in ravine	0	protect
30029	bigleaf maple	2X12"-14"	18	2	in ravine	0	protect
30033	Scouler willow	3X8"-10"	18	2	in ravine	0	remove
30042	Oregon ash	2X6"-8"	15	2	in ravine	0	protect
30045	bigleaf maple	10"	12	2	in ravine	0	protect
30046	bigleaf maple	10"	12	2	in ravine	0	protect
30053	Douglas-fir	26"	24	2	in ravine	0	protect
30054	red alder	2X11"-14"	12	1	terminal decline	0	protect
30062	bigleaf maple	8"	12	2	in ravine	0	protect
30063	bigleaf maple	8"	18	2	in ravine	0	protect
30076	bigleaf maple	18"	18	2	in ravine	0	protect
30090	Douglas-fir	14"	12	2	in ravine	0	protect
30099	bigleaf maple	14"	15	2	in ravine	0	protect
30100	bigleaf maple	16"	18	2	in ravine	0	protect
30101	red alder	12"	0	2	dead	0	protect
30117	red alder	4X13"-18"	0	2	dead	0	protect

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 4 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30738	yellow pine	14"	12	2	one-sided	0	protect
30739	yellow pine	14"	12	2	one-sided	0	protect
30740	Douglas-fir	16"	15	2	assymetrical crown	0	protect
30741	yellow pine	15"	15	2	assymetrical crown	0	protect
30772	quaking aspen	8"	9	2	assymetrical crown	0	protect
30773	Sato cherry	2X6"-8"	15	2	assymetrical crown	0	protect
30774	quaking aspen	8"	12	2	assymetrical crown	0	protect
30775	quaking aspen	12"	15	2	assymetrical crown	0	protect
30776	Douglas-fir	18"	18	2	assymetrical crown	0	protect
30777	Douglas-fir	15"	18	2	assymetrical crown	0	protect
30778	Douglas-fir	10"	15	2	assymetrical crown	0	protect
30779	Douglas-fir	16"	18	2	assymetrical crown	0	protect
30780	Douglas-fir	12"	12	2	assymetrical crown	0	protect
30781	Douglas-fir	12"	12	2	assymetrical crown	0	protect
30782	yellow pine	18"	21	2	assymetrical crown	0	protect
30783	yellow pine	12"	15	2	assymetrical crown	0	protect
30784	yellow pine	14"	18	2	assymetrical crown	0	protect
30785	Douglas-fir	13"	12	2	assymetrical crown	0	protect
30786	Douglas-fir	14"	9	2	assymetrical crown	0	protect
30787	Douglas-fir	10"	12	2	assymetrical crown	0	protect
30788	Douglas-fir	16"	18	2	assymetrical crown	0	remove
30789	yellow pine	16"	18	2	assymetrical crown	0	protect
30790	Douglas-fir	10"	12	2	viable	0	protect
30791	Douglas-fir	13"	12	2	assymetrical crown	0	protect

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 2 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30482	Douglas-fir	36"	36	2	in ravine OFFSITE	0	protect
30497	Alder	22"	24	2	in ravine	0	protect
30507	bigleaf maple	3X8"-28"	24	2	in ravine	0	protect
30513	Douglas-fir	24"	30	2	in ravine	0	protect
30514	bigleaf maple	2X14"-24"	12	2	the 24" stem is a Douglas-fir tree	0	protect
30516	Douglas-fir	24"	24	2	in ravine	0	protect
30517	Douglas-fir	20"	21	2	in ravine	0	protect
30518	Douglas-fir	20"	21	2	in ravine	0	protect
30519	Douglas-fir	28"	24	2	in ravine	0	protect
30520	Douglas-fir	24"	24	2	in ravine	0	protect
30534	bigleaf maple	16"	21	2	in ravine	0	protect
30535	Douglas-fir	34"	30	2	in ravine	0	protect
30536	Douglas-fir	20"	24	2	in ravine	0	protect
30537	Douglas-fir	40"	33	2	in ravine	0	protect
30599	Douglas-fir	12"	12	2	in ravine	0	protect
30600	Douglas-fir	18"	18	2	two tops	0	protect
30601	Douglas-fir	8"	18	2	at utility pole	0	protect
30602	Douglas-fir	16"	18	2	topped at 20 ft.	0	protect
30603	Japanese maple	6"	9	2	at house	0	protect
30709	Douglas-fir	9"	9	2	in ravine	0	protect
30710	Douglas-fir	9"	9	2	in ravine	0	protect
30711	bigleaf maple	28"	30	2	in ravine	0	protect
30712	Gary oak	36"	90	2	leans over house to remain and one-sided	24	protect
30713	Douglas-fir	32"	30	2	must preserve to protect 30712 Gary oak; two tops, one-sided	24	protect

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 5 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30792	yellow pine	9"	9	2	assymetrical crown	0	protect
30793	yellow pine	12"	12	2	assymetrical crown	0	protect
30794	yellow pine	9"	9	2	assymetrical crown	0	protect
30795	yellow pine	14"	12	2	assymetrical crown	0	protect
30796	yellow pine	14"	12	2	assymetrical crown	0	protect
30797	yellow pine	14"	12	2	assymetrical crown	0	protect
30798	yellow pine	18"	15	2	assymetrical crown	0	protect
30799	missing	0	0	2	missing from behind house	0	protect
30822	quaking aspen	10"	12	2	viable	0	protect
31353	Douglas-fir	20"	15	2	on berm, shallow-rooted	0	remove
31354	Douglas-fir	14"	12	2	on berm, shallow-rooted	0	remove
31356	Douglas-fir	14"	12	2	on berm, shallow-rooted	0	remove
31357	Douglas-fir	18"	12	2	on berm, shallow-rooted	0	remove
31358	Douglas-fir	12"	12	2	on berm, shallow-rooted	0	remove
31359	Douglas-fir	2X10"-13"	12	2	poor structure	0	remove
31360	Douglas-fir	12"	12	2	on berm, shallow-rooted	0	remove
31361	Douglas-fir	8"	12	2	on berm, shallow-rooted	0	remove
31362	Douglas-fir	10"	12	2	on berm, shallow-rooted	0	remove
31363	Douglas-fir	13"	15	2	on berm, shallow-rooted	0	remove
31364	Douglas-fir	20"	21	2	on berm, shallow-rooted	0	remove
31367	Douglas-fir	20"	24	2	on berm, shallow-rooted	0	remove
31368	Douglas-fir	14"	15	2	on berm, shallow-rooted	0	remove
31369	yellow pine	31"	30	2	crowded	0	remove
31370	yellow pine	18"	15	2	crowded	0	remove

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 3 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30714	red alder	14"	9	2	terminal decline	0	protect
30715	Douglas-fir	12"	9	2	in ravine	0	protect
30716	Douglas-fir	14"	0	2	in ravine	0	protect
30717	red alder	14"	0	2	in ravine	0	protect
30718	red alder	16"	12	2	in ravine	0	protect
30719	Douglas-fir	10"	9	2	in ravine	0	protect
30720	Douglas-fir	11"	12	2	in ravine	0	protect
30721	Douglas-fir	18"	12	2	in ravine	0	protect
30722	Douglas-fir	12"	12	2	in ravine	0	protect
30723	Douglas-fir	9"	9	2	viable	0	protect
30724	Douglas-fir	13"	12	2	in ravine	0	protect
30725	Douglas-fir	7"	12	2	in ravine	0	protect
30726	Douglas-fir	12"	12	2	in ravine	0	protect
30727	Douglas-fir	8"	9	2	in ravine	0	protect
30728	Douglas-fir	13"	12	2	in ravine	0	protect
30729	yellow pine	18"	18	2	in ravine	0	protect
30730	yellow pine	8"	9	2	in ravine	0	protect
30731	Douglas-fir	13"	12	2	in ravine	0	protect
30732	Douglas-fir	16"	15	2	in ravine	0	protect
30733	Douglas-fir	14"	12	2	in ravine	0	protect
30734	Douglas-fir	6"	9	2	in ravine	0	protect
30735	yellow pine	18"	18	2	in ravine	0	protect
30736	sweet cherry	14"	15	2	in ravine	0	protect
30737	yellow pine	12"	15	2	viable	0	protect

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 6 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31371	yellow pine	14"	24	2	crowded	0	remove
31372	yellow pine	13"	18	2	crowded	0	remove
31373	yellow pine	14"	18	2	crowded	0	remove
31374	yellow pine	14"	18	2	crowded	0	remove
31375	yellow pine	18"	24	2	assymetrical crown	0	remove
31376	Douglas-fir	12"	12	2	assymetrical crown	0	remove
31377	yellow pine	16"	15	2	assymetrical crown	0	remove
31378	yellow pine	10"	12	2	assymetrical crown	0	remove
31379	yellow pine	12"	12	2	assymetrical crown	0	remove
31380	yellow pine	14"	12	2	assymetrical crown	0	remove
31381	yellow pine	7"	9	2	assymetrical crown	0	remove
31382	yellow pine	14"	15	2	assymetrical crown	0	remove
31383	yellow pine	19"	24	2	assymetrical crown	0	remove
31384	yellow pine	18"	18	2	assymetrical crown	0	remove
31385	bigleaf maple	24"	24	2	viable	0	remove
31386	Douglas-fir	17"	24	2	one-sided	0	remove
31387	Douglas-fir	12"	18	2	assymetrical crown	0	remove
31388	yellow pine	13"	15	2	assymetrical crown	0	remove
31389	yellow pine	20"	21	2	assymetrical crown	0	remove
31390	yellow pine	16"	18	2	assymetrical crown	0	remove
31391	yellow pine	12"	12	2	assymetrical crown	0	remove
31392	yellow pine	14"	12	2	assymetrical crown	0	remove
31393	yellow pine	10"	12	2	assymetrical crown	0	remove
31394	yellow pine	16"	18	2	assymetrical crown	0	remove

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

FROG POND TERRACE
 19 DETACHED SINGLE FAMILY LOTS
 CITY OF WILSONVILLE, OREGON

TREE INVENTORY

TITLE

DATE DESCRIPTION

REVISIONS

NAV/D88

DATUM

OTAK CAD KJB

DRAWN BY CHECKED BY

LAND USE SUBMITTAL

STATUS

MAY 17, 2022

DATE

20015

PROJECT NUMBER

L1.10

© 2021 OTAK, INC.

If this drawing is not 22" x 34", it has been reduced/enlarged. Scale accordingly.



Otak, Inc.
808 SW Third Avenue, Ste. 800
Portland, OR 97204
503.287.6825
www.otak.com



Frog Pond Terrace (Martin and George Properties) Page 7 Compiled for West Hills Development, LLC

Table with 8 columns: Tag, Species, DBH, Dripline, Rating, Health & Structure, RPZ, Action. Contains 28 rows of tree data.

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 8 Compiled for West Hills Development, LLC

Table with 8 columns: Tag, Species, DBH, Dripline, Rating, Health & Structure, RPZ, Action. Contains 28 rows of tree data.

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 9 Compiled for West Hills Development, LLC

Table with 8 columns: Tag, Species, DBH, Dripline, Rating, Health & Structure, RPZ, Action. Contains 28 rows of tree data.

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 10 Compiled for West Hills Development, LLC

Table with 8 columns: Tag, Species, DBH, Dripline, Rating, Health & Structure, RPZ, Action. Contains 28 rows of tree data.

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 11 Compiled for West Hills Development, LLC

Table with 8 columns: Tag, Species, DBH, Dripline, Rating, Health & Structure, RPZ, Action. Contains 13 rows of tree data.

Rating: 0/dead or hazardous, 1/decline, 2/average, 3/excellent health and structure
RPZ mean root protection zone. This is a radius from the trunk measured in feet.
Dripline is average Crown Diameter or Canopy Spread
Trees tied and DBH measurements taken by Otak licensed surveyors for at various times.

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 12 Compiled for West Hills Development, LLC

Table with 8 columns: Tag, Species, DBH, Dripline, Rating, Health & Structure, RPZ, Action. Contains 13 rows of tree data.

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON
TREE INVENTORY

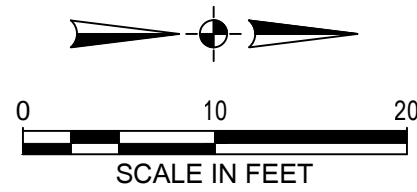
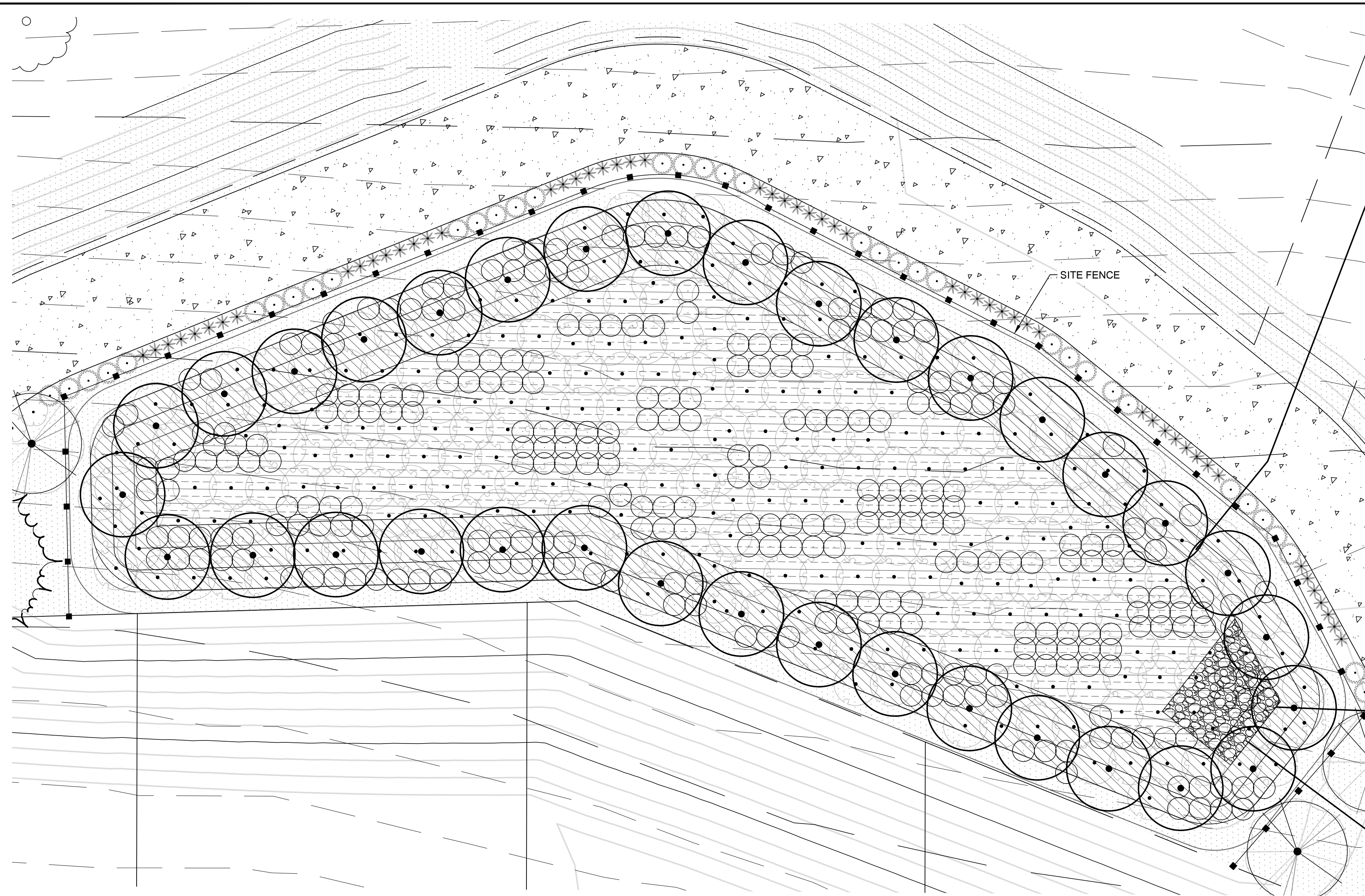
Table with 3 columns: #, DATE, DESCRIPTION. Header row: TITLE, #, DATE, DESCRIPTION.

REVISIONS
NAVD88
DATUM
OTAK CAD KJB
DRAWN BY CHECKED BY
LAND USE SUBMITTAL
STATUS
MAY 17, 2022
DATE
20015
PROJECT NUMBER

L1.20
© 2021 OTAK, INC.

If this drawing is not 22" x 34", it has been reduced/enlarged. Scale accordingly.

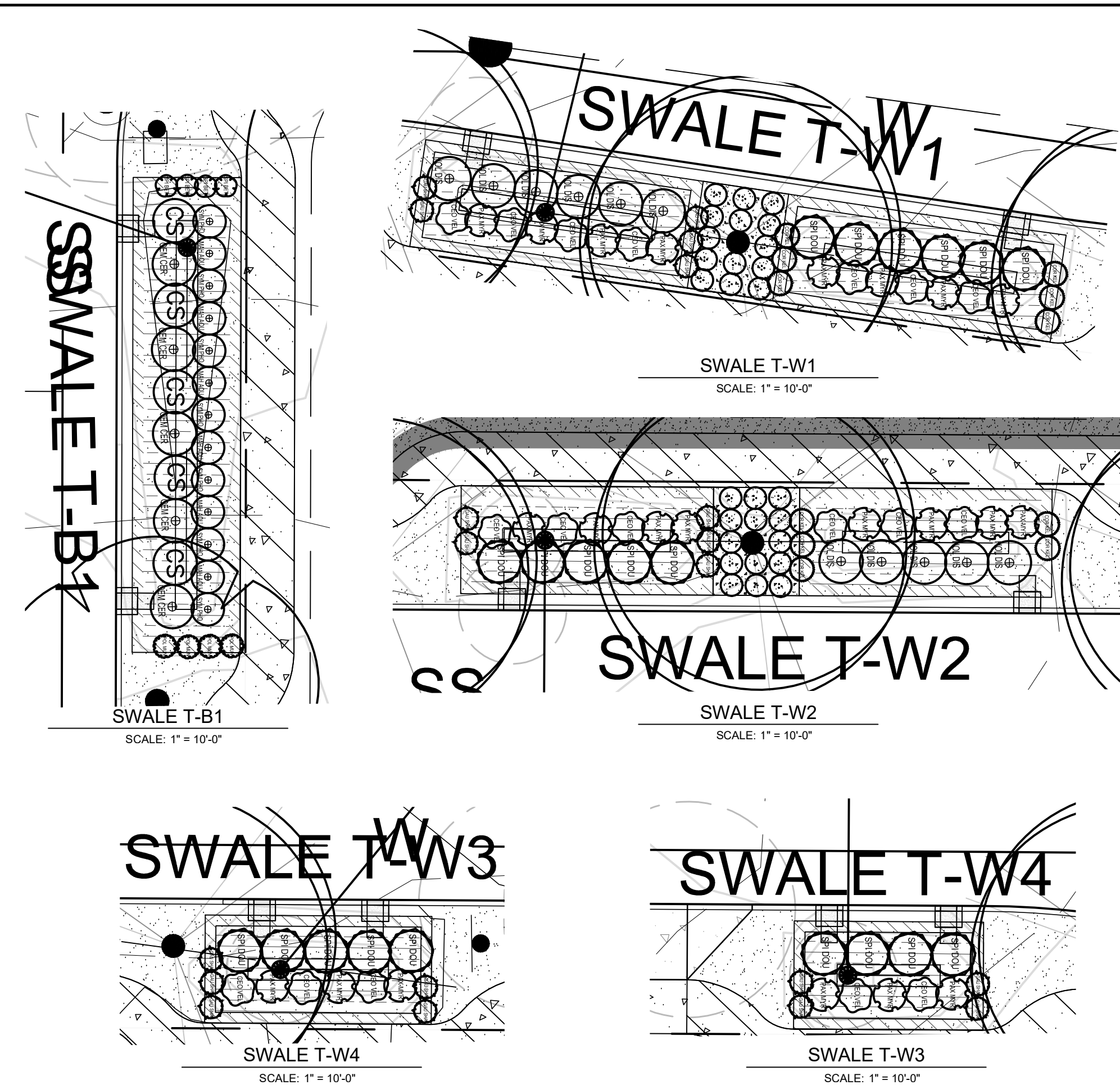
Plotted: Aug. 10, 2022, 2:26pm. gabriel.kruse. L:\Projects\2000\20015\CADD\CAD\Draw\Frog Pond - Terracel\20015L1_100.dwg. Layout Name: L1.20



RAIN GARDEN
 SCALE: 1" = 10'-0"

TRACT A RAIN GARDEN PLANT QUANTITIES											
ZONE A											
HERBACEOUS Plugs						SHRUBS 3 Gal.					
TREATMENT AREA	REQUIRED HERBACEOUS 1.15 per 100sf	Carex testacea	Juncus patens	Juncus ensifolius	Scirpus microcarpus	PROVIDED HERBACEOUS	REQ'D SMALL SHRUBS (4/100 SF)	Symphoricarpos albus	Spiraea betulifolia	Elymus glaucus	Mahonia aquifolium
4119	4737	1184	1184	1184	1481	5033	165	41	41	41	41
TOTAL PROVIDED HERBACEOUS						TOTAL SMALL SHRUBS PROVIDED	REQ'D LARGE SHRUBS (3/100 SF)	Holodiscus discolor	Ribes sanguineum	Rosa nutkana	Spiraea douglasii
165						124	31	31	31	31	124
ZONE B											
HERBACEOUS Plugs				GROUND COVER Plugs				SHRUBS 3 Gal.			
AREA	REQUIRED HERBACEOUS 1.15 per 100sf X 0.5	Carex testacea	Juncus patens	Juncus ensifolius	Scirpus microcarpus	TOTAL PROVIDED HERBACEOUS	REQ'D TREES (1/100 SF)	Alnus rubra	Fraxinus latifolia	Malus fusca	Thuja plicata
3396	1953	488	488	488	489	1953	34	9	9	8	8
TOTAL PROVIDED HERBACEOUS						TOTAL SMALL SHRUBS PROVIDED	REQ'D LARGE SHRUBS (3/100 SF)	Holodiscus discolor	Ribes sanguineum	Rosa nutkana	Spiraea douglasii
1953						102	26	26	25	25	102

*CLASSIFIED AS LOW WATER USAGE AREA (LESS THAN ONE (1) INCH PER WEEK).



FROG POND TERRACE VEGETATED SWALE PLANT QUANTITIES												
ZONE A												
HERBACEOUS = TREATMENT AREA						SHRUBS						
SWALE ID	STREET	TREATMENT AREA	REQUIRED HERBACEOUS 1.15 per 100sf	Carex testacea	Juncus patens	Juncus ensifolius	Scirpus microcarpus	PROVIDED HERBACEOUS	REQ'D SMALL SHRUBS (4/100 SF)	REQ'D LARGE SHRUBS (3/100 SF)	AREA (SF)	
SWALE T-W1	FROG POND	384	442	111	111	57	57	336	15	12	136	
SWALE T-W2	STREET I	342	393	98	98	98	98	392	14	10	126	
SWALE T-W3	STREET I	152	175	37	37	36	147	6	5	58	5	
SWALE T-W4	STREET I	124	143	37	37	36	147	5	4	51	4	
SWALE T-B1	STREET I	336	386	37	37	36	147	13	10	104	8	
TOTALS:			1539	320	320	266	263	1,169	53	41	475	38
												547

*CLASSIFIED AS LOW WATER USAGE AREA (LESS THAN ONE (1) INCH PER WEEK).

NORTH/SOUTH SWALE SHRUB LEGEND

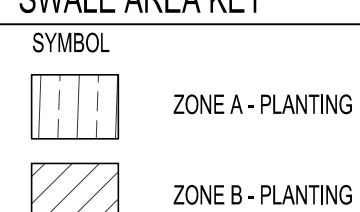
SYMBOL	QTY	COMMON NAME / Botanical name	Size	Spacing
(Zone B) 19	19	SALAL / Gaultheria shallon	1 GAL.	1' o.c.
(Zone A) 11	11	KELSEY DOGWOOD / Cornus sericea 'Kelsey'	1 GAL.	1' o.c.
(Zone A) 22	22	OREGON BOXLEAF / Paxistima myrsinites	1 GAL.	1' o.c.
(Zone A) 18	18	SNOWBRUSH / Ceanothus velutinus	1 GAL.	1' o.c.
(Zone A) 20	20	DOUGLAS SPIRAEA / Spiraea douglasii	30" HT.	3' o.c.
(Zone A) 11	11	WESTERN SERVICEBERRY / Holodiscus discolor	30" HT.	3' o.c.

*CLASSIFIED AS LOW WATER USAGE AREA (LESS THAN ONE (1) INCH PER WEEK).

EAST/WEST SWALE SHRUB LEGEND

SYMBOL	QTY	COMMON NAME / Botanical name	Size	Spacing
(Zone B) 4	4	BIRCHLEAF SPIRAEA / Spiraea betulifolia	1 GAL.	1' o.c.
(Zone B) 4	4	SWORD FERN / Polystichum minus	1 GAL.	1' o.c.
(Zone A) 6	6	OREGON GRAPE HOLLY / Mahonia aquifolium	1 GAL.	1' o.c.
(Zone A) 7	7	SNOWBERRY / Symphoricarpos alba	1 GAL.	1' o.c.
(Zone A) 5	5	INDIAN PLUM / Omleria cerasiformis	30" HT.	3' o.c.
(Zone A) 5	5	RED-TWIG BOXWOOD / Cornus sericea	30" HT.	3' o.c.

SWALE AREA KEY



- NOTES:
 1. HERBACEOUS/GROUNDCOVERS NOT SHOWN. PLANT IN QUANTITIES INDICATED ON SPREADSHEET THIS SHEET.
 2. HERBACEOUS PLANTS INSTALLED AT SP#4 SIZE.
 3. GROUNDCOVER INSTALLED AT #1 CONT. SIZE

STREET TREE MOUND SHRUBS

SYMBOL	QTY	COMMON NAME / Botanical name	Size
(Zone A) 28	28	GOLD NUGGET BARBERRY / Berberis thunbergii 'Gold Nugget'	#1 CONT. AS SHOWN

TITLE	#	DATE	DESCRIPTION

REVISIONS
NAV/D88 DATUM
OTAK CAD KJB
DRAWN BY CHECKED BY
LAND USE SUBMITTAL STATUS
MAY 17, 2022 DATE
20015 PROJECT NUMBER

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:

Coverage (<i>Aggregate, accept where noted</i>)	Limit
<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	\$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. All permits from other Agencies shall be submitted to the City prior to the start of Construction.
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. The applicant shall be in conformance with all source control requirements for the proposed development per the Public Works Standards and Wilsonville City Code.
 12. 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.
 13. 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.

14. Storm water quality facilities shall have approved landscape planted and approved by the City of Wilsonville prior to paving.
15. 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.
16. 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.
17. Streetlights shall be in compliance with City dark sky, LED, and PGE Option B requirements.
18. Sidewalks, ramps, crosswalks and pedestrian linkages in the public right-of-way shall be in compliance with the requirements of the U.S. Access Board.
19. No surcharging of sanitary or storm water manholes is allowed.
20. 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.
21. 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.
22. 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.
23. 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.
24. Street and traffic signs shall have a hi-intensity prismatic finish meeting ASTM 4956 Spec Type 4 standards.

25. 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.
26. 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).
27. 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.
28. Applicant shall design interior streets and alleys to meet specifications of Tualatin Valley Fire & Rescue and Republic Services for access and use of their vehicles.
29. 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.
30. The applicant shall "loop" proposed waterlines by connecting to the existing City waterlines where applicable.
31. 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.
32. 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).

33. Record 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 of: an electronic copy in AutoCAD, (current version) and a digitally signed PDF.

Exhibit C2
Natural Resources Findings & Requirements

Findings for SROZ22-0005 and SRIR22-0003

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 or site restoration 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. Mitigation actions shall be implemented prior to or at the same time as the impact activity is conducted.
5. 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.





Frog Pond Terrace Subdivision (George/Martin Property)

Wilsonville, Oregon

Request for
Annexation
Zone Map Amendment
Stage I Master Plan
Stage II Final Plan
Site Design Review of Open Space
Tentative Subdivision Plat
Type C Tree Removal and Plan
SROZ Map Verification

Prepared for:
West Hills Land Development
3330 NW Yeon Ave, Suite 200
Portland, OR 97210

May 18, 2022

Prepared By:
Otak, Inc.
808 SW Third Avenue, Suite 800
Portland, OR 97204

Project No. 20015.100



Planning Division Development Permit Application



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

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: September 16, 2021

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

Applicant:

Name: Dan Grimberg
Company: West Hills Land Development
Mailing Address: 3330 NW Yeon St, Ste 200
City, State, Zip: Portland, OR 97210
Phone: 503.789.0358 Fax: _____
E-mail: dan@westhillsdevelopment.com

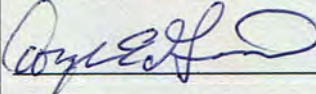
Authorized Representative:

Name: Li Alligood, AICP
Company: Otak, Inc.
Mailing Address: 808 SW Third Ave, Ste 800
City, State, Zip: Portland, OR 97204
Phone: 503.415.2384 Fax: _____
E-mail: li.alligood@otak.com

Property Owner:

Name: Colleen & Douglas George
Company: NA
Mailing Address: 7500 SW Frog Pond Ln
City, State, Zip: Wilsonville, OR 97070
Phone: _____ Fax: _____
E-mail: _____

Property Owner's Signature:


Printed Name: Colleen & Douglas George Date: 12-16-21

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

Printed Name: Dan Grimberg Date: _____

Site Location and Description:

Project Address if Available: 7500 SW Frog Pond Ln Suite/Unit _____
Project Location: _____
Tax Map #(s): 31W12D Tax Lot #(s): 2801 County: Washington Clackamas

Request:

Residential subdivision (Frog Pond Terrace) of 19 lots, two tracts, and associated infrastructure in Frog Pond West.

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

Residential Commercial Industrial Other: _____

Application Type(s):

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

Planning Division
Development Permit Application



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

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: September 16, 2021

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

Applicant:

Name: Dan Grimberg
Company: West Hills Land Development
Mailing Address: 3330 NW Yeon St, Ste 200
City, State, Zip: Portland, OR 97210
Phone: 503.789.0358 Fax: _____
E-mail: dan@westhillsdevelopment.com

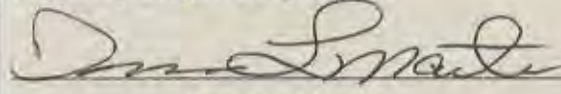
Authorized Representative:

Name: Li Alligood, AICP
Company: Otak, Inc.
Mailing Address: 808 SW Third Ave, Ste 800
City, State, Zip: Portland, OR 97204
Phone: 503.415.2384 Fax: _____
E-mail: li.alligood@otak.com

Property Owner:

Name: Donnie Martin
Company: NA
Mailing Address: 7480 SW Frog Pond Ln
City, State, Zip: Wilsonville, OR 97070
Phone: _____ Fax: _____
E-mail: _____

Property Owner's Signature:



Printed Name: Donnie Martin Date: _____

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

Printed Name: Dan Grimberg Date: _____

Site Location and Description:

Project Address if Available: Unaddressed Suite/Unit _____

Project Location: _____

Tax Map #(s): 31W12D Tax Lot #(s): 3500 County: Washington Clackamas

Request:

Residential subdivision (Frog Pond Terrace) of 19 lots, two tracts, and associated infrastructure in Frog Pond West.

Project Type: Class I Class II Class III

Residential Commercial Industrial Other: _____

Application Type(s):

- | | | | |
|--|---|---|---|
| <input checked="" type="checkbox"/> Annexation | <input type="checkbox"/> Appeal | <input type="checkbox"/> Comp Plan Map Amend | <input type="checkbox"/> Parks Plan Review |
| <input type="checkbox"/> Final Plat | <input type="checkbox"/> Major Partition | <input type="checkbox"/> Minor Partition | <input type="checkbox"/> Request to Modify Conditions |
| <input type="checkbox"/> Plan Amendment | <input type="checkbox"/> Planned Development | <input checked="" 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 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 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 checked="" type="checkbox"/> Zone Map Amendment | <input checked="" type="checkbox"/> Waiver(s) | <input type="checkbox"/> Conditional Use | |

Planning Division
Development Permit Application



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

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: September 16, 2021

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

Applicant:

Name: Dan Grimberg
Company: West Hills Land Development
Mailing Address: 3330 NW Yeon St, Ste 200
City, State, Zip: Portland, OR 97210
Phone: 503.789.0358 Fax: _____
E-mail: dan@westhillsdevelopment.com

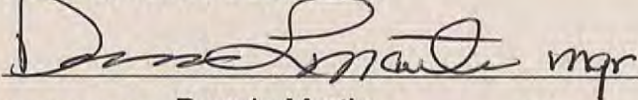
Authorized Representative:

Name: Li Alligood, AICP
Company: Otak, Inc.
Mailing Address: 808 SW Third Ave, Ste 800
City, State, Zip: Portland, OR 97204
Phone: 503.415.2384 Fax: _____
E-mail: li.alligood@otak.com

Property Owner:

Name: Marchil Investments, LLC: Donnie Martin
Company: NA
Mailing Address: 7480 SW Frog Pond Ln
City, State, Zip: Wilsonville, OR 97070
Phone: _____ Fax: _____
E-mail: _____

Property Owner's Signature:


Printed Name: Donnie Martin Date: _____

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

Printed Name: Dan Grimberg Date: _____

Site Location and Description:

Project Address if Available: 7480 SW Frog Pond Ln Suite/Unit _____
Project Location: _____
Tax Map #(s): 31W12D Tax Lot #(s): 2800 County: Washington Clackamas

Request:

Residential subdivision (Frog Pond Terrace) of 19 lots, two tracts, and associated infrastructure in Frog Pond West.

Project Type: Class I Class II Class III

Residential Commercial Industrial Other: _____

Application Type(s):

- | | | | |
|--|---|---|---|
| <input checked="" type="checkbox"/> Annexation | <input type="checkbox"/> Appeal | <input type="checkbox"/> Comp Plan Map Amend | <input type="checkbox"/> Parks Plan Review |
| <input type="checkbox"/> Final Plat | <input type="checkbox"/> Major Partition | <input type="checkbox"/> Minor Partition | <input type="checkbox"/> Request to Modify Conditions |
| <input type="checkbox"/> Plan Amendment | <input type="checkbox"/> Planned Development | <input checked="" 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 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 type="checkbox"/> Variance |
| <input checked="" type="checkbox"/> Type C Tree Removal Plan | <input type="checkbox"/> Tree Permit (B or C) | <input type="checkbox"/> Temporary Use | <input type="checkbox"/> Other (describe) |
| <input type="checkbox"/> Villebois SAP | <input type="checkbox"/> Villebois PDP | <input type="checkbox"/> Villebois FDP | |
| <input checked="" type="checkbox"/> Zone Map Amendment | <input checked="" type="checkbox"/> Waiver(s) | <input type="checkbox"/> Conditional Use | |



Frog Pond Terrace Subdivision (George/Martin Property)

Wilsonville, Oregon

Request for
Annexation
Zone Map Amendment
Stage I Master Plan
Stage II Final Plan
Site Design Review of Open Space
Tentative Subdivision Plat
Type C Tree Removal and Plan
SROZ Map Verification

Prepared for:
West Hills Land Development
3330 NW Yeon Ave, Suite 200
Portland, OR 97210

May 18, 2022

Prepared By:
Otak, Inc.
808 SW Third Avenue, Suite 800
Portland, OR 97204

Project No. 20015.100

REQUESTS

Annexation, Zone Map Amendment, Stage I Master Plan, Stage II Final Plan, Site Design Review of Open Space, Tentative Subdivision Plat, Type C Tree Removal and Protection Plan, and SROZ Map Verification approvals are requested to develop the Frog Pond Terrace subdivision and associated infrastructure. The Frog Pond Terrace site is comprised of three separate tax lots within the Frog Pond West Master Plan area. See Sheet P2.00.

SITE INFORMATION

SUBJECT SITE: 7500 SW Frog Pond Lane (TLID 31W12D 2801)
 7480 SW Frog Pond Lane (TLID 31W12D 2800)
 No address (TLID 31W12D 3500)

SITE AREA: 10.91 total acres
 7500 SW Frog Pond Lane: 2.0 acres
 7480 SW Frog Pond Lane: 8.9 acres
 No address (TLID 31W12D 3500): 0.01 acres

COMPREHENSIVE PLAN : Proposed: Residential Neighborhood RN

ZONING: *Current: Clackamas County RRF5*
 Proposed: Residential Neighborhood RN

APPLICANT/PROPERTY OWNER

APPLICANT: West Hills Land Development LLC
 3330 NW Yeon Ave, Suite 200
 Portland, OR 97210

Contact: Dan Grimberg
 503.789.0358
 dan@westhillsdevelopment.com

PROPERTY OWNERS: *31W12D 02800*
 Marchil Investments, LLC
 c/o Donnie Martin
 7480 SW Frog Pond Lane
 Wilsonville, OR 97062

31W12D 02801
 Colleen and Douglas George
 7500 SW Frog Pond Lane
 Wilsonville, OR 97070

31W12D 03500
 Donnie Martin
 7480 SW Frog Pond Lane
 Wilsonville, OR 97062

PROJECT DEVELOPMENT TEAM

APPLICANT'S
REPRESENTATIVE/
LAND USE PLANNER: Otak, Inc.
808 SW Third Avenue, Suite 800
Portland, OR 97204

Contact: Li Alligood, AICP
503.415.2384
li.alligood@otak.com

CIVIL ENGINEER: Contact: Keith Buisman, PE
503.415.2337
keith.buisman@otak.com

LANDSCAPE ARCHITECT: Contact: Gabriel Kruse, PLA
503.415.2402
gabriel.kruse@otak.com

SURVEYOR: Contact: Mike Spelts, PLS
503.415.2321
mike.spelts@otak.com

GEOTECHNICAL
ENGINEER: Hardman Geotechnical Services, Inc.
10110 SW Nimbus Ave, Suite B-5
Portland, OR 97223

Contact: Scott Hardman
503.530.8076
shardman.hgsi@frontier.com

ARBORIST: Portland Tree Consulting
PO Box 19042
Portland, OR 97280

Contact: Peter Torres
503.421.3883
petertorresusa@gmail.com

TABLE OF CONTENTS

	Page
I. Requests	1
II. Project Description	1
III. Comprehensive Plan Policies	2
A. Urban Growth Management.....	2
B. Land Use and Development.....	4
C. Areas of Special Interest.....	5
IV. Zoning Regulations	6
A. Section 4.035. Site Development Permits.....	6
B. Section 4.113. Standards Applying to Residential Developments in Any Zone.....	7
C. Section 4.118. Standards Applying in all Planned Development Zones.....	10
D. Section 4.124. Standards Applying to all Planned Development Residential Zones.....	11
E. Section 4.127. Residential Neighborhood (RN) Zone.....	14
F. Section 4.139. Significant Resource Overlay Zone.....	24
G. Section 4.140. Planned Development Regulations.....	29
V. General Development Regulations	33
A. Section 4.154. On-site Pedestrian Access and Circulation.....	33
C. Section 4.156. Sign Code Regulations.....	35
D. Section 4.167. General Regulations – Access, Ingress and Egress.....	36
E. Section 4.169. General Regulations – Double-Frontage Lots.....	36
F. Section 4.175. Public Safety and Crime Prevention.....	36
G. Section 4.176. Landscaping, Screening, and Buffering.....	36
H. Section 4.177. Street Improvement Standards.....	43
I. Section 4.180. Exceptions and Modifications - Projections into Required Yards.....	47
J. Section 4.181. Exceptions & Modifications - Height Limits.....	47
K. Section 4.182. Exceptions and Modifications - Setback Modifications.....	47
L. Section 4.197. Zone Changes and Amendments to This Code – Procedures.....	48
VI. Land Divisions	50
A. Section 4.210. Application Procedure.....	50
B. Section 4.236. General Requirements – Streets.....	51
C. Section 4.237. General Requirements – Other.....	53
D. Section 4.262. Improvements – Requirements.....	55
VII. Underground Utilities	57
A. Section 4.300. General.....	57
B. Section 4.320. Requirements.....	57
VIII. Site Design Review	57
A. Section 4.400. Purpose.....	57
B. Section 4.421. Criteria and Application of Design Standards.....	58
C. Section 4.440. Procedure.....	60
IX. Tree Preservation and Protection	61
A. Section 4.600.20. Applicability of Subchapter.....	61
B. Section 4.610.00. Application Review Procedure.....	63
C. Section 4.620.00. Tree Relocation, Mitigation, Or Replacement.....	68
X. Annexations and Urban Growth Boundary Amendments	69
A. Section 4.700. Procedures Relating To The Processing Of Requests For Annexation And Urban Growth Boundary Amendments.....	69
XI. Conclusion	70

Tables

Table 1. Proposed Residential Units 5
 Table 2. Compliance with Frog Pond West Neighborhood Lot Dimensional Standards 18
 Table 3. Tree Credits 41

Appendices

Appendix A City of Wilsonville Annexation Petitions and Certifications
 Appendix B Stormwater Preliminary Drainage Report dated May 2022, by Otak, Inc.
 Appendix C Wetland Delineation and SRIR dated January 2022, by AKS
 Appendix D Traffic Impact Letter dated February 7, 2022, by DKS and Associates
 Appendix E Tree Plan dated January 27, 2022, by Portland Tree Consulting
 Appendix F Geotechnical Report dated December 15, 2021, by Hardman Geotechnical Services, Inc.
 Appendix G Stafford Meadows PUD recorded CC&Rs and Bylaws
 Appendix H Example Building Elevations
 Appendix I Service Provider Letter from Republic Services dated January 31, 2022
 Appendix J Service Provider Letter from Tualatin Valley Fire and Rescue dated January 26, 2022

Reduced Size Plan Set

Sheet P0.00 Cover Sheet
 Sheet P1.00 Existing Conditions – Aerial
 Sheet P1.10 Existing Conditions – Survey Mapping
 Sheet P2.00 Preliminary Site Plan
 Sheet P2.10 Preliminary Street Cross Sections
 Sheet P3.00 Preliminary Plat
 Sheet P4.00 Preliminary Utility Plan
 Sheet P5.00 Preliminary Grading Plan
 Sheet P6.00 Annexation Plan
 Sheet P7.00 Zoning Map
 Sheet P8.00 Proposed Circulation and Connectivity
 Sheet P9.00 Shadow Plat Street Layout
 Sheet P10.00 Subdistricts and Density
 Sheet P11.00 Sight Lines to Boeckman Creek Corridor
 Sheet L1.00 Tree Removal and Protection Plan
 Sheet L1.10 Tree Inventory
 Sheet L1.20 Tree Inventory
 Sheet L2.00 Overall Landscape Plan
 Sheet L2.10 Landscape Tract Plan
 Sheet L2.20 Raingarden and LIDA Planting Plan
 Sheet L2.30 Landscape Details
 Sheet L3.00 Landscape Notes and Details
 Sheet IL-1 Illumination Notes
 Sheet IL-2 Illumination Details
 Sheet IL-3 Illumination Details
 Sheet IL-4 Illumination Plan

Note: All plan sheets are also separately bound in a larger format within the development application submittal.

I. Requests

Annexation, Zone Map Amendment, Stage I Master Plan, Stage II Final Plan, Site Design Review of Open Space, Tentative Subdivision Plat, Type C Tree Removal and Protection Plan, and SROZ Map Verification approvals are requested to develop the Frog Pond Terrace subdivision and associated infrastructure. The Frog Pond Terrace site is comprised of three separate tax lots within the Frog Pond West Master Plan area. See Sheet P2.00.

Annexation approval is required to annex the subject properties into Wilsonville City limits. Annexation of the properties is necessary to allow development and connection to City utilities.

Zone Map Amendment approval is required to apply RN zoning to the site. These properties are currently zoned Clackamas County RRFF 5, which does not allow the development envisioned in the Frog Pond West Master Plan.

Stage I Master Plan and Stage II Final Plan approvals are required because all development of 2 acres or greater in the RN Zone requires approval as a Planned Development, which requires approval of Stage I and Stage II applications. As shown on Sheet P0.00, the Frog Pond Terrace development is just over 10 acres, which exceeds the 2-acre threshold.

Site Design Review approval is required for review of common tracts and landscaping, landscaping in the public right-of-way, and walls.

Tentative Subdivision Plat approval is required to divide the property into 19 lots and two tracts. Land divisions of four lots or more are defined as subdivisions.

Type C Tree Plan approval is required to remove trees on site for the proposed development.

SROZ Map Verification approval is required to verify the mapped SROZ overlay on the site.

II. Project Description

The subject site is located within the Frog Pond West Master Plan area of the City of Wilsonville. It is the applicant's seventh development in Frog Pond West (previous developments are Stafford Meadows, to the southeast; Frog Pond Meadows, to the east; and Frog Pond Ridge, to the east; Frog Pond Estates, to the east; Frog Pond Oaks, to the northeast; and Frog Pond Overlook, to the northeast).

The applicant, West Hills Land Development LLC, proposes to divide the subject site into 19 lots and one tract and develop the public infrastructure required to serve those lots. In addition, the applicant proposes an extension of the Boeckman Creek Trail from the Morgan Farms development to the south along the western edge of the lots adjacent to the creek corridor. A trailhead park is also proposed to provide public access to the trail, consistent with the Frog Pond West Master Plan.

The Frog Pond Terrace development area is approximately 11 acres. A total of 19 detached residential lots are proposed, for intended development with 18 detached residential homes (one lot, proposed Lot 16, has an existing home that will remain).

The development area is adjacent to pending and approved developments in the Frog Pond West area and will extend infrastructure to the north and west to serve the site. Frog Pond Ln improvements are not proposed along the northern site boundary, as this portion of the Frog Pond Ln right-of-way is within the mapped SROZ and does not provide access to the development site. SW Woodbury Loop will be extended north from the southern property line, and the SW Brisband Street right-of-way along the southern site boundary will be widened by 20 ft. to the full 52-ft. right-of-way width. One new public east-west street, Street B, is proposed. Tract A contains a stormwater facility, the Boeckman Creek Trail, the trailhead park, and the delineated SROZ and Impact Area.

III. Comprehensive Plan Policies

A. Urban Growth Management

Response: Annexation of the site is subject to the provisions of the Urban Growth Management chapter of the Comprehensive Plan, specifically Goal 2.1 and Policy 2.2.1.

Policy 2.2.1

The City of Wilsonville shall plan for the eventual urbanization of land within the local planning area, beginning with land within the Urban Growth Boundary.

Implementation Measure 2.2.1.a

Allow annexation when it is consistent with future planned public services and when a need is clearly demonstrated for immediate urban growth.

Response: The Comprehensive Plan states:

“Based on Metro’s (1981) regional growth allocation statistics, Wilsonville’s population was projected to grow to 15,600 by the year 2000. In the same time period, the City’s economic growth is expected to generate a total of 14,400 jobs. Those projections proved to be surprisingly accurate. In fact, Wilsonville’s population in 2000 approached the 15,600 figure, and the number of jobs exceeded the 14,400 figure.”

The subject site is located within the West Neighborhood of the Frog Pond planning area. The Frog Pond Area Plan was adopted in 2015 and the Frog Pond West Master Plan was adopted in 2017 and provides for single-family residential and institutional uses to meet the needs of Wilsonville’s growing population. The Frog Pond Area Plan includes a transportation framework, parks and open space framework, and infrastructure framework to support development within the Frog Pond area and assure adequate public services.

This criterion is met.

Implementation Measure 2.2.1.e

Changes in the City boundary will require adherence to the annexation procedures prescribed by State law and Metro standards. Amendments to the City limits shall be based on consideration of:

1. *Orderly, economic provision of public facilities and services, i.e., primary urban services are available and adequate to serve additional development or improvements are scheduled through the City’s approved Capital Improvements Plan.*

Response: The Frog Pond Area Plan includes implementation measures to ensure the orderly and economic provision of public facilities and services for the Frog Pond Area, including Frog Pond West. Site development is proposed with concurrent applications for Stage I and Stage II Master Plans and Preliminary Subdivision, which proposes the extension of public facilities and services to the Frog Pond Terrace site. These proposed services are generally consistent with the Frog Pond Area Plan and Frog Pond West Master Plan, and the City’s Finance Plan and Capital Improvements Plan.

This criterion is met.

2. *Availability of sufficient land for the various uses to insure choices in the marketplace for a 3 to 5 year period.*

Response: The inclusion of the Frog Pond area within the UGB and the adoption of the Frog Pond Area Plan demonstrate the need for residential development and public facilities in the Frog Pond Area. Annexation of the subject site will allow development of the uses envisioned by the adopted Frog Pond West Master Plan.

3. *Statewide Planning Goals.*

Response: The Statewide Planning Goals provide direction to local jurisdictions regarding the State's policies on land use. These goals are implemented at the local level through Comprehensive Plans, which are required and reviewed by the Department of Land Conservation and Development (DLCDD) for conformance with the Statewide Planning Goals. It is assumed that the City's adopted Comprehensive Plan (which includes the adopted Frog Pond Area Plan and Frog Pond West Master Plan) is in compliance with the Statewide Planning Goals (specifically Goal 2: Land Use Planning), and that compliance with the Wilsonville Comprehensive Plan also demonstrates compliance with the Statewide Planning Goals.

Relevant Statewide Planning Goals include:

- Goal 10: Housing
- Goal 12: Transportation
- Goal 14: Urbanization

Responses to each are addressed below.

Goal 10: Housing

This goal identifies a need for "needed housing," which is defined (for cities having populations larger than 2,500) as attached and detached single-family housing, multiple-family housing, and manufactured homes. Annexation of the subject site into the Wilsonville city limits will provide detached single-family housing, which is defined as "needed housing" and will serve an identified need in the city.

Goal 12: Transportation

This goal identifies the importance of a safe, convenient, and economic transportation system, and requires local jurisdictions to adopt a Transportation System Plan (TSP). The proposed annexation area will comply with the Wilsonville Transportation System Plan, which has been updated to include the Frog Pond West area. Annexation of the subject site will allow for development of the site, including new street connections included in the TSP.

Goal 14: Urbanization

This goal identifies the need for orderly and efficient growth, the need to accommodate housing and employment within the urban growth boundary, and the importance of livable communities. The orderly annexation of this site, which is located within the Frog Pond West area, will provide additional housing within the UGB.

4. *Applicable Metro Plans;*

Response: The Metro Code contains applicable requirements. Section 3.07 Urban Growth Management Functional Plan (Functional Plan) provides direction to communities within Metro's jurisdiction regarding the region's land use and transportation policies, and Chapter 3.09 Local Government Boundary Changes identifies requirements for annexations.

Wilsonville is located within the jurisdiction of Metro, and its local plans and land use ordinances are subject to review by Metro. It is assumed that the City's adopted Comprehensive Plan (which includes the adopted Frog Pond West Master Plan) complies with the Functional Plan, and that compliance with the Wilsonville Comprehensive Plan also demonstrates compliance with the Functional Plan.

Metro Code 3.07 Urban Growth Management Functional Plan

Applicable Titles of the Functional Plan are addressed below.

Title 1: Housing Capacity

Annexation of the subject site will increase the housing capacity of the city, as described and confirmed through adoption of the Frog Pond West Master Plan.

Title 11: Planning for New Urban Areas

The City of Wilsonville's adopted Frog Pond Area Plan and Frog Pond West Master Plan include a comprehensive overview of future development in the Frog Pond planning area. The proposed annexation will expand the boundaries of the city and allow for orderly development of the Frog Pond West Area.

Metro Code 3.09 Local Government Boundary Changes

3.09.040 Requirements for Petitions

- A. A petition for a boundary change must contain the following information:
1. The jurisdiction of the reviewing entity to act on the petition;
 2. A map and a legal description of the affected territory in the form prescribed by the reviewing entity;
 3. For minor boundary changes, the names and mailing addresses of all persons owning property and all electors within the affected territory as shown in the records of the tax assessor and county clerk; and
 4. For boundary changes under ORS 198.855(3), 198.857, 222.125 or 222.170, statements of consent to the annexation signed by the requisite number of owners or electors.
- B. A city, county and Metro may charge a fee to recover its reasonable costs to carry out its duties and responsibilities under this chapter.

Response: The petition included as Appendix A includes the information required by this section.

5. Encouragement of development within the City limits before conversion of urbanizable (UGB) areas.

Response: The subject site is located within the Frog Pond West planning area, which has been the subject of significant local planning efforts. Expansion of the city's UGB to include this area was completed due to a determination that there was inadequate development area within the existing city limits. Annexation of this site will allow development that implements the vision of the Frog Pond West Master Plan.

B. Land Use and Development

Response: The requested zone change to RN is subject to compliance with Comprehensive Plan map designation and applicable goals, policies and objectives as well as compliance with the Land Use and Development chapter of the Comprehensive Plan. The RN zone change is specifically subject to Policy 4.1.4 and implementation measures 4.1.4.b, d, e, q, and x.

Land Use and Development

Policy 4.1.4

The City of Wilsonville shall provide opportunities for a wide range of housing types, sizes, and densities at prices and rent levels to accommodate people who are employed in Wilsonville.

Implementation Measure 4.1.4.b

Plan for and permit a variety of housing types consistent with the objectives and policies set forth under this section of the Comprehensive Plan, while maintaining a reasonable balance between the economics of building and the cost of supplying public services. It is the City's desire to provide a variety of housing types needed to meet a wide range of personal preferences and income levels. The City also recognizes the fact that adequate public facilities and services must be available in order to build and maintain a decent, safe, and healthful living environment.

Response: The proposed zone change to Residential Neighborhood RN implements the adopted Frog Pond West Master Plan and allows for development of single-family detached housing. The proposed development permitted by the zone change will provide adequate public facilities and services to serve the new dwellings.

Implementation Measure 4.1.4.d

Encourage the construction and development of diverse housing types, but maintain a general balance according to housing type and geographic distribution, both presently and in the future. Such housing types may include, but shall not be limited to: Apartments, single-family detached, single-family common wall, manufactured homes, mobile homes, modular homes, and condominiums in various structural forms.

Response: The Frog Pond West Master Plan anticipates single-family detached development in the R7 and R10 areas of the plan area. The proposed zone change implements the adopted Frog Pond West Master Plan and allows for development of single-family detached housing.

Implementation Measure 4.1.4.e

Targets are to be set in order to meet the City’s Goals for housing and assure compliance with State and regional standards.

Response: The Frog Pond Area Plan and Frog Pond West Master Plan establish minimum and maximum residential densities for this area in compliance with state and regional standards. The proposed zone change will allow development of the subject site in conformance with those densities.

Implementation Measure 4.1.4.q

The City will continue to allow for mobile homes and manufactured dwellings, subject to development review processes that are similar to those used for other forms of housing. Individual units will continue to be allowed on individual lots, subject to design standards. Mobile home parks and subdivisions shall be subject to the same procedures as other forms of planned developments.

Response: No mobile homes or manufactured dwellings are proposed, but the applicant acknowledges that they are allowed.

Implementation Measure 4.1.4.x

Apartments and mobile homes are to be located to produce an optimum living environment for the occupants and surrounding residential areas. Development criteria includes:

1. Buffering by means of landscaping, fencing, and distance from conflicting uses.
2. Compatibility of design, recognizing the architectural differences between apartment buildings and houses.
3. On-site recreation space as well as pedestrian and bicycle access to parks, schools, mass transit stops and convenience shopping.
4. The siting of buildings to minimize the visual effects of parking areas and to increase the availability of privacy and natural surveillance for security.

Response: No apartments or mobile homes are proposed or permitted by the requested zoning.

RESIDENTIAL PLANNING DISTRICTS SHOWN ON THE LAND USE MAP OF THE COMPREHENSIVE PLAN

Response: The Frog Pond West Master Plan and the RN zone identify minimum density targets for the Frog Pond West subdistricts. As shown in Table 1 below and Sheet P10.00, the proposed development will consist of 19 lots: 16 lots in Subdistrict 4 and 3 lots in Subdistrict 7. The applicant is requesting a reduction to the minimum density of Subdistrict 7 through the provisions of Section 4.118. These densities are not specifically addressed in Comprehensive Plan policies.

Table 1. Proposed Residential Units

Land Use Designation	Sub-district	Net Buildable Area (ac)	% of Sub-district	Minimum du	Maximum du	Proposed du	Comment
R-7	4	4.71	18.87	16	20	16	Meets density requirements
R-10	7	1.57	15.90	4	5	3	A waiver to the minimum density has been requested.
Total		6.29		20	25	19	

C. Areas of Special Interest

AREA L

This area is located north of Boeckman Road, south of Frog Pond Lane, west of Wilsonville (Stafford) Road, and east of Boeckman Creek. It contains a mixture of rural-residential and small agricultural uses. Eventual redevelopment of the area is expected to be primarily residential. The West Linn – Wilsonville School District and a church have acquired property in the area, causing speculation

that redevelopment with full urban services could occur prior to 2010. In fact, construction of a new church has already commenced at the corner of Boeckman Road and Wilsonville/Stafford Road.

The existing development patterns, and values of the existing homes in the Frog Pond neighborhood are expected to slow the redevelopment process. Most of the landowners in the area have expressed little or no interest in urban density redevelopment. The Metro standard for urbanizing residential land is an average residential density of at least 10 units/acre. Those densities may not appeal to many of the current residents of the area who live in large homes on lots with acreage. In view of the School District's plans to construct a school within the neighborhood, the City must prepare plans to serve the new school and the surrounding area.

Response: The site is located within Area L, now known as the Frog Pond West Plan Area. The Frog Pond West Master Plan was adopted in 2017 and provides land use and infrastructure plans for urban density redevelopment. The proposed zone change to RN implements the provisions of the Frog Pond West Master Plan.

IV. Zoning Regulations

A. Section 4.035. Site Development Permits

[...]

(.04) Site Development Permit Application.

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

1. A completed Permit application form, including identification of the project coordinator, or professional design team.

Response: Completed application forms have been submitted.

2. An explanation of intent, stating the nature of the proposed development, reasons for the Permit request, pertinent background information, information required by the development standards and other information specified by the Director as required by other sections of this Code because of the type of development proposal or the area involved or that may have a bearing in determining the action to be taken. As noted in Section 4.014, the applicant bears the burden of proving that the application meets all requirements of this Code.

Response: This narrative includes a description of the nature of the proposed project, reasons for the request, pertinent background information, and responses to applicable criteria.

3. Proof that the property affected by the application is in the exclusive ownership of the applicant, or that the applicant has the consent of all individuals or partners in ownership of the affected property.

Response: This submittal includes application forms signed by the property owners and the applicant, verifying that all owners consent to the application.

4. Legal description of the property affected by the application.

Response: An annexation legal description and a zoning map amendment legal description of the property is included in Appendix A.

5. The application shall include conceptual and quantitatively accurate representations of the entire development sufficient to judge the scope, size and impact of the development on the community, public facilities and adjacent properties; and except as otherwise specified in this Code, shall be accompanied by the following information,

Response: The exhibits and reports included with this submittal include this information.

6. Unless specifically waived by the Director, the submittal shall include: ten (10) copies folded to 9" x 12" or (one (1) set of full-sized scaled drawings and nine (9) 8 1/2" x 11" reductions of larger drawings) of the proposed Site Development Plan, including a small scale vicinity map and showing:
- a. Streets, private drives, driveways, sidewalks, pedestrian ways, off-street parking, loading areas, garbage and recycling storage areas, power lines and railroad tracks, and shall indicate the direction of traffic flow into and out of off-street parking and loading areas, the location of each parking space and each loading berth and areas of turning and maneuvering vehicles.
 - b. The Site Plan shall indicate how utility service, including sanitary sewer, water and storm drainage, are to be provided. The Site Plan shall also show the following off-site features: distances from the subject property to any structures on adjacent properties and the locations and uses of streets, private drives, or driveways on adjacent properties.
 - c. Location and dimensions of structures, utilization of structures, including activities and the number of living units.
 - d. Major existing landscaping features including trees to be saved, and existing and proposed contours.
 - e. Relevant operational data, drawings and/or elevations clearly establishing the scale, character and relationship of buildings, streets, private drives, and open space.
 - f. Topographic information sufficient to determine direction and percentage of slopes, drainage patterns, and in environmentally sensitive areas, e.g., flood plain, forested areas, steep slopes or adjacent to stream banks, the elevations of all points used to determine contours shall be indicated and said points shall be given to true elevation above mean sea level as determined by the City Engineer. The base data shall be clearly indicated and shall be compatible to City datum if bench marks are not adjacent. The following intervals shall be shown:
 - i. One (1) foot contours for slopes of up to five percent (5%);
 - ii. Two (2) foot contours for slopes of from six percent (6%) to twelve percent (12%);
 - iii. Five (5) foot contours for slopes of from twelve percent (12%) to twenty percent (20%). These slopes shall be clearly identified, and
 - iv. Ten (10) foot contours for slopes exceeding twenty percent (20%).
 - g. A tabulation of land area, in square feet, devoted to various uses such as building area (gross and net rentable), parking and paving coverage, landscaped area coverage and average residential density per net acre.
 - h. An application fee as set by the City Council.
 - i. If there are trees in the development area, an arborist's report, as required in Section 4.600. This report shall also show the impacts of grading on the trees.
 - j. A list of all owners of property within 250 feet of the subject property, printed on label format. The list is to be based on the latest available information from the County Assessor.

Response: A site circulation plan is included as Sheet P8.00; utility plans are included as Sheet P4.00; an existing conditions plan, including contours and trees, is included as Sheets P1.00 and P1.10; topographic information is shown on Sheets P1.0 and P1.10; a tabulation of land area and uses is included in Sheet P2.00; the application fee has been submitted with this application; an arborist report is included as Appendix D; and a list of property owners within 250 ft. of the subject property, in label format, is included with this application.

B. Section 4.113. Standards Applying to Residential Developments in Any Zone

(.01) Open Space

Response: The site is located within the Frog Pond West master plan area, and the provisions of Section 4.127 supersede these standards and are addressed below.

(.02) Building Setbacks

(for Fence Setbacks, see subsection .08). The following provisions apply unless otherwise provided

for by the Code or a legislative master plan. [Section .03 Building Setbacks amended by Ord. 806, /17/2017]

A. For lots over 10,000 square feet:

Response: No lots over 10,000 square feet are proposed. These provisions are not applicable.

B. For lots not exceeding 10,000 square feet:

1. *Minimum front yard setback: Fifteen (15) feet, with open porches allowed to extend to within ten (10) feet of the property line.*
2. *Minimum side yard setback: One story: five (5) feet; Two or more stories: seven (7) feet. In the case of a corner lot, abutting more than one street or tract with a private drive, the side yard on the street side of such lot shall be not less than ten (10) feet.*
3. *In the case of a key lot, the front setback shall equal one-half (1/2) the sum of depth of the required yard on the adjacent corner lot along the street or tract with a private drive upon which the key lot faces and the setback required on the adjacent interior lot.*
4. *No structure shall be erected within the required setback for any future street shown within the City's adopted Transportation Master Plan or Transportation Systems Plan.*
5. *Minimum setback to garage door or carport entry: Twenty (20) feet. Wall above the garage door may project to within fifteen (15) feet of property line, provided that clearance to garage door is maintained. Where access is taken from an alley, garages or carports may be located no less than four (4) feet from the property line adjoining the alley.*
6. *Minimum rear yard setback: One story: fifteen (15) feet. Two or more stories: Twenty (20) feet. Accessory buildings on corner lots must observe the same rear setbacks as the required side yard of the abutting lot. [Section 4.113(.03) amended by Ord. 682, 9/9/10]*

Response: The Frog Pond Terrace site is within the Frog Pond West Master Plan Area the site is subject to the RN zone setback requirements of Section 4.127, which are addressed in the responses to that section.

(.03) Height Guidelines

The Development Review Board may regulate heights as follows:

- A. *Restrict or regulate the height or building design consistent with adequate provision of fire protection and fire-fighting apparatus height limitations.*
- B. *To provide buffering of low density developments by requiring the placement of buildings more than two (2) stories in height away from the property lines abutting a low density zone.*
- C. *To regulate building height or design to protect scenic vistas of Mt. Hood or the Willamette River from greater encroachments than would occur if developed conventionally.*

Response: No low-density developments are adjacent to the site and no scenic vistas of Mt. Hood or the Willamette River have been identified on the site. No height regulation is needed.

(.04) Residential uses for treatment or training

- A. *Residential Homes, as defined in Section 4.001, shall be permitted in any location where a single-family dwelling is permitted.*
- B. *Residential Facilities, as defined in Section 4.001, shall be permitted in any location where multiple-family dwelling units are permitted.*

Response: No residential homes or facilities are proposed. These standards are not applicable.

(.05) Off Street Parking

Off-street parking shall be provided as specified in Section 4.155.

Response: The provisions of Section 4.155 are addressed in Section V of this narrative.

(.06) Signs

Signs shall be governed by the provisions of Sections 4.156.01 – 4.156.11.

Response: The provisions of Sections 4.156.01-11 are addressed in Section V of this narrative.

(.07) Fences

- A. *The maximum height of a sight-obscuring fence located in the required front yard of a residential development shall not exceed four (4) feet.*
- B. *The maximum height of a sight-obscuring fence located in the side yard of a residential lot shall not exceed four (4) feet forward of the building line and shall not exceed six (6) feet in height in the rear yard, except as approved by the Development Review Board. Except, however, that a fence in the side yard of residential corner lot may be up to six (6) feet in height, unless a greater restriction is imposed by the Development Review Board acting on an application. A fence of up to six (6) feet in height may be constructed with no setback along the side, the rear, and in the front yard of a residential lot adjoining the rear of a corner lot as shown in the attached Figure.*
- C. *Notwithstanding the provisions of Section 4.122(10)(a) and (b), the Development Review Board may require such fencing as shall be deemed necessary to promote and provide traffic safety, noise mitigation, and nuisance abatement, and the compatibility of different uses permitted on adjacent lots of the same zone and on adjacent lots of different zones.*
- D. *Fences in residential zones shall not include barbed wire, razor wire, electrically charged wire, or be constructed of sheathing material such as plywood or flakeboard.*

Response: The site is located within Frog Pond West and is subject to these standards. No fences on residential lots are proposed at this time. Fences adjacent to Boeckman Creek will be subject to the policies of the Frog Pond West Concept Plan.

(.08) Corner Vision

Vision clearance shall be provided as specified in Section 4.177, or such additional requirements as specified by the City Engineer.

Response: The provisions of Section 4.177 are addressed in Section V of this narrative.

(.09) Prohibited Uses

- A. *Uses of structures and land not specifically permitted in the applicable zoning districts.*
- B. *The use of a trailer, travel trailer or mobile coach as a residence, except as specifically permitted in an approved RV park.*
- C. *Outdoor advertising displays, advertising signs, or advertising structures except as provided in Sections 4.156.05, 4.156.07, 4.156.09, and 4.156.10.*

Response: No prohibited uses are proposed.

(.10) Accessory Dwelling Units

Accessory Dwelling Units, are permitted subject to standards and requirements of this Subsection. [Amended by Ord. #825, 10/15/18]

Response: No accessory dwelling units are proposed, though future development may include accessory dwelling units. These standards are not applicable.

(.11) Reduced Setback Agreements

The following procedure has been created to allow the owners of contiguous residential properties to reduce the building setbacks that would typically be required between those properties, or to allow for neighbors to voluntary waive the solar access provisions of Section 4.137. Setbacks can be reduced to zero through the procedures outlined in this subsection.[...]

Response: No reduced setbacks are requested through these provisions.

(.12) Bed and Breakfasts

Response: No bed and breakfasts are proposed. These standards are not applicable.

- (.13) *The Planning Director and Development Review Board shall, in making their determination of compliance in attaching conditions, consider the effects of this action on the availability and cost of needed housing. The provisions of this section shall not be used in such a manner that additional conditions, either singularly or cumulatively, have the effect of unnecessarily increasing the cost of housing or effectively excluding a needed housing type. However, consideration of these factors*

shall not prevent the Board or Planning Director from imposing conditions of approval necessary to meet the minimum requirements of the Comprehensive Plan and Code.

Response: This application is for land division to create new lots for single family residential development, which is considered a needed housing type per Statewide Planning Goal 10 and the City's Comprehensive Plan.

C. Section 4.118. Standards Applying in 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 subject site is not located within the "S" overlay zone. These standards are not applicable.

(.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: The provisions of Sections 4.300 to 4.320 are addressed in Section VII of this narrative.

(.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; and
15. On-site pedestrian access and circulation standards; and
16. Solar access standards, as provided in section 4.137.

[Amended by Ord. #719, 6/17/13.]

Response: No waivers to these development standards are requested.

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;
2. minimum density standards of residential zones;
3. minimum landscape, buffering, and screening standards;

[...]

Response: A waiver is requested to the minimum density standard of Subdistrict 7 to allow three (3) lots rather than the minimum of four (4) lots in the subdistrict.

[...]

D. Section 4.124. Standards Applying to all Planned Development Residential Zones.

(.01) Examples of principal uses that are typically permitted:

- A. Open Space.
- B. Single-Family Dwelling Units.
- C. Duplexes. [Added by Ord. #825, 10/15/18]
- D. Multiple-Family Dwelling Units. [Amended by Ord. #825, 10/15/18]
- E. Public parks, playgrounds, recreational and community buildings and grounds, tennis courts, and similar recreational uses, all of a non-commercial nature, provided that any principal building or public swimming pool shall be located not less than forty-five (45) feet from any other lot.
- F. Manufactured homes, subject to the standards of Section 4.115 (Manufactured Housing).

Response: The proposed development includes open space and single-family dwelling units. These uses are permitted uses in the PDR zones.

(.02) Permitted accessory uses to single family and detached dwelling units:

- A. Accessory uses, buildings and structures customarily incidental to any of the principal permitted uses listed above and located on the same lot.
- B. Living quarters without kitchen facilities for persons employed on the premises or for guests. Such facilities shall not be rented or otherwise used as a separate dwelling unless approved as an accessory dwelling unit or duplex.
- C. Accessory dwelling units, subject to the standards of Section 4.113 (.11). [Amended by Ord. #825, 10/15/18]
- D. Home occupations.
- E. A private garage or parking area.
- F. Temporary real estate signs, small announcement or professional signs, and subdivision signs, as provided in the provisions of Sections 4.156.05, 4.156.07, 4.156.09, and 4.156.10. [Amended by Ord. No. 704, 6/18/12]
- G. Temporary buildings for uses incidental to construction work, which buildings shall be removed upon completion or abandonment of the construction work.
- H. Accessory buildings and uses shall conform to front and side yard setback requirements. If the accessory buildings and uses do not exceed 120 square feet or ten (10) feet in height, and they are detached and located behind the rear-most line of the main buildings, the side and rear yard setbacks may be reduced to three (3) feet.
- I. Livestock and farm animals, subject to the provisions of Section 4.162.

Response: No accessory uses to the proposed detached single-family dwelling units are requested at this time. It is possible that future homes may include accessory buildings, which would be reviewed at the time of building permit.

(.03) Permitted accessory uses for duplexes and attached multiple-family dwelling units:

- A. Accessory uses, buildings, and structures customarily incidental to any of the aforesaid principal permitted uses, located on the same lot therewith.
- B. Home occupations.
- C. A private garage or parking area.
- D. Temporary buildings for uses incidental to construction work, which buildings shall be removed upon completion or abandonment of the construction work.
- E. Accessory buildings and uses shall conform to front and side yard setback requirements. If the accessory buildings and uses do not exceed 120 square feet or ten (10) feet in height, and they are detached and located behind the rear-most line of the main buildings, the side and rear yard setbacks may be reduced to three (3) feet.
- F. Livestock and farm animals, subject to the provisions of Section 4.162.

Response: No duplex dwelling units or attached multiple-family dwelling units are proposed.

(.05) Appropriate PDR Zoning Designation and Maximum and Minimum Density based on Comprehensive Plan Density Range District:

Table 1. PDR Zoning Designation and Maximum and Minimum Density based on Comprehensive Plan Density Range District

Zoning Designation	Comprehensive Plan Map Density Range District ^a	Max. Density per Acre ^{b, c}	Min. Density per Acre ^d
PDR-1	0-1	1	.8
PDR-2	2-3	3	2.4
PDR-3	4-5	5	4
PDR-4	6-7	7.5	6
PDR-5	10-12	12	9.6
PDR-6	16-20	20	16
PDR-7	Over 20	As approved by Zoning Order/Stage 1 Master Plan, at least 25	80% of Max Density

- a. Accessory Dwelling Units are not included for calculating density.
- b. Middle Housing, besides, townhouses, is not included in calculating maximum density beyond one unit per lot or parcel.
- c. For townhouses, the maximum density is the less of: (1) four times the maximum net density listed in Table 1; or (2) net density of 25 units per acre. If applying a maximum density for townhouses of four times the density listed in Table 1, the minimum density remains 80 percent of the maximum density listed in Table 1.
- d. For Cottage Clusters, the minimum net density shall be no less than four units per acre.

Response: The Comprehensive Plan Designation of Residential Neighborhood is implemented by the Residential Neighborhood RN zone. The RN zoning district is not included in the table above.

(.06) Unit Count Limitations. Unit count limitations are calculated as follows:

- A. *Maximum Unit Count. Maximum unit count at build out of Stage I Master Plan area: is calculated by taking the Gross Development Area multiplied by Maximum Density per Acre stated in Table 1 of this Code section, plus any density transferred from SROZ areas pursuant to Subsection 4.139.11 (.02). For example, any number greater than 4 and less than 5 shall be rounded down to 4.*
- B. *Minimum Unit Count. Minimum unit count at build out of Stage I Master Plan area: 80% of maximum unit count described in A. above.*
- C. *If the Stage I Master Plan area is subject to more than one Comprehensive Plan Map Density Range District and Zoning Designation, calculations for areas of differing densities shall be done separately and then summed together, and the final summed number rounded down to the nearest whole number.*

Response: This site is located within the Frog Pond West master plan area and is subject to the provisions of Section 4.127. Unit count limitations for the RN zone subdistricts are established in Section 4.127 and are addressed in that section of this narrative. Unit counts for the site were calculated per Appendix C of the Frog Pond West Concept Plan.

(.07) Lot Standards
[...]

Response: This site is located within the Frog Pond West master plan area, and is identified as zone RN, which is implemented by Section 4.127. The standards in that section supersede the standards in this section. Section 4.127 is addressed later in this narrative.

(.08) Adjustments to Ensure Minimum Density is Met.

In development not involving Multi-Family Dwelling Units, if demonstrated by the applicant that it is not physically possible to accommodate the minimum number of units at the required minimum lot size and the minimum open space, the following adjustments, A.-B., shall be made to the minimum extent necessary to enable minimum density to be met. To prioritize the provision of required open space, adjustments to minimum lot size, width, and depth shall be used to the extent allowed, as described in A. below, prior to any adjustment to open space requirements as described in B. below.

- A. *Adjustments to Minimum Lot Size, Width, and Depth: Reduce minimum lot size of up to 20% of the residential lots, rounded consistent with Subsection (.06) above or one lot for a four-lot subdivision, by up to 20%. For example, the potential adjustment, if determined necessary, for a 100-lot subdivision in the PDR-4 zone would be to reduce 20 lots to as low as 2,400 square feet (a 20% reduction of the 3,000 square foot minimum lot size). Also reduce the minimum lot width and minimum lot depth by up to 20% as necessary to allow the reduction of lot size.*
- B. *Adjustment to Open Space Area: Reduce the amount of open space area required pursuant to Subsection 4.113 (.01). Reduce non-usable open space to the extent possible prior to usable open space required by Subsection 4.113 (.01) C. 3. After any adjustment to open space, all subdivisions with 10 or more units must still include a minimum of one usable, programmed open space of at least 2,000 square feet meeting the requirements of Subsection 4.113 (.01) C. 3. Subdivisions less than 10 units shall require one usable open space of at least 1,000 square feet meeting the same requirements.*

Response: No adjustments to these standards are requested to ensure minimum density is met.

(.09) Block and access standards:

1. *Maximum block perimeter in new land divisions: 1,800 feet.*
2. *Maximum spacing between streets or private drives for local access: 530 feet, unless waived by the Development Review Board upon finding that barriers such as railroads, freeways, existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent street extensions meeting this standard. [Amended by Ord. 682, 9/9/10]*
3. *Maximum block length without pedestrian and bicycle crossing: 330 feet, unless waived by the Development Review Board upon finding that barriers such as railroads, freeways, existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent pedestrian and bicycle facility extensions meeting this standard.*

Response: As shown in Sheet P3.00, streets are located less than 530 ft. apart. Three partial blocks are created by the proposed land division, each less than 600 ft. in perimeter. Future block patterns to the east can meet the maximum block perimeter standards of this section.

Intersection spacing between Street B and the east-west portion of SW Woodbury Loop to the north is approximately 240 ft. and spacing between Street B and Brisband St to the south is approximately 300 ft., less than the maximum spacing of 530 ft. None of the proposed block lengths exceed 330 ft.

These standards are met.

(.10) Signs. *Per the requirements of Sections 4.156.01 through 4.156.11. [Amended by Ord. No. 704, 6/18/12]*

Response: No signs are currently proposed with this application.

(.11) Parking. *Per the requirements of Section 4.155.*

Response: The standards of 4.155 are addressed in Section V of this narrative.

(.12) Corner Vision Clearance. *Per the requirements of Section 4.177.*

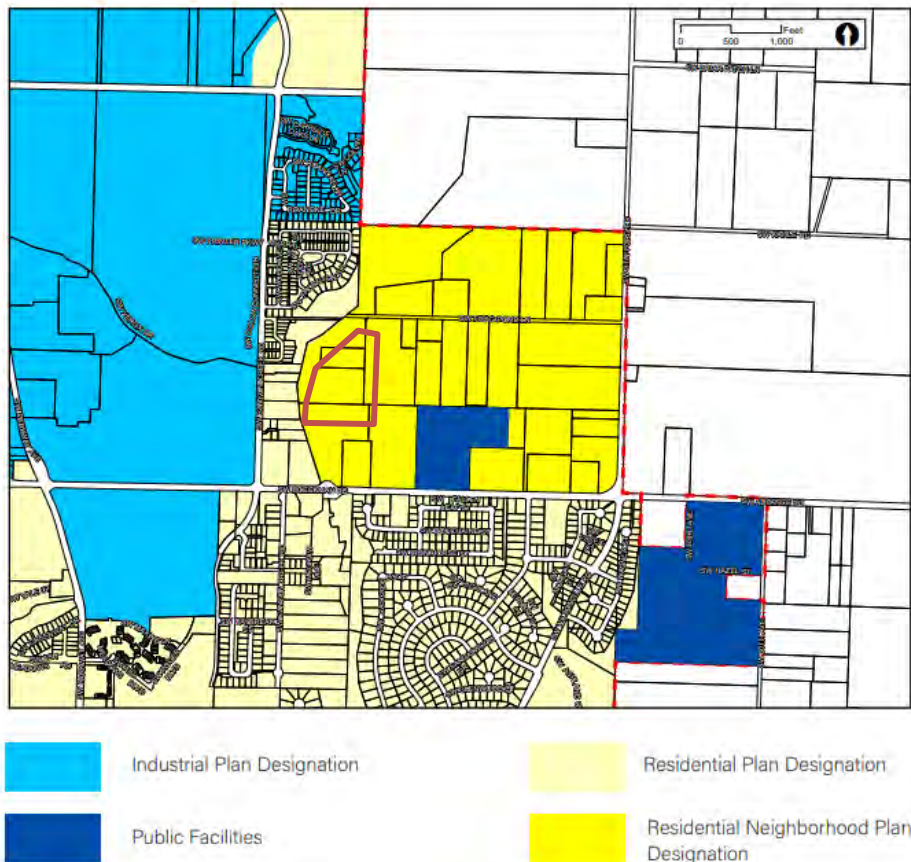
Response: The standards of 4.177 are addressed in Section V of this narrative.

E. Section 4.127. Residential Neighborhood (RN) Zone.

- (.01) **Purpose.** *The Residential Neighborhood (RN) zone applies to lands within Residential Neighborhood Comprehensive Plan Map designation. The RN zone is a Planned Development zone, subject to applicable Planned Development regulations, except as superseded by this section or in legislative master plans. The purposes of the RN Zone are to:*
- A. *Implement the Residential Neighborhood policies and implementation measures of the Comprehensive Plan.*
 - B. *Implement legislative master plans for areas within the Residential Neighborhood Comprehensive Plan Map designation.*
 - C. *Create attractive and connected neighborhoods in Wilsonville.*
 - D. *Regulate and coordinate development to result in cohesive neighborhoods that include: walkable and active streets; a variety of housing appropriate to each neighborhood; connected paths and open spaces; parks and other non-residential uses that are focal points for the community; and, connections to and integration with the larger Wilsonville community.*
 - E. *Encourage and require quality architectural and community design as defined by the Comprehensive Plan and applicable legislative master plans.*
 - F. *Provide transportation choices, including active transportation options.*
 - G. *Preserve and enhance natural resources so that they are an asset to the neighborhoods, and there is visual and physical access to nature.*
 - H. *Create housing opportunities for a variety of households, including housing types that implement the Wilsonville Equitable Housing Strategic Plan and housing affordability provisions of legislative master plans.*

Response: Per Figure 5 of the Frog Pond West Master Plan (below), the Frog Pond Terrace site is located within the RN Comprehensive Plan Map designation and is subject to these provisions and to applicable Planned Development regulations of Section 4.118.

Figure 5. Comprehensive Plan Designations



(.02) Permitted uses:

- A. Open Space.
- B. Single-Family Dwelling Unit.
- C. Townhouses. During initial development in the Frog Pond West Neighborhood, a maximum of two townhouses may be attached, except on corners, a maximum of three townhouses may be attached.
- D. Duplex.
- E. Multiple-Family Dwelling Units, except when not permitted in a legislative master plan, subject to the density standards of the zone. Multi-family dwelling units are not permitted within the Frog Pond West Master Plan area.
- F. Cluster housing. During initial development in the Frog Pond West Neighborhood, only two-unit cluster housing is permitted except on corner lots where three-unit cluster housing is permitted.
- G. Multiple-Family Dwelling Units, except when not permitted in a legislative master plan, subject to the density standards of the zone. Multi-family dwelling units are not permitted within the Frog Pond West Master Plan area.
- H. Cohousing.
- I. Cluster Housing (Frog Pond West Master Plan).
- J. Public or private parks, playgrounds, recreational and community buildings and grounds, tennis courts, and similar recreational uses, all of a non-commercial nature, provided that any principal building or public swimming pool shall be located not less than forty-five (45) feet from any other lot.
- K. Manufactured homes.

Response: As shown on Sheet P2.00, the proposed development includes 19 detached single-family dwelling units, a pedestrian pathway (the Boeckman Creek Trail), and a public trailhead park. The public pathway and park will be non-commercial in nature.

(.03) Permitted accessory uses to single family dwellings:

- A. Accessory uses, buildings and structures customarily incidental to any of the principal permitted uses listed above and located on the same lot.
- B. Living quarters without kitchen facilities for persons employed on the premises or for guests. Such facilities shall not be rented or otherwise used as a separate dwelling unless approved as an accessory dwelling unit or duplex.
- C. Accessory Dwelling Units, subject to the standards of Section 4.113 (.11).
- D. Home occupations.
- E. A private garage or parking area.
- F. Keeping of not more than two roomers or boarders by a resident family.
- G. Temporary buildings for uses incidental to construction work, which buildings shall be removed upon completion or abandonment of the construction work.
- H. Accessory buildings and uses shall conform to front and side yard setback requirements. If the accessory buildings and uses do not exceed 120 square feet or ten feet in height, and they are detached and located behind the rear-most line of the main buildings, the side and rear yard setbacks may be reduced to three feet.
- I. Livestock and farm animals, subject to the provisions of Section 4.162.

Response: No accessory uses are proposed at this time.

(.04) Uses permitted subject to Conditional Use Permit requirements:

- A. Public and semi-public buildings and/or structures essential to the physical and economic welfare of an area, such as fire stations, sub-stations and pump stations.
- B. Commercial Recreation, including public or private clubs, lodges or meeting halls, golf courses, driving ranges, tennis clubs, community centers and similar commercial recreational uses. Commercial Recreation will be permitted upon a finding that it is compatible with the surrounding residential uses and promotes the creation of an attractive, healthful, efficient and stable environment for living, shopping or working. All such uses except golf courses and tennis courts shall conform to the requirements of Section 4.124(.04)(D) (Neighborhood Commercial Centers).
- C. Churches; public, private and parochial schools; public libraries and public museums.

D. Neighborhood Commercial Centers limited to the provisions of goods and services primarily for the convenience of and supported by local residents. Neighborhood Commercial Centers are only permitted where designated on an approved legislative master plan.

Response: No Conditional Uses are proposed.

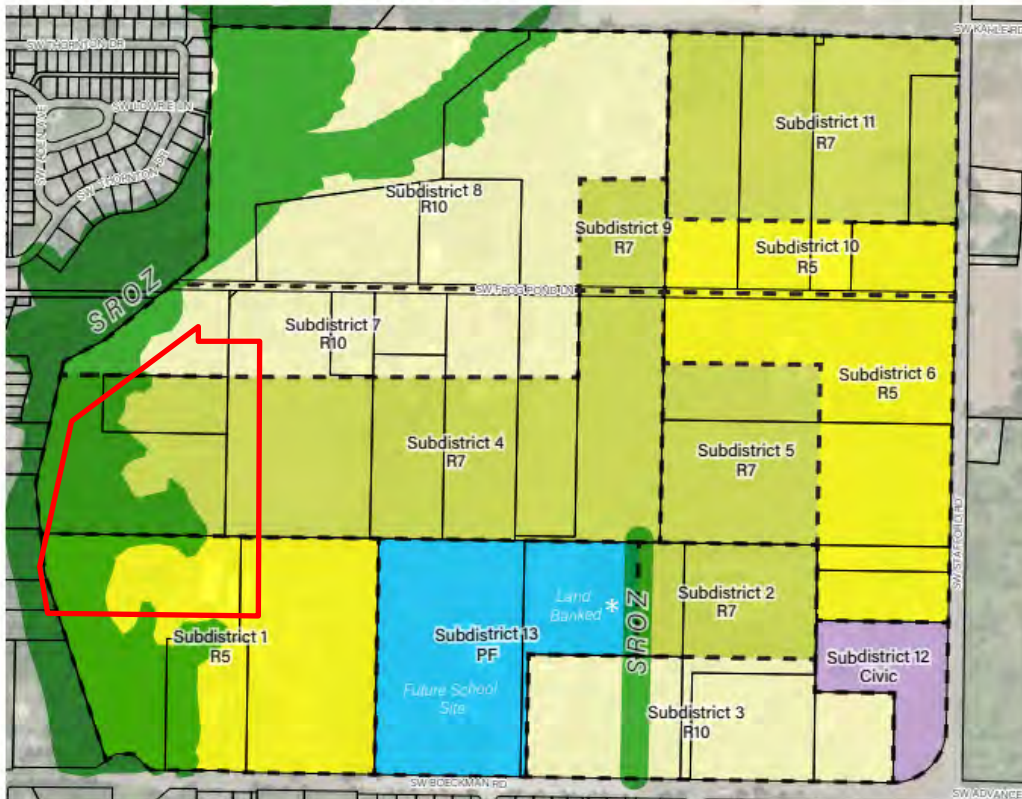
(.05) Residential Neighborhood Zone Sub-districts:

A. RN Zone sub-districts may be established to provide area-specific regulations that implement legislative master plans.

1. For the Frog Pond West Neighborhood, the sub-districts are listed in Table 1 of this code and mapped on Figure 6 of the Frog Pond West Master Plan. The Frog Pond West Master Plan Sub-District Map serves as the official sub-district map for the Frog Pond West Neighborhood.

Response: The Frog Pond Terrace site includes properties within Sub-districts 4 and 7, as shown in Figure 6 of the Frog Pond West Master Plan (below). The site also includes mapped SROZ. A map verification is requested per Section 4.139.

Figure 6. Frog Pond West Land Use and Subdistricts



* Land banked for school facilities, a neighborhood park, and/or residential use.

(.06) Minimum and Maximum Residential Units:

- A. The minimum and maximum number of residential units approved shall be consistent with this code and applicable provisions of an approved legislative master plan.
 - 1. For the Frog Pond West Neighborhood, Table 1 in this code and Frog Pond West Master Plan Table 1 establish the minimum and maximum number of residential units for the sub-districts.
 - 2. For parcels or areas that are a portion of a sub-district, the minimum and maximum number of residential units are established by determining the proportional gross acreage and applying that proportion to the minimums and maximums listed in Table 1. The maximum density on a parcel may be increased, up to a maximum of 10% of what would otherwise be permitted, based on an adjustment to an SROZ boundary that is consistent with 4.139.06.

Response: As shown in Table 1 previously, the proposed Frog Pond Terrace development includes 19 lots/dwelling units (3 within Subdistrict 7 and 16 within Subdistrict 4). The proposed density in Subdistrict 4 is one (1) unit below the minimum density of four (4) dwelling units.

Excerpts of Table 1. Minimum and Maximum Residential Lots by Sub-District in the Frog Pond West Neighborhood			
Area Plan Designation	Frog Pond West Sub-district	Minimum Lots in Sub-district^{a,b}	Maximum Lots in Sub-district^{a,b}
R-10 Large Lot	3	26	32
	7	24	30
	8	43	53
	4	86	107
	5	27	33
	9	10	13
	11	46	58

- a. Each lot must contain at least one dwelling unit but may contain additional units consistent with the allowance for ADUs and middle housing.
 - b. For townhouses, the combined lots of the townhouse project shall be considered a single lot for the purposes of the minimum and maximum of this table. In no case shall the density of a townhouse project exceed 25 dwelling units per net acre.
 - c. These metrics apply to infill housing within the Community of Hope Church property, should they choose to develop housing on the site. Housing in the Civic sub-district is subject to the R-7 Medium Lot Single Family regulations
- B. The City may allow a reduction in the minimum density for a sub-district when it is demonstrated that the reduction is necessary due to topography, protection of trees, wetlands and other natural resources, constraints posed by existing development, infrastructure needs, provision of non-residential uses and similar physical conditions.

Response: The net Subdistrict 7 area allows for a maximum of 5 lots and a minimum of 4 lots. There are constraints imposed by the proposed street system and the need to provide connectivity to future streets to the east while providing sight lines to Boeckman Creek and a connection to the Boeckman Creek Trail at the point where Woodbury Loop turns south.

In addition, the existing steep slopes and trees above Boeckman Creek and the outer boundary of the SROZ area serve to set the limits of development impacts. In Subdistrict 7, the impact area outside of and adjacent to the SROZ is being utilized for the northern extension of the Boeckman Creek Trail, further constraining the remaining developable area.

In order to achieve three (3) lots in this area, a flag lot has been created to provide frontage for Lot 19, thus achieving the maximum number of lots possible in this portion of the Subdistrict.

(.07) Development Standards Generally

- A. Unless otherwise specified by this the regulations in this Residential Development Zone chapter, all development must comply with Section 4.113, Standards Applying to Residential Development in Any Zone.

Response: Compliance with applicable regulations of Section 4.113 is addressed in Section IV of this narrative. Some regulations of 4.127 supersede the regulations of 4.113.

(.08) Lot Development Standards:

- A. Lot development shall be consistent with this code and applicable provisions of an approved legislative master plan.
- B. Lot Standards Generally. For the Frog Pond West Neighborhood, Table 2 establishes the lot development standards unless superseded or supplemented by other provisions of the Development Code.
- C. Lot Standards for Small Lot Sub-districts. The purpose of these standards is to ensure that development in the Small Lot Sub-districts includes varied design that avoids homogenous street frontages, creates active pedestrian street frontages and has open space that is integrated into the development pattern.
Standards. Planned developments in the Small Lot Sub-districts shall include one or more of the following elements on each block:
 - 1. Alleys.
 - 2. Residential main entries grouped around a common green or entry courtyard (e.g. cluster housing).
 - 3. Four or more residential main entries facing a pedestrian connection allowed by an applicable legislative master plan.
 - 4. Garages recessed at least 4 feet from the front façade or 6 feet from the front of a front porch.

Response: Table 2 of this code section establishes the following lot development standards for the Frog Pond West neighborhood. These standards supersede the setback standards of 4.113(.03). Lot dimensional standards are applied at the time of subdivision approval, while site development standards (setbacks, height, etc.) are applied at the time of building permit review. Sheet P2.00 identified the lot area for each proposed lot and illustrates the building envelopes for site and Appendix I provides examples of house plans. The site does not contain Small Lot Sub-Districts.

As shown in Table 2 below, proposed lots 1-18 meet the relevant standards. Lot 19 is a flag lot and will be accessed from an existing 20-ft. access easement to the east of the site.

Table 2. Compliance with Frog Pond West Neighborhood Lot Dimensional Standards

Standard	Required	Proposed	Required	Proposed	Comments
	R-7 Medium Lot		R-10 Large Lot		
Min Lot Size (sq. ft.)	6,000 ^C	6,013+	8,000 ^{AB}	8,021+	Meets standards.
Min Lot Depth (ft)	60	60+	60	119+	Meets standards.
Max. Lot Coverage (%)	45% ^E	NA	40% ^E	NA	Will be verified at the time of building permit review.
Min Lot Width ^{I,J,N} (ft)	35	35+	40	55+	Meets standards

Notes:

- A. Minimum lot size may be reduced to 80% of minimum lot size for any of the following three reasons: (1) where necessary to preserve natural resources (e.g. trees, wetlands) and/or provide active open space, (2) lots designated for cluster housing (Frog Pond West Master Plan), (3) to increase the number of lots up to the maximum number allowed so long as for each lot reduced in size a lot meeting the minimum lot size is designated for development of a duplex or triplex.
- B. For townhouses the minimum lot size in all sub-districts is 1,500 square feet.
- C. In R-5 and R-7 sub-districts the minimum lot size for quadplexes and cottage clusters is 7,000 square feet.
[...]

D. Lot Standards Specific to the Frog Pond West Neighborhood.

- 1. Lots adjacent to Boeckman Road and Stafford Road shall meet the following standards:

- a. *Rear or side yards adjacent to Boeckman Road and Stafford Road shall provide a wall and landscaping consistent with the standards in Figure 10 of the Frog Pond West Master Plan.*

Response: The subject site is not adjacent to Boeckman or Stafford Roads. This standard is not applicable.

2. *Lots adjacent to the collector-designated portions of Willow Creek Drive and Frog Pond Lane shall not have driveways accessing lots from these streets, unless no practical alternative exists for access. Lots in Large Lot Sub-districts are exempt from this standard.*

Response: The site abuts the local street-designated portion of Frog Pond Lane west of Willow Creek Drive; therefore, these provisions are not applicable.

(.09) Open Space:

- A. *Purpose. The purposes of these standards for the Residential Neighborhood Zone are to:*
 1. *Provide light, air, open space, and useable recreation facilities to occupants of each residential development.*
 2. *Retain and incorporate natural resources and trees as part of developments.*
 3. *Provide access and connections to trails and adjacent open space areas.*

For Neighborhood Zones which are subject to adopted legislative master plans, the standards work in combination with, and as a supplement to, the park and open space recommendations of those legislative master plans. These standards supersede the Outdoor Recreational Area requirements in WC Section 4.113 (.01) and (02).
- B. *Within the Frog Pond West Neighborhood, the following standards apply:*
 1. *Properties within the R-10 Large Lot Single Family sub-districts and R-7 Medium Lot Single Family sub-districts are exempt from the requirements of this section. If the Development Review Board finds, based upon substantial evidence in the record, that there is a need for open space, they may waive this exemption and require open space proportional to the need.*

Response: As shown in Figure 6 of the Frog Pond West Master Plan, the site consists of properties within the R-7 and R-10 sub-districts. Therefore, the subject site is exempt from these open space requirements.

(.10) Block, access and connectivity standards:

- A. *Purpose. These standards are intended to regulate and guide development to create: a cohesive and connected pattern of streets, pedestrian connections and bicycle routes; safe, direct and convenient routes to schools and other community destinations; and, neighborhoods that support active transportation and Safe Routes to Schools.*
- B. *Blocks, access and connectivity shall comply with adopted legislative master plans.*
 1. *Within the Frog Pond West Neighborhood, streets shall be consistent with Figure 18, Street Demonstration Plan, in the Frog Pond West Master Plan. The Street Demonstration Plan is intended to be guiding, not binding. Variations from the Street Demonstration Plan may be approved by the Development Review Board, upon finding that one or more of the following justify the variation: barriers such as existing buildings and topography; designated Significant Resource Overlay Zone areas; tree groves, wetlands or other natural resources; existing or planned parks and other active open space that will serve as pedestrian connections for the public; alignment with property lines and ownerships that result in efficient use of land while providing substantially equivalent connectivity for the public; and/or site design that provides substantially equivalent connectivity for the public.*
 2. *If a legislative master plan does not provide sufficient guidance for a specific development or situation, the Development Review Board shall use the block and access standards in Section 4.124(.06) as the applicable standards.*

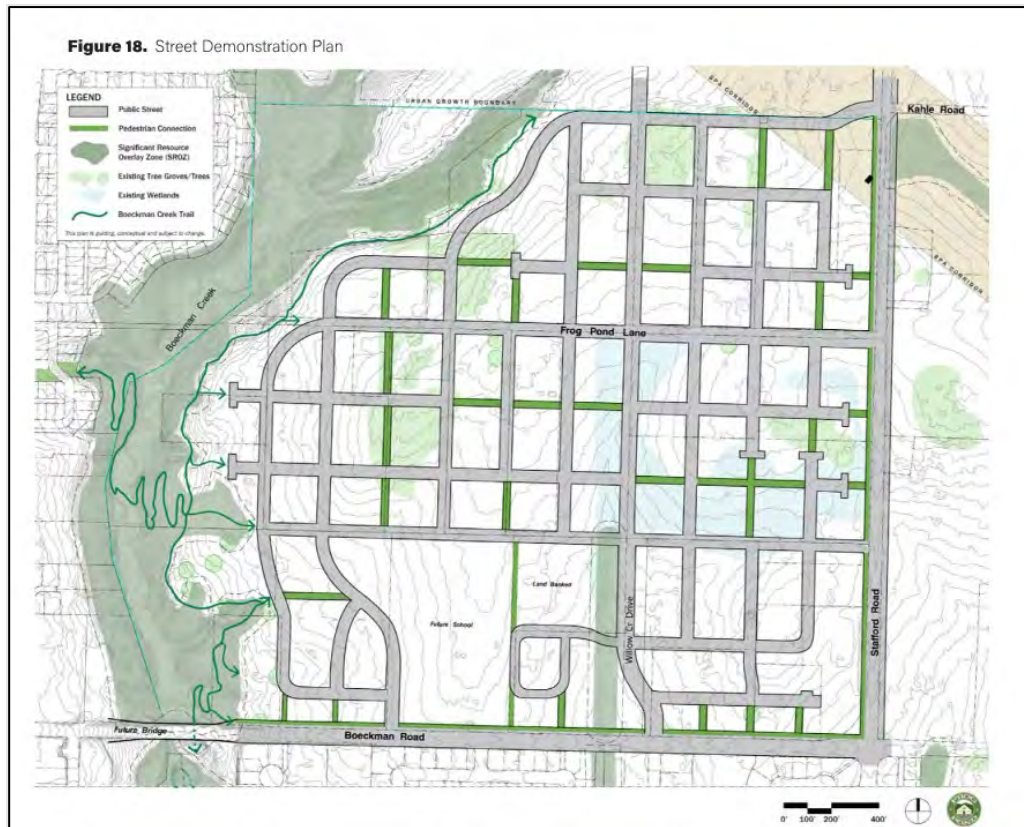
Response: As shown in Figure 18, Street Demonstration Plan (below), public street connections and portions of the Boeckman Creek Trail are planned through the subject site. The Street Demonstration Plan is an illustrative layout of the desired level of connectivity in the Frog Pond West neighborhood and

is intended to be guiding, not binding, allowing for flexibility provided that overall connectivity goals are met. Generally, the street network is a modified grid, except in the vicinity of this site due to the natural resource area. Access to Frog Pond Terrace is provided by east-west local streets (Woodbury Loop and Street B), and SW Woodbury Loop which provides north-south access through the site.

Sheets P3.00 and P8.00 illustrates the proposed blocks, access, and connectivity for Frog Pond Terrace. Brisband St will be widened and will extend along the southern site boundary. Proposed Street B will provide east-west connections to future development to the east. Proposed SW Woodbury Loop will be extended from the Morgan Farms development to the south to provide north-south access through the site. As shown on Sheet P3.00, the Boeckman Creek Trail is proposed along the western edge of the proposed lots and alongside Woodbury Loop, east of Boeckman Creek, and is intended to connect to existing portions of the trail within the Morgan Farms development south of the site and proposed trail connections within the Frog Pond Overlook development north of the site.

The location of Street B is established per Figure 18, which shows an east-west street in this location, terminating west of Woodbury Loop. Figure 18 shows Frog Pond Ln curving to the south and becoming a north-south street adjacent to the subject site. The proposed Frog Pond Overlook development to the northeast includes improvements to Frog Pond Ln to the western site boundary and extension of public utilities to serve sites to the west. Beyond this area, the Frog Pond Ln right-of-way is within mapped SROZ and does not connect to or provide access to proposed development.

Three north-south streets were established by the Morgan Farms development to the south: SW Woodbury Loop; SW Painter Dr; and SW Sherman Dr. SW Woodbury Loop will be extended to the north by the proposed development and curves to the east to connect with a future extension of SW Painter Dr and/or SW Sherman Dr. This street pattern differs from Figure 18 in that Frog Pond Ln terminates at the anticipated future extension of SW Painter Dr rather than continuing west to intersect SW Woodbury Loop. This revised connection point is necessary to respond to the mapped SROZ in the western portion of the site and to avoid impacts while maintaining the modified grid connections anticipated in Figure 18.



The proposed modified grid pattern provides an efficient street connection to SW Frog Pond Lane and SW Stafford Road. The desired extension of Sherman Drive north from Boeckman Road through the Morgan Farm development to Frog Pond Lane replaces the pedestrian connection in that alignment illustrated on the Street Demonstration Plan. The portion of pedestrian connection north of Frog Pond Lane has been shifted farther east in order to make a logical connection with the Boeckman Creek Trail as it runs out of the Frog Pond Vista development before it turns to the west. The offset grid pattern of future north-south streets is occasioned by the need to maintain the desired number of north-south street connections and block spacing between Frog Pond Lane and Brisband Street as shown on the Street Demonstration Plan, while accommodating the approved northern street connection to Frog Pond Lane from the approved Frog Pond Vista development and the desired extension of Sherman Drive north to Frog Pond Lane.

Existing slopes and the presence of the SROZ preclude extending Frog Pond Lane farther to the west in a broad radius as anticipated by the Street Demonstration Plan. Frog Pond Lane is proposed to terminate in an “eyebrow” allowing for a turn to the south that aligns with a future extension of Painter Drive from the Morgan Farm development. The proposed modifications do not require out-of-direction pedestrian or vehicular travel nor do they result in greater distances for pedestrian access to the proposed subdivision from the surrounding future streets than would otherwise be the case if the Street Demonstration Plan were adhered to.

Though not listed as an approval criterion, staff notes that Figure 13 of the Frog Pond West Master Plan is also relevant to proposed development within the Frog Pond West area. This figure illustrates sight lines from the interior of the Frog Pond West neighborhood to Boeckman Creek to the west.

As proposed, the sight lines remain along Frog Pond Ln and Brisband St. Between these two streets, the east-west sight lines have been shortened. As conceptually shown on Figure 13, these two sight lines begin at Willow Creek Drive. The proposed street plan would shorten these sight lines so that they begin at Columbine Street and continue west approximately 1,500 feet to the edge of the Boeckman Creek corridor.

As illustrated in Sheet P11.00, the potential future street and lot layout complies with the Frog Pond West Master Plan and the RN zone. The layout shown accommodates four east-west streets terminating at the Boeckman Creek corridor and five north-south streets extending from Frog Pond Lane to SW Brisband. The westernmost north-south street is truncated short of Frog Pond Lane due to the steepness of the existing slope of the Boeckman creek corridor.

(.011) Signs. *Per the requirements of Sections 4.156.01 through 4.156.11 and applicable provisions from adopted legislative master plans.*

Response: The requirements of Sections 4.156.01 through 4.156.11 are addressed in Section V of this narrative. No signs are proposed as part of this application.

(.012) Parking. *Per the requirements of Section 4.155 and applicable provisions from adopted legislative master plans.*

Response: The requirements of Section 4.155 are addressed in Section V of this narrative. The adopted legislative master plan applicable to this site is the Frog Pond West Master Plan, which has been codified in the zoning ordinance.

(.013) Corner Vision Clearance. *Per the requirements of Section 4.177.*

Response: The requirements of Section 4.177 are addressed in Section V of this narrative.

(.014) Main Entrance Standards

A. Purpose. These standards:

- 1. Support a physical and visual connection between the living area of the residence and the street;*
- 2. Enhance public safety for residents and visitors and provide opportunities for community interaction;*

3. *Ensure that the pedestrian entrance is visible or clearly identifiable from the street by its orientation or articulation; and*
 4. *Ensure a connection to the public realm for development on lots fronting both private and public streets by making the pedestrian entrance visible or clearly identifiable from the public street.*
- B. *Location. At least one main entrance for each structure must:*
1. *Be within 12 feet of the longest street-facing front wall of the dwelling unit; and*
 2. *Either:*
 - a. *Face the street*
 - b. *Be at an angle of up to 45 degrees from the street; or*
 - c. *Open onto a porch. The porch must:*
 - (i) *Be at least 6 feet deep*
 - (ii) *Have at least one entrance facing the street; and*
 - (iii) *Be covered with a roof or trellis*
- C. *Distance from grade. Main entrances meeting the standards in subsection B., above, must be within four feet of grade. For the purposes of this Subsection, grade is the average grade measured along the foundation of the longest street-facing wall of the dwelling unit.*

Response: The individual dwelling designs will be reviewed at the time of building permit submittal. As shown in Appendix I, all example dwellings will include a main entrance that meets the standards of this section.

(.015) Garage Standards

- A. *Purpose. These standards:*
1. *Ensure that there is a physical and visual connection between the living area of the residence and the street;*
 2. *Ensure that the location and amount of the living area of the residence, as seen from the street, is more prominent than the garage;*
 3. *Prevent garages from obscuring the main entrance from the street and ensure that the main entrance for pedestrians, rather than automobiles, is the prominent entrance;*
 4. *Provide for a pleasant pedestrian environment by preventing garages and vehicle areas from dominating the views of the neighborhood from the sidewalk; and*
 5. *Enhance public safety by preventing garages from blocking views of the street from inside the residence.*
- B. *Street-Facing Garage Walls*
1. *Where these regulations apply. Unless exempted, the regulations of this subsection apply to garages accessory to residential units.*
 2. *Exemptions:*
 - a. *Garages on flag lots.*
 - b. *Development on lots which slope up or down from the street with an average slope of 20 percent or more.*
 3. *Standards.*
 - a. *The length of the garage wall facing the street may be up to 50 percent of the length of the street-facing building façade. For duplexes, this standard applies to the total length of the street-facing façades. For all other lots and structures, the standards apply to the street-facing façade of each unit. For corner lots, this standard applies to only one street side of the lot. For lots less than 50 feet wide at the front lot line, the standard in (b) below applies.*
 - b. *For lots less than 50 wide at the front lot line, the following standards apply:*
 - (i) *The width of the garage door may be up to 50 percent of the length of the street-facing façade.*
 - (ii) *The garage door must be recessed at least 4 feet from the front façade or 6 feet from the front of a front porch.*
 - (iii) *The maximum driveway width is 18 feet.*
 - a. *Where a dwelling abuts a rear or side alley or a shared driveway, the garage shall orient to the alley or shared drive.*
 - b. *Where three or more contiguous garage parking bays are proposed facing the same street, the garage opening closest to a side property line shall be recessed at least two feet behind the adjacent opening(s) to break up the street facing elevation and*

diminish the appearance of the garage from the street. Side-loaded garages, i.e., where the garage openings are turned away from the street, are exempt from this requirement.

- c. *A garage entry that faces a street may be no closer to the street than the longest street facing wall of the dwelling unit. There must be at least 20 feet between the garage door and the sidewalk. This standard does not apply to garage entries that do not face the street.*

Response: As shown on Sheet P2.00, the site design does not include alleys. The individual dwelling designs will be reviewed at the time of building permit submittal. As shown on the plan sheets in Appendix I, all example dwellings will include garages that meet the standards of this section.

(0.16) Residential Design Standards

A. *Purpose. These standards:*

- 1. *Support consistent quality standards so that each home contributes to the quality and cohesion of the larger neighborhood and community.*
- 2. *Support the creation of architecturally varied homes, blocks and neighborhoods, whether a neighborhood develops all at once or one lot at a time, avoiding homogeneous street frontages that detract from the community's appearance.*

B. *Applicability. These standards apply to all façades facing streets, pedestrian connections, parks, open space tracts, the Boeckman Trail, or elsewhere as required by this Code or the Development Review Board. Exemptions from these standards include: (1) Additions or alterations adding less than 50 percent to the existing floor area of the structure; and, (2) Additions or alterations not facing a street, pedestrian connection, park, or open space tract. [...]*

Response: Several of the proposed lots face open space tracts and/or the Boeckman Trail .The individual dwelling designs will be reviewed at the time of building permit submittal. The standards of Subsection (0.16) are not applicable at this time.

(0.17) Fences

A. *Within Frog Pond West, fences shall comply with standards in 4.113 (.07) except as follows:*

- 1. *Columns for the brick wall along Boeckman Road and Stafford Road shall be placed at lot corners where possible.*
- 2. *A solid fence taller than 4 feet in height is not permitted within 8 feet of the brick wall along Boeckman Road and Stafford Road, except for fences placed on the side lot line that are perpendicular to the brick wall and end at a column of the brick wall.*
- 3. *Height transitions for fences shall occur at fence posts.*

Response: The subject site is not adjacent to Boeckman or Stafford Roads. In addition, no fences on residential lots are being proposed at this time.

(0.18) Residential Structures Adjacent to Schools, Parks and Public Open Spaces

A. *Purpose. The purpose of these standards is to ensure that development adjacent to schools and parks is designed to enhance those public spaces with quality design that emphasizes active and safe use by people and is not dominated by driveways, fences, garages, and parking.*

B. *Applicability. These standards apply to development that is adjacent to or faces schools and parks. As used here, the term adjacent includes development that is across a street or pedestrian connection from a school or park.*

Response: Lot 4 is adjacent to the proposed trailhead park on the site; Lots , 10,11, and 12 are across the street from the proposed park. Therefore, these standards are applicable to those lots.

C. *Development must utilize one or more of the following design elements:*

- 1. *Alley loaded garage access.*
- 2. *On corner lots, placement of the garage and driveway on the side street that does not face the school, park, or public open space.*

3. Recess of the garage a minimum of four feet from the front façade of the home. A second story above the garage, with windows, is encouraged for this option.

Response: There are no alleys proposed. Compliance with C.2-3 above regarding garage/driveway placement and design will be reviewed at the time of building permit.

- D. Development must be oriented so that the fronts or sides of homes face adjacent schools or parks. Rear yards and rear fences may generally not face the schools or parks, unless approved through the waiver process of 4.118 upon a finding that there is no practicable alternative due to the size, shape or other physical constraint of the subject property.

Response: The side or front of lots adjacent to the trailhead park will be oriented toward the park as indicated in Sheet P2.00. The individual dwelling designs will be reviewed at the time of building permit submittal.

F. Section 4.139. Significant Resource Overlay Zone.

[...]

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 the significant resources.

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

[...]

Response: Per the City's SROZ Map and Figure 6 of the Frog Pond West Master Plan, this site contains land that is within the SROZ overlay; therefore, this section applies. The proposed impacts are exempt from the provisions of these regulations per Section 4.139.04.

Section 4.139.03 Administration

[...]

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

Response: The proposed SROZ and impact area are shown on Figure 7 and Sheet EX 1 of the SRIR report included as Appendix C. As shown, future development on the proposed residential lots may occur within the impact area but will be outside the SROZ and Impact Area.

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

Response: No non-exempt development or activity is proposed within the SROZ. Therefore, a Significant Resource Impact Report (SRIR) is not required.

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

Response: Proposed development within the SROZ includes a portion of a public park, portions of the Boeckman Creek Trail, portions of a stormwater pond and associated grading, and stormwater outfalls. No prohibited activity is proposed within the SROZ.

- (.05) Habitat-Friendly Development Practices. *To the extent practicable, development and construction activities that encroach within the Significant Resource Overlay Zone and/or Impact Area shall be designed, located and constructed to:*
- A. *Minimize grading, removal of native vegetation, disturbance and removal of native soils, and impervious area;*
 - B. *Minimize adverse hydrological impacts on water resources, such as using the practices described in Part (a) of Table NR-2, unless their use is prohibited by an applicable and required state or federal permit, such as a permit required under the federal Clean Water Act, 33 U.S.C. §§1251 et seq., or the federal Safe Drinking Water Act, 42 U.S.C. §§300f et seq., and including conditions or plans required by such permit;*
 - C. *Minimize impacts on wildlife corridors and fish passage, such as by using the practices described in Part (b) of Table NR-2; and*
 - D. *Consider using the practices described in Part (c) of Table NR-2.*

Response: The development activities within the SROZ and Impact Areas are designed to minimize grading and removal of vegetation, and limit impervious areas to the required Boeckman Creek trail. The final plans for the development will include conditions imposed by any State or Federal permits. No impacts are proposed to Boeckman Creek or mapped wetlands.

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. [Added by Ord. # 674 11/16/09]

[...]

- (.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.*

[...]

- (.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.*

[...]

- (.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.*

[...]

- (.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.*

Response: The applicant is proposing three exempt activities within the SROZ and impact areas, as shown on EX 1 of the SRIR included as Appendix C:

- Retention of an existing home on Tax Lot 2801. The home is located within the 25-ft. Significant Resource Impact Area and the Area of Limited Conflicting Use. Per (.02) above, this activity is exempt from these regulations.
- A pedestrian path (Boeckman Creek Trail) which is intended to provide access to the natural resource area and will be designed to minimize and repair disturbance to existing native vegetation and slope stability. The location of the trail is identified by the Frog Pond West Concept Plan.

- A stormwater treatment pond and storm outfall, both of which are located (at least partially) within the SROZ. As noted in Page 4 of the SRIR, “ Due to the degraded condition of the Impact Area buffer, the placement of the stormwater facility within SROZ will provide a water quality and habitat benefit through planting the facility with native vegetation. Stormwater outfalls within ALCU will consist of riprap flow spreader to protect the riparian area from erosion.”

The submittal requirements for this exemption are provided in this application and are consistent with the submittal requirements listed under Section 4.139.06(.01)(B – I), as applicable to the exempt uses and activities. These requirements are addressed further in the responses to that section.

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: This application includes a land division request that will create new lots that either contain or are within 100 feet of the SROZ boundary. Therefore, SROZ map verification is required.

- (.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: The site is subject to Section 4.139.05(.01) as noted above. Application for SROZ map verification is being submitted concurrently with the other required land use applications.

- (.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;*
 - C. *The applicant may demonstrate that the subject property was developed lawfully prior to June 7, 2001.*

Response: The applicant generally concurs with the accuracy of the SROZ map. It appears that logging occurred in the southeast corner of the subject site after the current SROZ boundary was adopted, while the site was within Clackamas County jurisdiction and prior to the adoption of the Frog Pond West Concept Plan. See Figure 5 of Appendix C for the mapped 2009 SROZ boundary. The 2014 Natural Resources Inventory (NRI) conducted by Pacific Habitat Services does not include this area. The applicant concurs with the accuracy of the 2014 NRI and the 2021 wetland delineation conducted by AKS. The SROZ report included as Appendix C provides additional detail.

[...]

- (.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).

Response: The application is filed pursuant to this section. The submittal requirements listed under Section 4.139.06(.01)(B-H) are included in the Abbreviated SRIR included as Appendix C.

- (.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: This application is not filed pursuant to this section.

Section 4.139.06 Significant Resource Impact Report (SRIR) and Review Criteria

A Significant Resource Impact Report (SRIR) is a report that delineates specific resource boundaries and analyzes the impacts of development within mapped significant resource areas based upon the requirements of this Section. An SRIR is only required for non-exempt development that is located within the Significant Resource Overlay Zone and/or its associated 25 foot Impact Area.

The Significant Resource Overlay Zone Map identifies areas that have been classified as significant natural resources. The preparation of the Significant Resource Overlay Zone Map did not include specific field observations of every individual property. These maps are designed to be specific enough to determine whether further environmental review of a development proposal is necessary. If any portion of the development or alteration of the land (except those exempted by this Section) is located within the Significant Resource Overlay Zone boundary or the identified Impact Area, then an SRIR is required before any development permit can be issued. Where it can be clearly determined by the Planning Director that development is only in the Impact Area and there is no impact to the Significant Resource, development may be permitted without SRIR review.

[...]

Response: No non-exempt development is proposed within the SROZ or Impact Area with this development. However, a map verification is required.

- (.01) *Abbreviated SRIR Requirements. It is the intent of this subsection to provide a user-friendly process for the applicant. Only the materials necessary for the application review are required. At the discretion of the Planning Director, an abbreviated SRIR may be submitted for certain small-scale developments such as single family dwellings, additions to single family dwellings, minor additions and accessory structures. The following requirements shall be prepared and submitted as part of the abbreviated SRIR evaluation:*
- A. *A Site Development Permit Application must be submitted in compliance with the Planning and Land Development Ordinance;*
 - B. *Outline of any existing features including, but not limited to, structures, decks, areas previously disturbed and existing utility locations*;*
 - C. *Location of any wetlands or water bodies on the site and the location of the stream centerline and top-of-bank;*
 - D. *Within the area proposed to be disturbed, the location, size and species of all trees that are more than six (6) inches in diameter at breast height (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;*
 - E. *The location of the SROZ and Impact Area boundaries*;*
 - F. *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*;*
 - G. *A map that delineates the Metro UGMFP Title 3 Water Quality Resource Area boundary (using Metro Title 3 field observed standards)*;*
 - H. *Current photos of site conditions shall be provided to supplement the above information*.*
 - I. *A narrative describing the possible and probable impacts to natural resources and a plan to mitigate for such impacts*.*

**Indicates information that City Staff may have readily available to assist an applicant.*

Response: As noted above, the applicant requests an exemption for exempt activities per Section 4.139.01, and the submittal requirements of (.01)B-I above are applicable. A Site Development Permit Application is included in this submittal, and the Abbreviated SRIR included as Appendix C includes the information listed in B-I above. Specifically, see Figure 7 and EX 1 of Appendix C.

[...]

(.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;*
- 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;*
- C. *No more than five 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 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 percent;*
- 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;*
- 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;*
- 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;*
- G. *Non-structural fill used within the SROZ area shall primarily 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;*
- 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; and*
- 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.*

Response: As noted in the SRIR and shown on EX 1, exempt activities are proposed within the area of conflicting use and the impact area. EX 1 also illustrates the location of the enhancement area.

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 US Army Corps of Engineers and Oregon Division of State Lands. 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. Mitigation is not required for trees lost to a natural event such as wind or floods.

(.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:*

[...]

Response: As noted above, no non-exempt disturbance is proposed within the SROZ or the Impact Area. The SRIR included as Appendix C includes a mitigation plan for the proposed disturbance.

[...]

G. Section 4.140. Planned Development Regulations.

[...]

(.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." All sites which are greater than two (2) 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 site greater than 2 acres and is designated in the Comprehensive Plan for residential use and Planned Development is required. The proposed development will be developed as a residential Planned Development per the provisions of this section.

(.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 included in the proposed PD is the subject of a joint application by the owners of all of the property included.

(.04) Professional Design.

- A. *The applicant for all proposed Planned Developments shall certify that the professional services of the appropriate professionals have been utilized in the planning process for development.*
- B. *Appropriate professionals shall include, but not be limited to the following to provide the elements of the planning process set out in Section 4.139:*
 1. *An architect licensed by the State of Oregon;*
 2. *A landscape architect registered by the State of Oregon;*
 3. *An urban planner holding full membership in the American Institute of Certified Planners, or a professional planner with prior experience representing clients before the Development Review Board, Planning Commission, or City Council; or*
 4. *A registered engineer or a land surveyor licensed by the State of Oregon.*
- C. *One of the professional consultants chosen by the applicant from either 1, 2, or 3, above, shall be designated to be responsible for conferring with the planning staff with respect to the concept and details of the plan.*
- 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 development team includes Keith Buisman, PE; Steve Dixon, PLA; Gabriel Kruse, PLA; and Li Alligood, AICP. Li Alligood has been designated as the applicant's representative and party responsible for conferring with the planning staff.

(.05) Planned Development Permit Process.

- A. All parcels of land exceeding two (2) 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 Development Review Board, or, on appeal, City Council approval.

Response: The subject site exceeds 2 acres in size and is proposed for residential development. This application includes a zoning map amendment to apply the RN zone to the site; Master Plan Stage I application; and Master Plan Stage II application.

- 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: The requested zoning map amendment is subject to the applicable provisions of the Zoning Sections and 4.197. These provisions are addressed in Sections IV and V of this narrative.

- C. Development Review Board approval is governed by Sections 4.400 to 4.450
- 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. When a zone change is necessary, application for such change shall be made simultaneously with an application for preliminary approval to the Board; and
 3. Final (Stage II) review by the Development Review Board
 4. In the case of a zone change and zone boundary amendment, City Council approval is required to authorize a Stage I preliminary plan.

Response: A pre-application conference was held with the Planning Department on September 16, 2021. Concurrent zoning map amendment, Stage I, and Stage II applications (and a number of additional concurrent applications) have been submitted for review by the DRB.

[...]

(.07) Preliminary Approval (Stage One):

- A. Applications for preliminary approval for planned developments shall:
1. Be made by the owner of all affected property or the owner's authorized agent; and
 2. Be filed on a form prescribed by the City Planning Department and filed with said Department.
 3. Set forth the professional coordinator and professional design team as provided in subsection (.04), above.
 4. State whether the development will include mixed land uses, and if so, what uses and in what proportions and locations.

Response: This submittal includes all the above information.

- B. The application shall include conceptual and quantitatively accurate representations of the entire development sufficient to judge the scope, size, and impact of the development on the community; and, in addition to the requirements set forth in Section 4.035, shall be accompanied by the following information:
1. A boundary survey or a certified boundary description by a registered engineer or licensed surveyor.
 2. Topographic information as set forth in Section 4.035
 3. A tabulation of the land area to be devoted to various uses, and a calculation of the average residential density per net acre.
 4. A stage development schedule demonstrating that the developer intends receive Stage II approval within two (2) years of receiving Stage I approval, and to commence construction within two (2) years after the approval of the final development plan, and will

proceed diligently to completion; unless a phased development schedule has been approved; in which case adherence to that schedule shall be considered to constitute diligent pursuit of project completion.

5. *A commitment by the applicant to provide in the Final Approval (Stage II) a performance bond or other acceptable security for the capital improvements required by the project.*
6. *If it is proposed that the final development plan will be executed in stages, a schedule thereof shall be provided.*
7. *Statement of anticipated waivers from any of the applicable site development standards.*

Response: A boundary survey including topographic information is included as Sheet P1.10. A tabulation of land area and residential density is included in Sheet P2.00 and Table 1 of this narrative. Stage I and Stage II approvals are being requested concurrently, and a staged development schedule is not proposed.

(.09) Final Approval (Stage Two):

[Note: Outline Number is incorrect.]

- A. *Unless an extension has been granted by the Development Review Board, within two (2) years after the approval or modified approval of a preliminary development plan (Stage I), the applicant shall file with the City Planning Department a final plan for the entire development or when submission in stages has been authorized pursuant to Section 4.035 for the first unit of the development, a public hearing shall be held on each such application as provided in Section 4.013.*

Response: A Stage II application has been submitted concurrent with the Stage I application.

- B. *After such hearing, the Development Review Board shall determine whether the proposal conforms to the permit criteria set forth in this Code, and shall approve, conditionally approve, or disapprove the application.*
- C. *The final plan shall conform in all major respects with the approved preliminary development plan, and shall include all information included in the preliminary plan plus the following:*
 1. *The location of water, sewerage and drainage facilities;*
 2. *Preliminary building and landscaping plans and elevations, sufficient to indicate the general character of the development;*
 3. *The general type and location of signs;*
 4. *Topographic information as set forth in Section 4.035;*
 5. *A map indicating the types and locations of all proposed uses; and*
 6. *A grading plan.*

Response: A Preliminary Utility Plan is included as Sheet P4.00. Preliminary building elevations are included as Appendix H. Preliminary landscaping plans are included as Sheet L2.00. A Preliminary Grading Plan is included as Sheet P5.00. Sign locations and permits will be provided under separate application.

- D. *The final plan shall be sufficiently detailed to indicate fully the ultimate operation and appearance of the development or phase of development. However, Site Design Review is a separate and more detailed review of proposed design features, subject to the standards of Section 4.400.*

Response: A concurrent Site Design Review application has been submitted. Section 4.400 Site Design Review criteria are addressed in Section VIII of this narrative.

- E. *Copies of legal documents required by the Development Review Board for dedication or reservation of public facilities, or for the creation of a non-profit homeowner's association, shall also be submitted.*

Response: The recorded Declaration of Protective Covenants, Conditions, Restrictions and Easements for Stafford Meadows is included as Appendix G. Frog Pond Terrace will be annexed into the existing Homeowners Association (HOA).

[...]

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

Response: The site is located within the Frog Pond West neighborhood of the Frog Pond planning area. The Frog Pond West Master Plan has been incorporated into the Comprehensive Plan and designates the site for single-family residential development. Consistency with the Comprehensive Plan is addressed in Section III of this narrative. The RN zone is identified as the implementing zone for the Residential Neighborhood RN Comprehensive Plan designation; this zone requires that all development within it be approved as a Planned Development.

2. *That the location, design, size and uses are such that traffic generated by the development at the most probable used intersection(s) can be accommodated safely and without congestion in excess of Level of Service D, as defined in the Highway Capacity Manual published by the National Highway Research Board, on existing or immediately planned arterial or collector streets and will, in the case of commercial or industrial developments, avoid traversing local streets. Immediately planned arterial and collector streets are those listed in the City's adopted Capital Improvement Program, for which funding has been approved or committed, and that are scheduled for completion within two years of occupancy of the development or four year if they are an associated crossing, interchange, or approach street improvement to Interstate 5.*
 - a. *In determining levels of Service D, the City shall hire a traffic engineer at the applicant's expense who shall prepare a written report containing the following minimum information for consideration by the Development Review Board:*
 - i. *An estimate of the amount of traffic generated by the proposed development, the likely routes of travel of the estimated generated traffic, and the source(s) of information of the estimate of the traffic generated and the likely routes of travel; [Added by Ord. 561, adopted 12/15/03.]*
 - ii. *What impact the estimate generated traffic will have on existing level of service including traffic generated by (1) the development itself, (2) all existing developments, (3) Stage II developments approved but not yet built, and (4) all developments that have vested traffic generation rights under section 4.140(.10), through the most probable used intersection(s), including state and county intersections, at the time of peak level of traffic. This analysis shall be conducted for each direction of travel if backup from other intersections will interfere with intersection operations. [Amended by Ord 561, adopted 12/15/03.]*
 - b. *The following are exempt from meeting the Level of Service D criteria standard:*
 - i. *A planned development or expansion thereof which generates three (3) new p.m. peak hour traffic trips or less;*
 - ii. *A planned development or expansion thereof which provides an essential governmental service.*
 - c. *Traffic generated by development exempted under this subsection on or after Ordinance No. 463 was enacted shall not be counted in determining levels of service for any future applicant. [Added by Ord 561, adopted 12/15/03.]*
 - d. *Exemptions under 'b' of this subsection shall not exempt the development or expansion from payment of system development charges or other applicable regulations. [Added by Ord 561, adopted 12/15/03.]*
 - e. *In no case will development be permitted that creates an aggregate level of traffic at LOS "F". ([Added by Ord 561, adopted 12/15/03.]*

Response: DKS Associates has determined that a full Traffic Impact Study (TIS) is not necessary to evaluate traffic impacts from the proposed development. The memo is included as Appendix D.

3. *That the location, design, size and uses are such that the residents or establishments to be accommodated will be adequately served by existing or immediately planned facilities and services.*

Response: The proposal will construct transportation and other needed infrastructure with site development and will dedicate public right-of-way for local streets. Public access will be provided to the Boeckman Creek Trail and trailhead park. The site will be adequately served by existing or immediately planned facilities.

[...]

(.10) Early Vesting of Traffic Generation. [...]

Response: No early vesting of traffic generation is requested. This standard is not applicable.

V. General Development Regulations

A. Section 4.154. On-site Pedestrian Access and 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.*
 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.*
 - 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.*
 - c. *The pathway connects to all primary building entrances and is consistent with the Americans with Disabilities Act (ADA) requirements.*
 - 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 site is proposed for single-family residential development lots and will include a network of public sidewalks. In addition to the sidewalk system, the site will provide extend and provide access to the Boeckman Creek Trail, which will be extended along the western edge of the residential lots.

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: Where the proposed Boeckman Creek Trail abuts Woodbury Loop adjacent to proposed Lot 16, it will be separated from the vehicular lane by a curb and planter strip.

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: The proposed Boeckman Creek Trail crosses the driveway of Lot 16. This standard is applicable.

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 (5) feet wide. Secondary pathways and pedestrian trails may have an alternative surface except as otherwise required by the ADA.*

Response: The proposed pedestrian pathways will be constructed of concrete, asphalt, brick/masonry pavers, or other durable surface, and will be at least 5 ft. wide. The Boeckman Creek Trail is within the public right-of-way, is 10-15 ft. wide, and will also be paved. This standard is met.

6. *All pathways shall be clearly marked with appropriate standard signs.*
[Added by Ord. #719, 6/17/13]

Response: The pedestrian pathways will be signed as required.

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

[...]

(.02) *General Provisions:*

[...]

Response: Generally, these provisions apply to multifamily and commercial development, which is not proposed within Frog Pond Terrace. These provisions are not applicable.

(.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.*
- B. *Parking and loading or delivery areas shall be landscaped to minimize the visual dominance of the parking or loading area, as follows: [...]*

Response: There is no off-street loading required or proposed for the proposed single-family development. These provisions are not applicable.

- 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 fifty (50) standard spaces., provide one ADA-accessible parking space that is constructed to building code standards, Wilsonville Code 9.000.*
- 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.*
- 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.*
- F. *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 parking areas required or proposed for the proposed single-family development. The required parking spaces will be provided on site and on-street parking spaces are not requested to count toward the minimum standards.

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. [Amended by Ordinance No. 538, 2/21/02.]*

Response: Table 5 requires that single units provide one parking space per dwelling unit. There is no maximum number listed. Each single-family dwelling unit will be provided with at least two off-street parking spaces within garages. This standard is met.

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: No electrical vehicle charging stations are proposed at this time.

I. *Motorcycle parking:*

1. *Motorcycle parking may substitute for up to 5 spaces or 5 percent of required automobile parking, whichever is less. For every 4 motorcycle parking spaces provided, the automobile parking requirement is reduced by one space.*
2. *Each motorcycle space must be at least 4 feet wide and 8 feet deep. Existing parking may be converted to take advantage of this provision. [Amended by Ord. #719, 6/17/13]*

Response: No motorcycle parking is proposed.

(.04) Bicycle Parking:

A. *Required Bicycle Parking - General Provisions.*

1. *The required minimum number of bicycle parking spaces for each use category is shown in Table 5, Parking Standards.[...]*

Response: Table 5 states that there is no minimum bicycle parking requirement for detached or attached single-family homes. These provisions are not applicable.

(.05) Minimum Off-Street Loading Requirements: [...]

Response: There is no off-street loading requirement for single-family homes. These provisions are not applicable.

(.06) Carpool and Vanpool Parking Requirements: [...]

Response: There is no carpool or vanpool parking requirement for single-family homes. These provisions are not applicable.

C. Section 4.156. Sign Code Regulations.

Section 4.156.07. Sign Regulations in Residential Zones.

[...]

Response: No signs are proposed at this time. Future signs will be subject to these regulations.

D. 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. [Amended by Ord. 682, 9/9/10]*

Response: Proposed driveways will access onto streets and are shown in Sheet P2.00. The final location of these driveways will be confirmed at the time of site development permits.

E. Section 4.169. General Regulations – Double-Frontage Lots.

- (.01) *Buildings on double frontage lots (i.e., through lots) and corner lots must meet the front yard setback for principal buildings on both streets or tracts with a private drive. [Amended by Ord. 682,*

9/9/10]

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

Response: No double-frontage lots are proposed.

F. Section 4.175. Public Safety and Crime Prevention.

- (.01) *All developments shall be designed to deter crime and insure public safety.*
 (.02) *Addressing and directional signing shall be designed to assure identification of all buildings and structures by emergency response personnel, as well as the general public.*
 (.03) *Areas vulnerable to crime shall be designed to allow surveillance. Parking and loading areas shall be designed for access by police in the course of routine patrol duties.*
 (.04) *Exterior lighting shall be designed and oriented to discourage crime.*

Response: The Frog Pond Terrace development has been designed to deter crime and ensure public safety. Streets and pedestrian connections will be lit for visibility and safety. Homes will generally be oriented toward these streets to provide “eyes on the street.” All dwellings will be addressed per Building and Fire Department requirements to allow identification for emergency response personnel. No parking and loading areas are proposed. Dwellings will have exterior porch lighting, which will complement the streetlights and add to safety and visibility. These standards are met.

G. Section 4.176. Landscaping, Screening, and Buffering.

[...]

- (.02) *Landscaping and Screening Standards.*

[...]

C. General Landscaping Standard.

[...]

2. *Required materials. Shrubs and trees, other than street trees, may be grouped. Ground cover plants must fully cover the remainder of the landscaped area (see Figure 21: General Landscaping). The General Landscaping Standard has two different requirements for trees and shrubs:*
- Where the landscaped area is less than 30 feet deep, one tree is required for every 30 linear feet.*
 - Where the landscaped area is 30 feet deep or greater, one tree is required for every 800 square feet and two high shrubs or three low shrubs are required for every 400 square feet.*

Response: The proposed development consists of single-family dwellings, which are generally subject to the General Landscape Standard. Sheet L2.00 provides details of proposed landscaping in these areas.

[...]

E. Low Berm Landscaping Standard.

1. *Intent. The Low Berm Standard is intended to be applied in situations where moderate screening to reduce both visual and noise impacts is needed to protect abutting uses or developments from one-another, and where it is desirable and practical to provide separation by both distance and sight- obscuring materials. This screening is most important where either, or both, of the abutting uses or developments can be expected to be particularly sensitive to noise or visual impacts.*
2. *Required materials. The Low Berm Standard requires a berm at least two feet six inches (2' 6") high along the interior side of the landscaped area (see Figure 23: Low Berm Landscaping). If the berm is less than three (3) feet high, low shrubs meeting the Low Screen Landscaping Standard, above, are to be planted along the top of the berm, assuring that the screen is at least three (3) feet in height. In addition, one tree is required for every 30 linear feet of berm, or as otherwise required to provide a tree canopy over the landscaped area. Ground cover plants must fully cover the remainder of the landscaped area.*

Response: The proposed residential development is located adjacent to approved and future residential and public trail/park development. No screening is required or proposed.

[...]

I. Partially Sight-Obscuring Fence Standard.

1. *Intent. The Partially Sight-Obscuring Fence Standard is intended to provide a tall, but not totally blocked, visual separation. The standard is applied where a low level of screening is adequate to soften the impact of one use or development on another, and where some visibility between abutting areas is preferred over a total visual screen. It can be applied in conjunction with landscape plantings or applied in areas where landscape plantings are not necessary and where nonresidential uses are involved.*
2. *Required materials. Partially Sight-Obscuring Fence Standard are to be at least six (6) feet high and at least 50% sight-obscuring. Fences may be made of wood (other than plywood or particle-board), metal, bricks, masonry or other permanent materials (see Figure 26: Partially Sight-Obscuring Fence).*

J. Fully Sight-Obscuring Fence Standard.

1. *Intent. The Fully Sight-Obscuring Fence Standard is intended to provide a totally blocked visual separation. The standard is applied where full visual screening is needed to reduce the impact of one use or development on another. It can be applied in conjunction with landscape plantings or applied in areas where landscape plantings are not necessary.*
2. *Required materials. Fully sight-obscuring fences are to be at least six (6) feet high and 100% sight-obscuring. Fences may be made of wood (other than plywood or particle-board), metal, bricks, masonry or other permanent materials (see Figure 27: Totally Sight-Obscuring Fence).*

Response: There is no need for partially or totally blocked visual separation. Sight-obscuring fencing is not provided.

(.03) Landscape Area. *Not less than fifteen percent (15%) of the total lot area, shall be landscaped with vegetative plant materials. The ten percent (10%) parking area landscaping required by section 4.155.03(B)(1) is included in the fifteen percent (15%) 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). [Amended by Ord. # 674 11/16/09]*

Response: At least 15 percent of the total lot area for each single-family dwelling will be landscaped; conformance with this standard will be reviewed at the time of building permit submittal. There are no

parking areas proposed and no parking area landscaping is required. The landscape plan included as Sheet L2.00 illustrates the location and type of landscaping within public rights-of-way and tracts.

(.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.*
- 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.*
- 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.*
- 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.*
- F. *In any zone any fence over six (6) feet high measured from soil surface at the outside of fence line shall require Development Review Board approval.*

Response: The requirements of 4.137.5 are applicable along the edge of nonresidential zones abutting, or located directly across the street from, residential zones. The proposed development is located within a residential zone and abuts residential zones to the west, north, and east. These standards are not applicable.

(.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 one hundred ten percent (110%) of the cost of such fence or planting and its installation. (See Sections 4.400 to 4.470 for additional requirements.)*

Response: No sight-obscuring fences or planting are required between the proposed residential use and adjacent uses. This standard is not applicable.

(.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 (3) 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 bark dust are not to be used as substitutes for plant areas. [Amended by Ord. # 674 11/16/09]*
 1. *Shrubs. All shrubs shall be well branched and typical of their type as described in current AAN Standards and shall be equal to or better than 2-gallon containers and 10" to 12" spread.*
 2. *Ground cover. Shall be equal to or better than the following depending on the type of plant materials used: gallon containers spaced at 4 feet on center minimum, 4" pot spaced 2 feet on center minimum, 2-1/4" pots spaced at 18 inch on center minimum. No bare root planting shall be permitted. Ground cover shall be sufficient to cover at least 80% of the bare soil in required landscape areas within three (3) years of planting. Where wildflower seeds are designated for use as a ground cover, the City may require annual re-seeding as necessary.*
 3. *Turf or lawn in non-residential developments. Shall not be used to cover more than ten percent (10%) of the landscaped area, unless specifically approved based on a finding that, due to site conditions and availability of water, a larger percentage of turf or lawn area is appropriate. Use of lawn fertilizer shall be discouraged. Irrigation drainage runoff from lawns shall be retained within lawn areas.*
 4. *Plant materials under trees or large shrubs. Appropriate plant materials shall be installed beneath the canopies of trees and large shrubs to avoid the appearance of bare ground in those locations.*
 5. *Integrate compost-amended topsoil in all areas to be landscaped, including lawns, to help detain runoff, reduce irrigation and fertilizer needs, and create a sustainable, low-maintenance landscape. [Added by Ord. # 674 11/16/09]*

Response: The landscape plan included as Sheets L2.00-L2.10 demonstrates conformance with these requirements.

- B. Trees. All trees shall be well-branched and typical of their type as described in current American Association of Nurserymen (AAN) Standards and shall be balled and burlapped. The trees shall be grouped as follows:*
- 1. Primary trees which define, outline or enclose major spaces, such as Oak, Maple, Linden, and Seedless Ash, shall be a minimum of 2" caliper.*
 - 2. Secondary trees which define, outline or enclose interior areas, such as Columnar Red Maple, Flowering Pear, Flame Ash, and Honeylocust, shall be a minimum of 1-3/4" to 2" caliper.*
 - 3. Accent trees which, are used to add color, variation and accent to architectural features, such as Flowering Pear and Kousa Dogwood, shall be 1-3/4" minimum caliper.*
 - 4. Large conifer trees such as Douglas Fir or Deodar Cedar shall be installed at a minimum height of eight (8) feet.*
 - 5. Medium-sized conifers such as Shore Pine, Western Red Cedar or Mountain Hemlock shall be installed at a minimum height of five to six (5 to 6) feet.*

Response: The landscape plan included as Sheet L2.00 addresses these requirements.

- C. Where a proposed development includes buildings larger than twenty-four (24) feet in height or greater than 50,000 square feet in footprint area, the Development Review Board may require larger or more mature plant materials:*
- 1. At maturity, proposed trees shall be at least one-half the height of the building to which they are closest, and building walls longer than 50 feet shall require tree groups located no more than fifty (50) feet on center, to break up the length and height of the façade.*
 - 2. Either fully branched deciduous or evergreen trees may be specified depending upon the desired results. Where solar access is to be preserved, only solar-friendly deciduous trees are to be used. Where year-round sight obscuring is the highest priority, evergreen trees are to be used.*
 - 3. The following standards are to be applied:*
 - a. Deciduous trees:*
 - i. Minimum height of ten (10) feet; and*
 - ii. Minimum trunk diameter (caliper) of 2 inches (measured at four and one-half [4 1/2] feet above grade).*
 - b. Evergreen trees: Minimum height of twelve (12) feet.*

Response: Some of the proposed residential dwellings will exceed 24 ft. in height but will be far less than 50,000 sq. ft. in footprint area. Requirements for larger or more mature plant materials are not warranted.

- D. Street Trees. In order to provide a diversity of species, the Development Review Board may require a mix of street trees throughout a development. Unless the Board waives the requirement for reasons supported by a finding in the record, different types of street trees shall be required for adjoining blocks in a development.*
- 1. All trees shall be standard base grafted, well branched and typical of their type as described in current AAN Standards and shall be balled and burlapped (b&b). Street trees shall be planted at sizes in accordance with the following standards:*
 - a. Arterial streets - 3" minimum caliper*
 - b. Collector streets - 2" minimum caliper.*
 - c. Local streets or residential private access drives - 1-3/4" minimum caliper. [Amended by Ord. 682, 9/9/10]*
 - d. Accent or median tree - 1-3/4" minimum caliper.*

Response: Proposed streets within the development are classified as Local Streets. As shown in Sheet L2.00, 2-in. caliper balled and burlapped street trees are proposed for all streets within the development, which are larger than required.

- 2. The following trees and varieties thereof are considered satisfactory street trees in most circumstances; however, other varieties and species are encouraged and will be considered:*

- a. *Trees over 50 feet mature height: Quercus garryana (Native Oregon White Oak), Quercus rubra borealis (Red Oak), Acer Macrophyllum (Native Big Leaf Maple), Acer nigrum (Green Column Black Maple), Fraxinus americanus (White Ash), Fraxinus pennsylvannica 'Marshall' (Marshall Seedless Green Ash), Quercus coccinea (Scarlet Oak), Quercus pulustris (Pin Oak), Tilia americana (American Linden).*
- b. *Trees under 50 feet mature height: Acer rubrum (Red Sunset Maple), Cornus nuttallii (Native Pacific Dogwood), Gleditsia triacanthos (Honey Locust), Pyrus calleryana 'Bradford' (Bradford Pear), Tilia cordata (Little Leaf Linden), Fraxinus oxycarpa (Flame Ash).*
- c. *Other street tree species. Other species may be specified for use in certain situations. For instance, evergreen species may be specified where year-round color is desirable and no adverse effect on solar access is anticipated. Water-loving species may be specified in low locations where wet soil conditions are anticipated.*

[Section 4.176(.06)(D.) amended by Ordinance No. 538, 2/21/02.]

Response: The proposed street trees include a mix of Cladrastis Kentukea (American Yellowwood), Tilia Americana (American Linden), and Tilia Cordota 'Glenleven' (Glenleven Littleleaf Linden). All trees listed here have been chosen from the approved street tree list for the Frog Pond West Master Plan and continue previously established street tree selections.

E. Types of Plant Species.

- 1. *Existing landscaping or native vegetation may be used to meet these standards, if protected and maintained during the construction phase of the development and if the plant species do not include any that have been listed by the City as prohibited. The existing native and non-native vegetation to be incorporated into the landscaping shall be identified.*
- 2. *Selection of plant materials. Landscape materials shall be selected and sited to produce hardy and drought-tolerant landscaping. Selection shall be based on soil characteristics, maintenance requirements, exposure to sun and wind, slope and contours of the site, and compatibility with other vegetation that will remain on the site. Suggested species lists for street trees, shrubs and groundcovers shall be provided by the City of Wilsonville.*
- 3. *Prohibited plant materials. The City may establish a list of plants that are prohibited in landscaped areas. Plants may be prohibited because they are potentially damaging to sidewalks, roads, underground utilities, drainage improvements, or foundations, or because they are known to be invasive to native vegetation.*

[Section 4.176(.06)(E.) amended by Ordinance No. 538, 2/21/02.]

Response: As shown on Sheet L2.00, the proposed landscape materials include a mix of native trees, shrubs, and groundcovers. No prohibited plant materials are proposed.

F. Tree Credit.

Existing trees that are in good health as certified by an arborist and are not disturbed during construction may count for landscaping tree credit as follows (measured at four and one-half feet above grade and rounded to the nearest inch):

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

[Amended by Ord. # 674 11/16/09]

- 1. *It shall be the responsibility of the owner to use reasonable care to maintain preserved trees. Trees preserved under this section may only be removed if an application for removal permit under Section 4.610.10(01)(H) has been approved. Required mitigation for removal shall be replacement with the number of trees credited to the preserved and removed tree.*
- 2. *Within five years of occupancy and upon notice from the City, the property owner shall replace any preserved tree that cannot be maintained due to disease or damage, or hazard or nuisance as defined in Chapter 6 of this code. The notice shall be based on complete information provided by an arborist Replacement with the number of trees credited shall occur within one (1) growing season of notice.*

Response: As shown on Sheet L1.00 and described in Appendix E, there are 250 trees on the site and 98 trees will be protected on site. Of these, 26 are of sufficient size to provide landscaping tree credits. Per the calculations above and shown in Table 3 below, 91 tree credits are provided by protected trees. Additional protections are outlined in the Tree Plan included as Appendix E.

Table 3. Tree Credits

Count	Tag #	Existing Trunk Diameter (in.)	Number of Tree Credits
1	30007	20	3
2	30053	26	4
3	30076	18	3
4	30482	36	5
5	30497	22	3
6	30513	24	3
7	30516	24	3
8	30517	20	3
9	30518	20	3
10	30519	28	4
11	30520	24	3
12	30535	34	5
13	30536	20	3
14	30537	40	5
15	30600	18	3
16	30711	28	4
17	30712	36	5
18	30713	32	5
19	30721	18	3
20	30729	18	3
21	30735	18	3
22	30776	18	3
23	30782	18	3
24	30798	18	3
25	31491	18	3
26	31493	20	3
Total			91

(.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.*
- 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.*
- C. *Irrigation. The intent of this standard is to assure that plants will survive the critical establishment period when they are most vulnerable due to a lack of watering and also to assure that water is not wasted through unnecessary or inefficient irrigation. Approved irrigation system plans shall specify one of the following:*
 1. *A permanent, built-in, irrigation system with an automatic controller. Either a spray or drip irrigation system, or a combination of the two, may be specified.*

2. A permanent or temporary system designed by a landscape architect licensed to practice in the State of Oregon, sufficient to assure that the plants will become established and drought-tolerant.
 3. Other irrigation system specified by a licensed professional in the field of landscape architecture or irrigation system design.
 4. A temporary permit issued for a period of one year, after which an inspection shall be conducted to assure that the plants have become established. Any plants that have died, or that appear to the Planning Director to not be thriving, shall be appropriately replaced within one growing season. An inspection fee and a maintenance bond or other security sufficient to cover all costs of replacing the plant materials shall be provided, to the satisfaction of the Community Development Director. Additionally, the applicant shall provide the City with a written license or easement to enter the property and cause any failing plant materials to be replaced.
- 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: As detailed on Sheet L2.00, all landscape areas will be watered by a fully automatic underground irrigation system. These standards are met.

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

Response: High screening is not required on any corner lots and is not proposed. This standard is not applicable.

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

- A. High water usage areas (+/- two (2) inches per week): small convoluted lawns, lawns under existing trees, annual and perennial flower beds, and temperamental shrubs;
- B. Moderate water usage areas (+/- one (1) inch per week): large lawn areas, average water-using shrubs, and trees;
- C. Low water usage areas (Less than one (1) 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: A landscape plan is included as Sheet L2.00 and indicates the water consumption of the proposed plantings. The proposed site development plan includes street tree plantings, which consist of native vegetation that requires low water usage. Individual lot landscaping will be proposed at the time of building permit submittal and will likely include grass and ground coverings. These standards are met.

(.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: Acknowledged. No deferral is requested at this time but may be requested in the future subject to the scenarios above.

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

Response: No waiver or variance for on-site landscaping is requested. This standard is not applicable.

(.12) Mitigation and Restoration Plantings. *A mitigation plan is to be approved by the City's Development Review Board before the destruction, damage, or removal of any existing native plants. Plantings intended to mitigate the loss of native vegetation are subject to the following standards. Where these standards conflict with other requirements of this Code, the standards of this Section shall take precedence. The desired effect of this section is to preserve existing native vegetation.*

- A. Plant Sources. Plant materials are to be native and are subject to approval by the City. They are to be non-clonal in origin; seed source is to be as local as possible, and plants must be nursery propagated or taken from a pre-approved transplantation area. All of these requirements are to be addressed in any proposed mitigation plan.*
- B. Plant Materials. The mitigation plan shall specify the types and installation sizes of plant materials to be used for restoration. Practices such as the use of pesticides, fungicides, and fertilizers shall not be employed in mitigation areas unless specifically authorized and approved.*
- C. Installation. Install native plants in suitable soil conditions. Plant materials are to be supported only when necessary because of extreme winds at the site. Where support is necessary, all stakes, guy wires or other measures are to be removed as soon as the plants can support themselves. Protect from animal and fowl predation and foraging until establishment.*
- D. Irrigation. Permanent irrigation systems are generally not appropriate in restoration situations, and manual or temporary watering of new plantings is often necessary. The mitigation plan shall specify the method and frequency of manual watering, including any that may be necessary after the first growing season.*
- E. Monitoring and Reporting. Monitoring of native landscape areas is the on-going responsibility of the property owner. Plants that die are to be replaced in kind and quantity within one year. Written proof of the survival of all plants shall be required to be submitted to the City's Planning Department one year after the planting is completed.*
[Section 4.176 amended by Ordinance No. 536, 1/7/02]

Response: The site is currently in residential and agricultural use, and site plantings consist primarily of grass and clustered trees. The existing grass and many of the trees will be removed for site development, specifically to accommodate the planned street network and desired lotting pattern. Tree removal will be mitigated as detailed in the response to Section 4.610.40. These standards are not applicable.

H. 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.*

Response: The proposed public facility improvements are designed to comply with the standards in this section, the Wilsonville Public Works Standards, and the Transportation System Plan as modified by the Frog Pond Master Plan.

(.02) Street Design Standards.

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

1. *Development shall be required to provide existing or future connections to adjacent sites through the use of access easements where applicable. Such easements shall be required in addition to required public street dedications as required in Section 4.236(.04).*

Response: The street network has been designed per the Frog Pond West Street Demonstration Plan with minor modifications, as described above. Future connections to adjacent sites are anticipated to the north and east. This standard is met.

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

Response: No modifications are proposed to the rights-of-way and street elements widths. The development will construct a 20-ft. portion of Brisband Street at the southeast corner of the site and full street improvements for Street B and Woodbury Loop through the site. See Sheet P2.10 for details.

C. *Rights-of-way.*

1. *Prior to issuance of a Certificate of Occupancy Building permits or as a part of the recordation of a final plat, the City shall require dedication of rights-of-way in accordance with the Transportation System Plan. All dedications shall be recorded with the County Assessor's Office.*
2. *The City shall also require a waiver of remonstrance against formation of a local improvement district, and all non-remonstrances shall be recorded in the County Recorder's Office as well as the City's Lien Docket, prior to issuance of a Certificate of Occupancy Building Permit or as a part of the recordation of a final plat.*
3. *In order to allow for potential future widening, a special setback requirement shall be maintained adjacent to all arterial streets. The minimum setback shall be 55 feet from the centerline or 25 feet from the right-of-way designated on the Master Plan, whichever is greater.*

Response: This proposal includes the following right-of-way dedications as shown in Sheet P2.10:

- ROW dedication of 20 feet along the site's frontage with SW Brisband Street
- ROW dedication of 52 feet for Woodbury Loop
- ROW dedication of 52 feet for Street B

The site does not have frontage on an arterial street; therefore, the special setback does not apply. These standards are met.

D. *Dead-end Streets. New dead-end streets or cul-de-sacs shall not exceed 200 feet in length, unless the adjoining land contains barriers such as existing buildings, railroads or freeways, or environmental constraints such as steep slopes, or major streams or rivers, that prevent future street extension and connection. A central landscaped island with rainwater management and infiltration are encouraged in cul-de-sac design. No more than 25 dwelling units shall take access to a new dead-end or cul-de-sac street unless it is determined that the traffic impacts on adjacent streets will not exceed those from a development of 25 or fewer units. All other dimensional standards of dead-end streets shall be governed by the Public Works Standards. Notification that the street is planned for future extension shall be posted on the dead-end street. [Amended by Ord. # 674 11/16/09]*

Response: No dead-end streets are proposed. Proposed Street B will stub at the eastern property line of the site and is expected to be extended with future development. In the interim, it will be approximately 150 ft. long and serve four lots. This standard is met.

E. Corner or clear vision area.

1. *A clear vision area which meets the Public Works Standards shall be maintained on each corner of property at the intersection of any two streets, a street and a railroad or a street and a driveway. However, the following items shall be exempt from meeting this requirement:*
 - a. *Light and utility poles with a diameter less than 12 inches.*
 - b. *Trees less than 6" d.b.h., approved as a part of the Stage II Site Design, or administrative review.*
 - c. *Except as allowed by b., above, an existing tree, trimmed to the trunk, 10 feet above the curb.*
 - d. *Official warning or street sign.*
 - e. *Natural contours where the natural elevations are such that there can be no cross-visibility at the intersection and necessary excavation would result in an unreasonable hardship on the property owner or deteriorate the quality of the site.*

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

Response: Clear vision areas will be maintained at the corner of each property consistent with these requirements.

G. Interim improvement standard. It is anticipated that all existing streets, except those in new subdivisions, will require complete reconstruction to support urban level traffic volumes. However, in most cases, existing and short-term projected traffic volumes do not warrant improvements to full Master Plan standards. Therefore, unless otherwise specified by the Development Review Board, the following interim standards shall apply.[...]

Response: The Frog Pond Ln right-of-way abuts the natural resource area of the site to the north. This right-of-way terminates at the western site boundary and is not expected to continue. Improvements are not proposed to this section of the street.

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

- A. *Sidewalk widths shall include a minimum through zone of at least five feet. The through zone may be reduced pursuant to variance procedures in Section 4.196, a waiver pursuant to Section 4.118, or by authority of the City Engineer for reasons of traffic operations, efficiency, or safety.*
- B. *Within a Planned Development, the Development Review Board may approve a sidewalk on only one side. If the sidewalk is permitted on just one side of the street, the owners will be required to sign an agreement to an assessment in the future to construct the other sidewalk if the City Council decides it is necessary.*

Response: As shown on Sheets P2.00 and P2.10, all sidewalks within the development site are at least 5 ft. wide. No adjustments are requested. These standards are met.

(.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 proposed street cross-sections shown on Sheet P2.10 comply with this standard. All streets within and adjacent to the proposed development are Local streets and bikes will share the vehicular lane with vehicles. These standards are met.

- (.05) Multiuse Pathways.** Pathways may be in addition to, or in lieu of, a public street. Paths that are in addition to a public street shall generally run parallel to that street, and shall be designed in accordance with the Public Works Standards or as specified by the City Engineer. Paths that are in lieu of a public street shall be considered in areas only where no other public street connection options are feasible, and are subject to the following standards.
- A. Paths shall be located to provide a reasonably direct connection between likely pedestrian and bicyclist destinations. Additional standards relating to entry points, maximum length, visibility, and path lighting are provided in the Public Works Standards.
 - B. To ensure ongoing access to and maintenance of pedestrian/bicycle paths, the City Engineer will require dedication of the path to the public and acceptance of the path by the City as public right-of-way; or creation of a public access easement over the path.

Response: A Boeckman Creek Trail is proposed, but it is a recreational trail rather than a multiuse pathway. No multiuse pathways are proposed. This standard does not apply.

(.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 site is not adjacent to nor incorporates a major transit street. These standards are not applicable.

- (.07) Residential Private Access Drives.** Residential Private Access Drives shall meet the following standards:
- A. Residential Private Access Drives shall provide primary vehicular access to no more than four (4) dwelling units, excluding accessory dwelling units.

Response: No private access drives are proposed. This section is not applicable.

[...]

- 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.

Response: The TSP does not identify minimum access requirements for local streets and all access is being taken from local streets. These standards are met.

[...]

- 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.
 1. Intersects with a public street that is controlled, or is to be controlled in the planning period, by a traffic signal;
 2. Intersects with an existing or planned arterial or collector street; or
 3. Would be an extension of an existing or planned local street, or of another major driveway.

Response: Street B is located to comply with local street spacing standards, as shown in Sheet P2.00.

(.09) Minimum street intersection spacing standards.

- A. New streets shall intersect at existing street intersections so that centerlines are not offset. Where existing streets adjacent to a proposed development do not align properly, conditions shall be imposed on the development to provide for proper alignment.

- B. *Minimum intersection spacing standards are provided in Transportation System Plan Table 3-2.*

Response: The streets within and adjacent to the development are Local Streets. Per Table 3-2 of the TSP, there is no minimum access spacing standard for Local Streets and access is permitted to each lot. Access to each lot is proposed from local streets. These standards are met.

(.10) Exceptions and Adjustments. *The City may approve adjustments to the spacing standards of subsections (.08) and (.09) above through a Class II process, or as a waiver per Section 4.118(.03)(A.), where an existing connection to a City street does not meet the standards of the roadway authority, the proposed development moves in the direction of code compliance, and mitigation measures alleviate all traffic operations and safety concerns. Mitigation measures may include consolidated access (removal of one access), joint use driveways (more than one property uses same access), directional limitations (e.g., one-way), turning restrictions (e.g., right in/out only), or other mitigation. [Section 4.177 amended by Ord. 719, 6/17/13]*

Response: No exceptions or adjustments to the spacing standards are requested.

I. Section 4.180. Exceptions and Modifications - Projections into Required Yards.

(.01) *Certain non-structural architectural features are permitted to project into required yards or courts, without requiring the approval of a Variance or Reduced Setback Agreement, as follows:*

A. *Into any required yard:*

1. *Architectural features may project into the required yard not more than two (2) inches for each foot of required setback.*
2. *Open, unenclosed fire escapes may project a distance not exceeding forty-eight (48) inches.*

B. *Into any required yard, adjoining a street or tract with a private drive: [Amended by Ord. 682, 9/9/10]*

1. *Architectural features may project a distance not exceeding forty (40) inches.*
2. *An uncovered porch, terrace, or patio extending no more than two and one-half (2 1/2) feet above the finished elevation may extend within three (3) feet of an interior side lot line, or within ten (10) feet of a front lot line or of an exterior side lot line.*

Response: No buildings are proposed with this application. These provisions are not applicable.

J. Section 4.181. Exceptions & Modifications - Height Limits.

Except as stipulated in Sections 4.800 through 4.804, height limitations specified elsewhere in this Code shall not apply to barns, silos or other farm buildings or structures on farms; to church spires; belfries; cupolas; and domes; monuments; water towers; windmills; chimneys; smokestacks; fire and hose towers; flag poles; above-ground electric transmission, distribution, communication and signal lines, towers and poles; and properly screened mechanical and elevator structures.

Response: No listed structures are proposed at this time. These provisions are not applicable.

K. Section 4.182. Exceptions and Modifications - Setback Modifications.

In any residential zone where the average depth of at least two (2) existing front yards on adjoining lots or within one hundred fifty (150) feet of the lot in question and within the same block front is less or greater than the minimum or maximum front yard depth prescribed elsewhere in this Code, the required depth of the front yard on such lot shall be modified. In such case, the front yard depth shall not be less than the average depth, nor more than the greater depth, of existing front yards on at least two (2) adjoining lots within one hundred and fifty (150) feet. In the case of a corner lot, the depth of the front yard may be reduced to that of the lot immediately adjoining, provided, however, that the depth of a front yard on any corner lot shall be at least ten (10) feet.

Response: No setback modifications are requested under the provisions of this section.

L. Section 4.197. Zone Changes and Amendments to This Code – Procedures.

(.01) The following procedure shall be followed in applying for an amendment to the text of this Chapter:[...]

Response: No zoning text amendments are proposed. This procedure is not applicable.

(.02) The following procedures shall be followed for zone map amendments. :

Response: An amendment to the zoning map is proposed as part of this project. Therefore, the criteria in this section apply.

[...]
(C) In recommending approval or denial of a proposed zone map amendment, the Planning Commission or Development Review Board shall at a minimum, adopt findings addressing the following criteria:

1. That the application before the Commission or Board was submitted in accordance with the procedures set forth in Section 4.008, Section 4.125 (.18)(B)(2) or, in the case of a Planned Development, Section 4.140; and [Amended by Ord 557, adopted 9/5/03]

Response: The zone map amendment is being requested concurrent with a Planned Development. The application has been submitted in accordance with the procedures set forth in Section 4.140. This criterion is met.

2. That the proposed amendment is consistent with the Comprehensive Plan map designation and substantially complies with the applicable goals, policies and objectives, set forth in the Comprehensive Plan text; and

Response: The Comprehensive Plan map designation for the Frog Pond Terrace site is Residential Neighborhood RN, which is implemented by the requested Residential Neighborhood RN zone.

The applicable goals, policies, and objectives of the Comprehensive Plan text are addressed in Section III of this narrative. This criterion is met.

3. In the event that the subject property, or any portion thereof, is designated as "Residential" on the City's Comprehensive Plan Map; specific findings shall be made addressing substantial compliance with Implementation Measures 4.1.4.b, d, e, q, and x of Wilsonville's Comprehensive Plan text; and

Response: The Frog Pond Terrace site is designated "Residential" on the City's Comprehensive Plan Map. Compliance with Implementation Measures 4.1.4.b, d, e, q, and x is addressed in Section III of this narrative. This criterion is met.

4. That the existing primary public facilities, i.e., roads and sidewalks, water, sewer and storm sewer are available and are of adequate size to serve the proposed development; or, that adequate facilities can be provided in conjunction with project development. The Planning Commission and Development Review Board shall utilize any and all means to insure that all primary facilities are available and are adequately sized; and

Response: As addressed elsewhere in this narrative, the development will extend roads and sidewalks, water, sewer, and storm sewer to serve the proposed development. This criterion is met.

5. That the proposed development does not have a significant adverse effect upon Significant Resource Overlay Zone areas, an identified natural hazard, or an identified geologic hazard. When Significant Resource Overlay Zone areas or natural hazard, and/or geologic hazard are located on or abut proposed development, the Planning Commission or Development

Review Board shall use appropriate measures to mitigate and significantly reduce conflicts between the development and identified hazard or Significant Resource Overlay Zone; and

Response: The site contains SROZ area associated with Boeckman Creek. The site has been designed to minimize impacts to the SROZ area and no non-exempt activities are proposed within the SROZ. This application includes an exemption request and an SROZ map verification, which is addressed in the responses to Section 4.139 in this narrative. This criterion is met.

6. *That the applicant is committed to a development schedule demonstrating that development of the property is reasonably expected to commence within two (2) years of the initial approval of the zone change; and*

Response: The zone change request is being submitted concurrently with a planned development, subdivision, and site plan review application. The applicant is committed to develop the property as soon as these applications and related site development permits are approved, which is expected to occur by fall 2022. This criterion is met.

7. *That the proposed development and use(s) can be developed in compliance with the applicable development standards or appropriate conditions are attached that insure that the project development substantially conforms to the applicable development standards.*

Response: The proposed development and use is for single-family residential in accordance with the Frog Pond West Master Plan. Compliance with the applicable development standards of the RN zone is addressed Section IV of this narrative.

8. *Adequate public facilities, services, and transportation networks are in place, or are planned to be provided concurrently with the development of the property. The applicant shall demonstrate compliance with the Transportation Planning Rule, specifically by addressing whether the proposed amendment has a significant effect on the transportation system pursuant to OAR 660-012-0060. A Traffic Impact Analysis (TIA) shall be prepared pursuant to the requirements in Section 4.133.05.(01).*

Response: Adequate public facilities, services, and transportation networks are in place, or are planned to be provided concurrently with the proposed development. The development will extend sewer and water infrastructure into the development from existing lines in Frog Pond Lane, Woodbury Loop, and Brisband Street, and will provide storm drainage facilities to serve the development. See Sheet P4.00 and Appendix B Preliminary Drainage Report.

DKS, the City's traffic engineer, determined that a full Traffic Impact Analysis was not required for this development due to the small number of dwelling units proposed. See Appendix D for a traffic impact memo. Compliance with the TPR is included in the Frog Pond Area Plan and assumes full development of the Frog Pond area. The Frog Pond Area Plan determined that the anticipated development within Frog Pond would comply with the TPR with the addition of a traffic signal at the intersection of Stafford Road and Frog Pond Lane.

This criterion is met.

- (.03)** *If affirmative findings cannot be made for all applicable criteria listed above the Planning Commission or Development Review Board shall recommend that the proposed text or map amendment, as the case may be, be denied.*
- (.04)** *City Council action approving a change in zoning shall be in the form of a Zoning Order.*
- (.05)** *In cases where a property owner or other applicant has requested a change in zoning and the City Council has approved the change subject to conditions, the owner or applicant shall sign a statement accepting, and agreeing to complete the conditions of approval before the zoning shall be changed.*

Response: The proposed development meets the applicable criteria as described above.

VI. Land Divisions

A. Section 4.210. Application Procedure.

- (.01) Pre-application conference.** *Prior to submission of a tentative condominium, partition, or subdivision plat, a person proposing to divide land in the City shall contact the Planning Department to arrange a pre-application conference as set forth in Section 4.010.*
- A. *Preparation of Tentative Plat. The Planning staff shall provide information regarding procedures and general information having a direct influence on the proposed development, such as elements of the Comprehensive Plan, existing and proposed streets, roads and public utilities. The applicant shall cause to be prepared a tentative plat, together with improvement plans and other supplementary material as specified in this Section. The Tentative Plat shall be prepared by an Oregon licensed professional land surveyor or engineer. An affidavit of the services of such surveyor or engineer shall be furnished as part of the submittal.*
- B. *Tentative Plat Submission. The purpose of the Tentative Plat is to present a study of the proposed subdivision to the Planning Department and Development Review Board and to receive approval or recommendations for revisions before preparation of a final Plat. The design and layout of this plan plat shall meet the guidelines and requirements set forth in this Code. The Tentative Plat shall be submitted to the Planning Department with the following information:*
1. *Site development application form completed and signed by the owner of the land or a letter of authorization signed by the owner. A preliminary title report or other proof of ownership is to be included with the application form.*
 2. *Application fees as established by resolution of the City Council.*
 3. *Ten (10) copies and one (1) sepia or suitable reproducible tracing of the Tentative Plat shall be submitted with the application. Paper size shall be eighteen inch (18") by twenty-four inch (24"), or such other size as may be specified by the City Engineer.*
 4. *Name of the subdivision. No subdivision name shall duplicate or resemble the name of any other subdivision in Clackamas or Washington County. Names may be checked through the county offices.*
 5. *Names, addresses, and telephone numbers of the owners and applicants, and engineer or surveyor.*
 6. *Date, north point and scale of drawing.*
 7. *Location of the subject property by Section, Township, and Range.*
 8. *Legal road access to subject property shall be indicated as City, County, or other public roads.*
 9. *Vicinity map showing the relationship to the nearest major highway or street.*
 10. *Lots: Dimensions of all lots, minimum lot size, average lot size, and proposed lot and block numbers.*
 11. *Gross acreage in proposed plat.*
 12. *Proposed uses of the property, including sites, if any, for multi-family dwellings, shopping centers, churches, industries, parks, and playgrounds or other public or semi-public uses.*
 13. *Improvements: Statement of the improvements to be made or installed including streets, private drives, sidewalks, lighting, tree planting, and times such improvements are to be made or completed. [Amended by Ord. 682, 9/9/10]*
 14. *Trees. Locations, types, sizes, and general conditions of all existing trees, as required in Section 4.600.*
 15. *Utilities such as electrical, gas, telephone, on and abutting the tract.*
 16. *Easements: Approximate width, location, and purpose of all existing and proposed easements on, and known easements abutting the tract.*
 17. *Deed Restrictions: Outline of proposed deed restrictions, if any.*
 18. *Written Statement: Information which is not practical to be shown on the maps may be shown in separate statements accompanying the Tentative Plat.*
 19. *If the subdivision is to be a "Planned Development," a copy of the proposed Home Owners Association By-Laws must be submitted at the time of submission of the*

application. The Tentative Plat shall be considered as the Stage I Preliminary Plan. The proposed By-Laws must address the maintenance of any parks, common areas, or facilities.

20. Any plat bordering a stream or river shall indicate areas subject to flooding and shall comply with the provisions of Section 4.172.
21. Proposed use or treatment of any property designated as open space by the City of Wilsonville.
22. A list of the names and addresses of the owners of all properties within 250 feet of the subject property, printed on self-adhesive mailing labels. The list shall be taken from the latest available property ownership records of the Assessor's office of the affected county.
23. A completed "liens and assessments" form, provided by the City Finance Department.
24. Locations of all areas designated as a Significant Resource Overlay Zone by the City, as well as any wetlands shall be shown on the tentative plat.
25. Locations of all existing and proposed utilities, including but not limited to domestic water, sanitary sewer, storm drainage, and any private utilities crossing or intended to serve the site. Any plans to phase the construction or use of utilities shall be indicated. [Amended by Ord. 682, 9/9/10]
26. A traffic study, prepared under contract with the City, shall be submitted as part of the tentative plat application process, unless specifically waived by the Community Development Director.

C. Action on proposed tentative plat:

[...]

- D. Land division phases to be shown. Where the applicant intends to develop the land in phases, the schedule of such phasing shall be presented for review at the time of the tentative plat. In acting on an application for tentative plat approval, the Planning Director or Development Review Board may set time limits for the completion of the phasing schedule which, if not met, shall result in an expiration of the tentative plat approval.
- E. Remainder tracts to be shown as lots or parcels. Tentative plats shall clearly show all affected property as part of the application for land division. All remainder tracts, regardless of size, shall be shown and counted among the parcels or lots of the division.

[...]

Response: A Subdivision is requested to create the lots proposed by the Planned Development. The information described above is included with this submittal. A Preliminary Plat is included as Sheet 3.00; a Preliminary Utility Plan is included as Sheet P4.00; a Tree Removal and Protection Plan is included as Sheet L1.00; Preliminary Street Cross-Sections are included as Sheet P2.10; a traffic memo is included as Appendix D; and draft Homeowner Association Bylaws and CC&Rs are included as Appendix G.

B. Section 4.236. General Requirements – Streets.

- (.01)** *Conformity to the Transportation System Plan. Land divisions shall conform to and be in harmony with the Transportation Systems Plan, the Bicycle and Pedestrian Master Plan, and the Parks and Recreation Master Plan.*

Response: As confirmed by the traffic impact memo prepared by DKS, the proposed street plan conforms to the Transportation System Plan and the Frog Pond West Master Plan.

The Bicycle and Pedestrian Master Plan shows a general alignment for the Boeckman Creek Trail through the subject site. As shown on Sheet P2.00, this project will include a segment of the Boeckman Creek Trail consistent with the Bicycle and Pedestrian Master Plan and the Frog Pond West Master Plan.

This project also includes a proposed Trailhead Park that will provide public access to the Boeckman Creek Trail, consistent with the Parks and Recreation Master Plan and Frog Pond West Master Plan.

The City can find that this standard is met.

(.02) Relation to Adjoining Street System.

- A. A land division shall provide for the continuation of the principal streets existing in the adjoining area, or of their proper projection when adjoining property is not developed, and shall be of a width not less than the minimum requirements for streets set forth in these regulations. Where, in the opinion of the Planning Director or Development Review Board, topographic conditions make such continuation or conformity impractical, an exception may be made. In cases where the Board or Planning Commission has adopted a plan or plat of a neighborhood or area of which the proposed land division is a part, the subdivision shall conform to such adopted neighborhood or area plan.
- B. Where the plat submitted covers only a part of the applicant's tract, a sketch of the prospective future street system of the unsubmitted part shall be furnished and the street system of the part submitted shall be considered in the light of adjustments and connections with the street system of the part not submitted.
- C. At any time when an applicant proposes a land division and the Comprehensive Plan would allow for the proposed lots to be further divided, the city may require an arrangement of lots and streets such as to permit a later resubdivision in conformity to the street plans and other requirements specified in these regulations.

Response: As shown in Sheet P8.00, the proposed street network is designed for future continuation per the Frog Pond West Master Plan. These standards are met.

(.03) All streets shall conform to the standards set forth in Section 4.177 and the block size requirements of the zone.

Response: The standards of Section 4.177 are addressed in Section V of this narrative. These standards are met.

(.04) Creation of Easements: *The Planning Director or Development Review Board may approve an easement to be established without full compliance with these regulations, provided such an easement is the only reasonable method by which a portion of a lot large enough to allow partitioning into two (2) parcels may be provided with vehicular access and adequate utilities. If the proposed lot is large enough to divide into more than two (2) parcels, a street dedication may be required. [Amended by Ord. 682, 9/9/10]*

Response: No street easements are proposed. This standard is not applicable.

(.05) Topography: *The layout of streets shall give suitable recognition to surrounding topographical conditions in accordance with the purpose of these regulations.*

Response: The street layout recognizes topographical conditions, specifically slopes to the west toward the creek. This standard is met.

- (.06) Reserve Strips:** *The Planning Director or Development Review Board may require the applicant to create a reserve strip controlling the access to a street. Said strip is to be placed under the jurisdiction of the City Council, when the Director or Board determine that a strip is necessary:*
- A. *To prevent access to abutting land at the end of a street in order to assure the proper extension of the street pattern and the orderly development of land lying beyond the street; or*
 - B. *To prevent access to the side of a street on the side where additional width is required to meet the right-of-way standards established by the City; or*
 - C. *To prevent access to land abutting a street of the land division but not within the tract or parcel of land being divided; or*
 - D. *To prevent access to land unsuitable for building development.*

Response: No reserve strip is proposed. The applicant acknowledges that the DRB may require that the applicant create a reserve strip.

(.07) Future Expansion of Street: *When necessary to give access to, or permit a satisfactory future division of, adjoining land, streets shall be extended to the boundary of the land division and the resulting dead-end street may be approved without a turn-around. Reserve strips and street plugs*

shall be required to preserve the objective of street extension. Notification that the street is planned for future extension shall be posted on the stub street. [Amended by Ord. #719, 6/17/13]

Response: Street B will be extended to the east with future development and Woodbury Loop will extend north-south through the site and will connect to the east. Due to the natural resource area at the western edge of the site, the street network is not planned to extend further west and no dead-ends or turnarounds are proposed.

(.08) Existing Streets: *Whenever existing streets adjacent to or within a tract are of inadequate width, additional right-of-way shall conform to the designated width in this Code or in the Transportation Systems Plan.*

Response: The project will dedicate 20 ft. of additional right-of-way along Brisband Street, which is adjacent to the southern site boundary. No right-of-way dedication or improvements are proposed for Frog Pond Lane to the north.

(.09) Street Names: *No street names will be used which will duplicate or be confused with the names of existing streets, except for extensions of existing streets. Street names and numbers shall conform to the established name system in the City, and shall be subject to the approval of the City Engineer.*

Response: Brisband Lane, Frog Pond Lane, and Woodbury Loop have been established by previous development applications. Street B will conform to the City's established name system and will be subject to approval by the City Engineer. This standard is met.

C. Section 4.237. General Requirements – Other.

(.01) Blocks:

- A. *The length, width, and shape of blocks shall be designed with due regard to providing adequate building sites for the use contemplated, consideration of needs for convenient access, circulation, control, and safety of pedestrian, bicycle, and motor vehicle traffic, and recognition of limitations and opportunities of topography.*
- B. *Sizes: Blocks shall not exceed the sizes and lengths specified for the zone in which they are located unless topographical conditions or other physical constraints necessitate larger blocks. Larger blocks shall only be approved where specific findings are made justifying the size, shape, and configuration.*

Response: The length, width, and shape of blocks have been designed to accommodate the development established by the Frog Pond West Master Plan and to comply with the standards of Section 4.177. These standards are addressed in Section V.H of this narrative. The site is designated as RN and has R7 and R10 zoning; it is also subject to the block, access, and connectivity standards of Section 4.127(.10). Those standards are addressed in Section IV.E of this narrative. These standards are met.

(.02) Easements:

- A. *Utility lines. Easements for sanitary or storm sewers, drainage, water mains, electrical lines or other public utilities shall be dedicated wherever necessary. Easements shall be provided consistent with the City's Public Works Standards, as specified by the City Engineer or Planning Director. All of the public utility lines within and adjacent to the site shall be installed within the public right-of-way or easement; with underground services extending to the private parcel constructed in conformance to the City's Public Works Standards. All franchise utilities shall be installed within a public utility easement. All utilities shall have appropriate easements for construction and maintenance purposes. [Amended by Ord. 682, 9/9/10]*
- B. *Water courses. Where a land division is traversed by a water course, drainage way, channel or stream, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the lines of the water course, and such further width as will be adequate for the purposes of conveying storm water and allowing for maintenance of the facility or channel. Streets or parkways parallel to water courses may be required.*

Response: Generally, public utilities are proposed to be placed within public rights-of-way or within public utility easements (PUE) adjacent to the public streets. A proposed stormwater conveyance and facility is proposed within Tract A west of Lots 1-4, and an easement is proposed in this location. A 15-ft. storm conveyance easement is proposed over the stormwater outfall within Tract A.

- (.03) Pedestrian and bicycle pathways.** *An improved public pathway shall be required to transverse the block near its middle if that block exceeds the length standards of the zone in which it is located.*
- A. *Pathways shall be required to connect to cul-de-sacs or to pass through unusually shaped blocks.*
 - B. *Pathways required by this subsection shall have a minimum width of ten (10) feet unless they are found to be unnecessary for bicycle traffic, in which case they are to have a minimum width of six (6) feet.*

Response: Per Section 4.124(.06), the maximum block length for new Planned Development land divisions is 330 ft. The blocks that will be created by this proposal are all less than 330 ft. The proposed Boeckman Creek Trail is between 10 ft. and 15 ft. in width. Though not required by this section, the trail meets the dimensional standards of this section.

- (.04) Tree planting.** *Tree planting plans for a land division must be submitted to the Planning Director and receive the approval of the Director or Development Review Board before the planting is begun. Easements or other documents shall be provided, guaranteeing the City the right to enter the site and plant, remove, or maintain approved street trees that are located on private property.*

Response: Tree planting plans are included as Sheet L2.00. Proposed street trees are located within public rights-of-way. This standard is met.

- (.05) Lot Size and shape.** *The lot size, width, shape and orientation shall be appropriate for the location of the land division and for the type of development and use contemplated. Lots shall meet the requirements of the zone where they are located.*
- A. *In areas that are not served by public sewer, an on-site sewage disposal permit is required from the City. If the soil structure is adverse to on-site sewage disposal, no development shall be permitted until sewer service can be provided.*
 - B. *Where property is zoned or deeded for business or industrial use, other lot widths and areas may be permitted at the discretion of the Development Review Board. Depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to provide for the off-street service and parking facilities required by the type of use and development contemplated.*
 - C. *In approving an application for a Planned Development, the Development Review Board may waive the requirements of this section and lot size, shape, and density shall conform to the Planned Development conditions of approval.*

Response: The site is served by public sewer, and no on-site sewage disposal is proposed. The property is zoned for residential purposes and is subject to an application for a Planned Development. The site is located within the RN designation and is subject to the RN standards. As shown on Sheet P3.00, the proposed lots meet the dimensional standards of the RN zone and the R-7 and R-10 sub-districts. These standards are met.

- (.06) Access.** *The division of land shall be such that each lot shall have a minimum frontage on a street or private drive, as specified in the standards of the relative zoning districts. This minimum frontage requirement shall apply with the following exceptions:*
- A. *A lot on the outer radius of a curved street or tract with a private drive, or facing the circular end of a cul-de-sac shall have frontage of not less than twenty-five (25) feet upon a street or tract with a private drive, measured on the arc.*
 - B. *The Development Review Board may waive lot frontage requirements where in its judgment the waiver of frontage requirements will not have the effect of nullifying the intent and purpose of this regulation or if the Board determines that another standard is appropriate because of the characteristics of the overall development.*

Response: The minimum lot width in the RN zone/R-7 subdistrict is 35 ft; and the minimum lot width in the RN zone/R-10 subdistrict is 40 ft. As detailed in the response to Section 4.127 and shown on Sheet P3.00, each lot has frontage of at least 40 ft. on a public street with the exception of Lot 19, which is a flag lot with 20 ft. of frontage. These standards are met.

(.07) Through lots. *Through lots shall be avoided except where essential to provide separation of residential development from major traffic arteries or adjacent non-residential activity or to overcome specific disadvantages of topography and orientation. A planting screen easement of at least ten (10) feet, across which there shall be no access, may be required along the line of lots abutting such a traffic artery or other disadvantageous use. Through lots with planting screens shall have a minimum average depth of one hundred (100) feet. The Development Review Board may require assurance that such screened areas be maintained as specified in Section 4.176.*

Response: No through lots are proposed with this subdivision. This standard is not applicable.

(.08) Lot side lines. *The side lines of lots, as far as practicable for the purpose of the proposed development, shall run at right angles to the street or tract with a private drive upon which the lots face. [Amended by Ord. 682, 9/9/10]*

Response: All side lot lines run at right angles to the street or the tract upon which they face as far as practicable. Due to the site topography and the location of the SROZ on site, some lots have side lot lines that are not at right angles to the street.

(.09) Large lot land divisions. *In dividing tracts which at some future time are likely to be re-divided, the location of lot lines and other details of the layout shall be such that re-division may readily take place without violating the requirements of these regulations and without interfering with the orderly development of streets. Restriction of buildings within future street locations shall be made a matter of record if the Development Review Board considers it necessary.*

Response: No future development tracts are proposed.

(.10) Building line. *The Planning Director or Development Review Board may establish special building setbacks to allow for the future re-division or other development of the property or for other reasons specified in the findings supporting the decision. If special building setback lines are established for the land division, they shall be shown on the final plat.*

Response: No special building setbacks are proposed.

(.11) Build-to line. *The Planning Director or Development Review Board may establish special build to lines for the development, as specified in the findings and conditions of approval for the decision. If special build-to lines are established for the land division, they shall be shown on the final plat.*

Response: There is no maximum setback in the RN zones, and no build-to-lines are proposed.

(.12) Land for public purposes. *The Planning Director or Development Review Board may require property to be reserved for public acquisition, or irrevocably offered for dedication, for a specified period of time.*

Response: The City is in discussion with the applicant regarding the final acquisition or dedication of the trailhead park. The final disposition of the park will be determined during the land use review process.

(.13) Corner lots. *Lots on street intersections shall have a corner radius of not less than ten (10) feet.*

Response: As shown on Sheet P3.00, lots on street intersections have corner radii of at least 20 ft. This standard is met.

D. Section 4.262. Improvements – Requirements.

(.01) Streets. *Streets within or partially within the development shall be graded for the entire right-of-way width, constructed and surfaced in accordance with the Transportation Systems Plan and*

City Public Works Standards. Existing streets which abut the development shall be graded, constructed, reconstructed, surfaced or repaired as determined by the City Engineer.

(.02) Curbs. *Curbs shall be constructed in accordance with standards adopted by the City.*

(.03) Sidewalks. *Sidewalks shall be constructed in accordance with standards adopted by the City.*

Response: As shown on Sheet P2.10, streets will be graded, constructed, and surfaced according to the TSP, the cross-sections incorporated into the Frog Pond West Master Plan, and the City's Public Works Standards as modified by the City Engineer. These standards are met.

(.04) Sanitary sewers. *When the development is within two hundred (200) feet of an existing public sewer main, sanitary sewers shall be installed to serve each lot or parcel in accordance with standards adopted by the City. When the development is more than two hundred (200) feet from an existing public sewer main, the City Engineer may approve an alternate sewage disposal system.*

(.05) Drainage. *Storm drainage, including detention or retention systems, shall be provided as determined by the City Engineer.*

Response: The proposed development will be served by public sanitary sewer. Storm drainage systems are being provided as outlined in the City's Site Assessment and Planning standards. LIDA facilities are proposed within the Frog Pond Ln street frontage.

See Sheet P2.00 for the location of LIDA facilities within planter strips and Sheet P4.00 for the location of stormwater facilities within Tract A. See Sheet L2.20 for details of the LIDA facility plantings; and see Appendix B for the Preliminary Drainage Plan.

(.06) Underground utility and service facilities. *All new utilities shall be subject to the standards of Section 4.300 (Underground Utilities). The developer shall make all necessary arrangements with the serving utility to provide the underground services in conformance with the City's Public Works Standards.*

Response: The standards of Section 4.300 are addressed in Section VII of this narrative. These standards are met.

(.07) Streetlight standards. *Streetlight standards shall be installed in accordance with regulations adopted by the City.*

Response: Streetlights will be installed per the Frog Pond West Master Plan and regulations adopted by the City. Figure 42 of the Frog Pond West Master Plan identifies the streets within the development site as Local Streets. The Master Plan calls for the use of the Philips Hadco LED Westbrooke fixture for local streets.

(.08) Street signs. *Street name signs shall be installed at all street intersections and dead-end signs at the entrance to all dead-end streets and cul-de-sacs in accordance with standards adopted by the City. Other signs may be required by the City Engineer.*

Response: Street signs will be installed per City standards.

(.09) Monuments. *Monuments shall be placed at all lot and block corners, angle points, points of curves in streets, at intermediate points and shall be of such material, size and length as required by State Law. Any monuments that are disturbed before all improvements are completed by the developer and accepted by the City shall be replaced to conform to the requirements of State Law.*

Response: Monuments will be placed per State, Clackamas County, and City requirements.

(.10) Water. *Water mains and fire hydrants shall be installed to serve each lot in accordance with City standards.*

Response: Water mains and fire hydrants are proposed to serve each lot in accordance with City and Fire Department standards. See Sheet P4.00.

VII. Underground Utilities

A. Section 4.300. General.

- (.01) The City Council deems it reasonable and necessary in order to accomplish the orderly and desirable development of land within the corporate limits of the City, to require the underground installation of utilities in all new developments.*
- (.02) After the effective date of this Code, the approval of any development of land within the City will be upon the express condition that all new utility lines, including but not limited to those required for power, communication, street lighting, gas, cable television services and related facilities, shall be placed underground.*
- (.03) The construction of underground utilities shall be subject to the City's Public Works Standards and shall meet applicable requirements for erosion control and other environmental protection.*

Response: The proposed development is subject to the requirements of this section.

B. Section 4.320. Requirements.

- (.01) The developer or subdivider shall be responsible for and make all necessary arrangements with the serving utility to provide the underground services (including cost of rearranging any existing overhead facilities). All such underground facilities as described shall be constructed in compliance with the rules and regulations of the Public Utility Commission of the State of Oregon relating to the installation and safety of underground lines, plant, system, equipment and apparatus.*
- (.02) The location of the buried facilities shall conform to standards supplied to the subdivider by the City. The City also reserves the right to approve location of all surface-mounted transformers.*
- (.03) Interior easements (back lot lines) will only be used for storm or sanitary sewers, and front easements will be used for other utilities unless different locations are approved by the City Engineer. Easements satisfactory to the serving utilities shall be provided by the developer and shall be set forth on the plat.*

Response: New utilities will be installed underground in accordance with City and other agency requirements. These standards are met.

VIII. Site Design Review

A. Section 4.400. Purpose.

- (.01) Excessive uniformity, inappropriateness or poor design of the exterior appearance of structures and signs and the lack of proper attention to site development and landscaping in the business, commercial, industrial and certain residential areas of the City hinders the harmonious development of the City, impairs the desirability of residence, investment or occupation in the City, limits the opportunity to attain the optimum use in value and improvements, adversely affects the stability and value of property, produces degeneration of property in such areas and with attendant deterioration of conditions affecting the peace, health and welfare, and destroys a proper relationship between the taxable value of property and the cost of municipal services therefor.*
- (.02) The City Council declares that the purposes and objectives of site development requirements and the site design review procedure are to:*
 - A. Assure that Site Development Plans are designed in a manner that insures proper functioning of the site and maintains a high quality visual environment.*
 - B. Encourage originality, flexibility and innovation in site planning and development, including the architecture, landscaping and graphic design of said development;*
 - C. Discourage monotonous, drab, unsightly, dreary and inharmonious developments;*

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

Response: The City Council adopted the Frog Pond West Master Plan to guide development in this area. The Master Plan addresses visual appeal, infrastructure provisions, and protection of the natural areas within the development site. The proposed development is intended to advance the vision for Frog Pond West by incorporating the natural areas on site, providing attractive streetscapes, and enhancing the existing neighborhood. The intent of this purpose statement is incorporated into the proposed site design.

Per City staff, the project elements subject to the standards of this section include: tracts and their landscaping; landscaping in the public right-of-way; retaining walls; and public furnishings.

B. Section 4.421. Criteria and Application of Design Standards.

- (.01)** *The following standards shall be utilized by the Board in reviewing the plans, drawings, sketches and other documents required for Site Design Review. These standards are intended to provide a frame of reference for the applicant in the development of site and building plans as well as a method of review for the Board. These standards shall not be regarded as inflexible requirements. They are not intended to discourage creativity, invention and innovation. The specifications of one or more particular architectural styles is not included in these standards. (Even in the Boones Ferry Overlay Zone, a range of architectural styles will be encouraged.)*
- A. *Preservation of Landscape. The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soils removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas.*

Response: As shown on Sheet L1.00, trees within the SROZ area on the site will be preserved. As shown on Sheet P5.00, the remainder of the site will need to be graded to extend utilities and to accommodate the stormwater facility.

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

Response: Four structures are proposed within the trailhead park within Tract A: two picnic tables and two benches. No buildings are proposed with this application. A chain link fence is proposed around the stormwater facility in Tract A. No buildings are proposed with this application. The chain link fence around the stormwater facility is intended to provide protection for the public. See Sheet L2.30 for details.

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

Response: The drives, parking, and circulation within the development is subject to the requirements of the RN Zone, the Planned Development overlay, and Land Division requirements. The parking to serve single-family dwellings will be provided on site. Pedestrian and vehicular traffic is separated vertically by curbs. These standards are met.

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

Response: See Sheet P2.00 for the location of LIDA facilities within the planter strips of the public streets and Sheet P4.00 for the location of stormwater facilities within Tract B. See Sheet L2.20 for details of LIDA facility planting; and see Appendix B for the Preliminary Drainage Plan.

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

Response: As shown on Sheet P4.00, each lot will be served by a sanitary sewer line. Storm sewage disposal is provided by a storm drain system connecting to each on-site stormwater facility. Above ground utilities will be limited to electrical vaults if required by PGE. This standard is met.

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

Response: No signs or outdoor advertising structures or features are proposed with this application. This standard is not applicable.

G. Special Features. Exposed storage areas, exposed machinery installations, surface areas, truck loading areas, utility buildings and structures and similar accessory areas and structures shall be subject to such setbacks, screen plantings or other screening methods as shall be required to prevent their being incongruous with the existing or contemplated environment and its surrounding properties. Standards for screening and buffering are contained in Section 4.176.

Response: The proposed development is a single-family residential development, and no storage areas, machinery installations, surface areas, truck loading areas, or utility buildings or structures are proposed. This standard is not applicable.

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

Response: Four structures are proposed within the trailhead park within Tract A: two picnic tables and two benches. No buildings are proposed with this application. See Sheet L2.10 for details. Applicable standards have been addressed above.

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

Response: The purpose of Section 4.400 is addressed earlier in this section. This standard is met.

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

Response: This application includes a zone change and planned development, among other applications, and includes responses to the site development standards of those sections. Per City staff, the project elements subject to Site Design Review and the standards of this chapter are: tracts and their landscaping; and landscaping in the public right-of-way.

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

Response: The development has been designed in accordance with the Frog Pond West Master Plan, which is part of, and consistent with, the Comprehensive Plan. The proposed development plan is consistent with the densities and other requirements established by the Frog Pond West Master Plan and the implementing RN zone. No additional conditions are needed to ensure that the development remains consistent with the City's adopted policies.

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

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

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

Response: The proposed development is detached single-family residential development and two tracts. No paints or colors of materials are identified in the design standards of the Frog Pond West Master Plan. It is anticipated that building elevations, including paint and material colors, will be evaluated at the time of building permit review.

C. Section 4.440. Procedure.

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

A. *A site plan, drawn to scale, showing the proposed layout of all structures and other improvements including, where appropriate, driveways, pedestrian walks, landscaped areas, fences, walls, off-street parking and loading areas, and railroad tracks. The site plan shall indicate the location of entrances and exits and direction of traffic flow into and out of off-*

street parking and loading areas, the location of each parking space and each loading berth and areas of turning and maneuvering vehicles. The site plan shall indicate how utility service and drainage are to be provided.

Response: Sheet P2.00 shows the proposed layout of improvements, driveways, pedestrian walks, fences, and walls. Sheets L2.00 – L3.00 show landscaped areas and details.

B. A Landscape Plan, drawn to scale, showing the location and design of landscaped areas, the variety and sizes of trees and plant materials to be planted on the site, the location and design of landscaped areas, the varieties, by scientific and common name, and sizes of trees and plant materials to be retained or planted on the site, other pertinent landscape features, and irrigation systems required to maintain trees and plant materials. An inventory, drawn at the same scale as the Site Plan, of existing trees of 4" caliper or more is required. However, when large areas of trees are proposed to be retained undisturbed, only a survey identifying the location and size of all perimeter trees in the mass is necessary.

Response: Sheet L1.00 provides an inventory of existing trees. Sheets L2.00– L2.30 shows landscaped areas and landscape schedules and Sheet L3.00 shows planting details.

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

Response: Example building elevations are included as Appendix H. Compliance with these standards will be evaluated at the time of building permit review.

- D. A Color Board displaying specifications as to type, color, and texture of exterior surfaces of proposed structures. Also, a phased development schedule if the development is constructed in stages.*
- E. A sign Plan, drawn to scale, showing the location, size, design, material, color and methods of illumination of all exterior signs.*
- F. The required application fee.*

Response: A color board is not included, as exterior dwelling design will be evaluated at the time of building permit review. No signs are proposed at this time. The required application fee has been submitted with this application.

IX. Tree Preservation and Protection

A. Section 4.600.20. Applicability of Subchapter

- (.01) The provisions of this subchapter apply to the United States and the State of Oregon, and to their agencies and subdivisions, including the City of Wilsonville, and to the employees and agents thereof.*
- (.02) By this subchapter, the City of Wilsonville regulates forest practices on all lands located within its urban growth boundary, as provided by ORS 527.722.*
- (.03) The provisions of this subchapter apply to all land within the City limits, including property designated as a Significant Resource Overlay Zone or other areas or trees designated as protected by the Comprehensive Plan, City zoning map, or any other law or ordinance; except that any tree activities in the Willamette River Greenway that are regulated by the provisions of WC 4.500 - 4.514 and requiring a conditional use permit shall be reviewed by the DRB under the application and review procedures set forth for Tree Removal Permits.*

Response: Upon annexation and at the time of development, the site will be located within City limits and this subchapter will be applicable.

Section 4.600.30. Tree Removal Permit Required

- (.01) Requirement Established. No person shall remove any tree without first obtaining a Tree Removal Permit (TRP) as required by this subchapter.
- (.02) Tree Removal Permits will be reviewed according to the standards provided for in this subchapter, in addition to all other applicable requirements of Chapter 4.
- (.03) Although tree activities in the Willamette River Greenway are governed by WC 4.500 - 4.514, the application materials required to apply for a conditional use shall be the same as those required for a Type B or C permit under this subchapter, along with any additional materials that may be required by the Planning Department. An application for a Tree Removal Permit under this section shall be reviewed by the Development Review Board.

Response: As shown on Sheet L1.00 and described in Appendix E, the development will remove trees and a Tree Removal Permit is required.

Section 4.600.40. Exceptions

- (.01) Exception from requirement. Notwithstanding the requirement of WC 4.600.30(1), the following activities are allowed without a Tree Removal Permit, unless otherwise prohibited:
- A. Agriculture, Commercial Tree Farm or Orchard. Tree removal or transplanting occurring during use of land for commercial purposes for agriculture, orchard(s), or tree farm(s), such as Christmas tree production.
 - B. Emergencies. Actions made necessary by an emergency, such as tornado, windstorm, flood, freeze, utility damage or other like disasters, in order to prevent imminent injury or damage to persons or property or restore order and it is impractical due to circumstances to apply for a permit.
 1. When an emergency has occurred, a Tree Removal Permit must be applied for within thirty (30) days following the emergency tree removal under the application procedures established in this subchapter.
 2. In addition to complying with the permit application requirements of this subchapter, an applicant shall provide a photograph of any tree removed and a brief description of the conditions that necessitated emergency removal. Such photograph shall be supplied within seven days of application for a permit. Based on good cause shown arising out of the emergency, the Planning Director may waive any or all requirements of this section.
 3. Where a Type A Permit is granted for emergency tree removal, the permittee is encouraged to apply to the City Tree Fund for replanting assistance.
 - C. City utility or road work in utility or road easements, in utility or road rights-of-way, or in public lands. However, any trees removed in the course of utility work shall be mitigated in accordance with the standards of this subchapter.
 - D. Nuisance abatement. The City is not required to apply for a Tree Removal Permit to undertake nuisance abatement as provided in WC 6.200 et seq. However, the owner of the property subject to nuisance abatement is subject to all the provisions of this subchapter in addition to the requirements of WC 6.200 et seq.
 - E. The removal of filbert trees is exempt from the requirements of this subchapter.
 - F. The Charbonneau District, including its golf course, is exempt from the requirements of WC 4.600.30(1) on the basis that by and through the current CC&R's of the Charbonneau Country Club, the homeowners' association complies with all requirements of WC 4.610.30(1)(C)(1). This exception has been based upon the Tree Maintenance and Protection Plan that has been submitted by the Charbonneau Country Club and approved by the Planning Director. Tree removal activities remain subject to all applicable standards of this subchapter. Unless authorized by the City, this exception does not include tree removal upon any public easements or public property within the district. In the event that the CC&R's are changed relative to the effect of the Tree Maintenance and Protection Plan, then the Planning Director shall review whether such effect is material, whether it can be mitigated, and if not, may disallow the exemption.

Response: The proposed tree removal is not listed as exempt. The provisions of this chapter are applicable.

Section 4.600.50. Application For Tree Removal Permit

- (.01) Application for Permit.** A person seeking to remove one or more trees shall apply to the Director for a Tree Removal Permit for a Type A, B, C, or D permit, depending on the applicable standards as provided in this subchapter.
- A. An application for a tree removal permit that does not meet the requirements of Type A may be submitted as a Type B application.
- (.02) Time of Application.** Application for a Tree Removal Permit shall be made before removing or transplanting trees, except in emergency situations as provided in WC 4.600.40 (1)(B) above. Where the site is proposed for development necessitating site plan or plat review, application for a Tree Removal Permit shall be made as part of the site development application as specified in this subchapter.
- (.03) Fees.** A person applying for a Tree Removal Permit shall pay a non-refundable application fee; as established by resolution of the City Council.
- A. By submission of an application, the applicant shall be deemed to have authorized City representatives to have access to applicant's property as may be needed to verify the information provided, to observe site conditions, and if a permit is granted, to verify that terms and conditions of the permit are followed.

Response: The site is proposed for development necessitating site plan and plat review, and this application includes a request for a Type C Tree Removal Permit. The application fee has been submitted with this application.

B. Section 4.610.00. Application Review Procedure

- (.01)** The permit applicant shall provide complete information as required by this subchapter in order for the City to review the application.
- (.02) Departmental Review.** All applications for Tree Removal Permits must be deemed complete by the City Planning Department before being accepted for review. When all required information has been supplied, the Planning Department will verify whether the application is complete. Upon request of either the applicant or the City, the City may conduct a field inspection or review meeting. City departments involved in the review shall submit their report and recommendations to the Planning Director who shall forward them to the appropriate reviewing authority.
- (.03) Reviewing Authority.**
- A. Type A or B. Where site plan review or plat approval by the Development Review Board is not required by City ordinance, the grant or denial of the Tree Removal Permit application shall be the responsibility of the Planning Director. The Planning Director has the authority to refer a Type B permit application to the DRB under the Class II administrative review procedures of this Chapter. The decision to grant or deny a permit shall be governed by the applicable review standards enumerated in WC 4.610.10
- B. Type C. Where the site is proposed for development necessitating site plan review or plat approval by the Development Review Board, the Development Review Board shall be responsible for granting or denying the application for a Tree Removal Permit, and that decision may be subject to affirmance, reversal or modification by the City Council, if subsequently reviewed by the Council.
- C. Type D. Type D permit applications shall be subject to the standards and procedures of Class I administrative review and shall be reviewed for compliance with the Oregon Forest Practice Rules and Statutes. The Planning Director shall make the decision to grant or deny an application for a Type D permit.
- D. Review period for complete applications. Type A permit applications shall be reviewed within 10 (ten) working days. Type B permit applications shall be reviewed by the Planning Director within thirty (30) calendar days, except that the DRB shall review any referred application within sixty (60) calendar days. Type C permit applications shall be reviewed within the time frame established by this Chapter. Type D permit applications shall be reviewed within 15 calendar days.

Response: The application is for a Type C Tree Removal Permit and is subject to review and approval by the DRB.

[...]

Section 4.610.10. Standards For Tree Removal, Relocation Or Replacement

(.01) *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: The site contains SROZ area. No tree removal is planned within the proposed SROZ boundary.

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.*

Response: As shown on Sheet L1.0, most of the trees to be removed are located within the grading limits of proposed streets and public utilities and within future building footprints. The locations of those streets were determined by the Frog Pond West Master Plan and the City's block length and perimeter standards. The remainder of the trees to be removed is located within the building footprint of the individual lots, as determined by minimum setbacks and driveway depth requirements. Two hundred and fifty (250) trees are located on site; 105 trees will be preserved on site.

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: The Frog Pond West Master Plan provides clear direction for street connections, residential densities, and preservation of the SROZ. The subject site contains mapped SROZ areas but does not contain designated tree groves.

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: The proposed land clearing is limited to designated street rights-of-way and areas necessary for the construction of single-family homes. This standard is met.

E. *Residential Development. Where the proposed activity involves residential development, residential units shall, to the extent reasonably feasible, be designed and constructed to blend into the natural setting of the landscape.*

Response: The proposed project is for single-family residential development. The units will be designed and constructed, as much as possible, to blend into the natural areas on the site. This standard is met.

F. *Compliance With Statutes and Ordinances. The proposed activity shall comply with all applicable statutes and ordinances.*

Response: Applicable statutes and ordinances include the City's Development Code. The proposed activity will comply with this code and any other applicable statutes and ordinances. This standard is met.

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: As shown in Sheet L1.00 and described in Appendix E, trees to be retained will be protected per the provisions of 4.620.10 and trees will be replaced in accordance with 4.620.00.

Those provisions are addressed in the responses to Section 4.620.00 later in this narrative. This standard is met.

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.*

Response: Per the arborist's report included as Appendix E, there are 250 trees on site. One hundred and five (105) of the trees are identified for protection on site. In total, 145 trees will be removed from the site.

Removal of the trees on site is necessary for construction of site improvements, including utilities, streets, and detached residential dwellings. The location of streets and connections was determined by the Frog Pond West Master Plan and the block perimeter requirements of the RN zone. In addition, the designation of the site as a single-family area requires the grading of each lot to accommodate single-family dwellings and associated site improvements (driveways and walkways, stormwater management, outdoor yard areas, etc.). Reducing building footprints by increasing height is not a viable alternative as the height limit in the RN zone is 35 ft., or 2.5 stories.

- 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.*

Response: No filbert trees were identified. This standard is not applicable.

- 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.*

Response: As shown on Sheet L1.00, many of the trees proposed for removal are located within the SW Frog Pond Lane right-of-way to be dedicated with the plat. The remainder are located along the western property line. The construction of SW Frog Pond Lane and associated sidewalks and utilities requires their removal. These trees cannot be preserved while providing the street network required by the Frog Pond West Master Plan and established by previous approvals.

- 4. Other. Where the applicant shows that tree removal or transplanting is reasonable under the circumstances.*

Response: The proposed development is anticipated by the Frog Pond West Master Plan. While the development requires removal of trees on site, the trees removed will be mitigated, and street trees appropriate for the size and location of the planter strips within the public right-of-way will be planted. These trees will serve to soften the urban environment, contribute to stormwater management, and provide shade and protection for pedestrians.

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 has been completed and incorporated into the Tree Removal and Protection Plan includes as Sheet L1.00. This standard is met.

2. *Platted Subdivisions. The recording of a final subdivision plat whose preliminary plat has been reviewed and approved after the effective date of Ordinance 464 by the City and that conforms with this subchapter shall include a Tree Survey and Maintenance and Protection Plan, as required by this subchapter, along with all other conditions of approval.*

Response: A tree survey has been completed and incorporated into the Tree Removal and Protection Plan included as Sheet L1.00. A Tree Maintenance and Protection Plan is included as Appendix E and Sheet L1.00.

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 utilities will be located and placed within rights-of-way or adjacent PUEs whenever possible. Trees removed from the site will be mitigated and/or replaced per the provisions of 4.620.00. This standard is met.

[...]

Section 4.610.40. Type C Permit

- (.01)** *Approval to remove any trees on property as part of a site development application may be granted in a Type C permit. A Type C permit application shall be reviewed by the standards of this subchapter and all applicable review criteria of Chapter 4. Application of the standards of this section shall not result in a reduction of square footage or loss of density, but may require an applicant to modify plans to allow for buildings of greater height. If an applicant proposes to remove trees and submits a landscaping plan as part of a site development application, an application for a Tree Removal Permit shall be included. The Tree Removal Permit application will be reviewed in the Stage II development review process, and any plan changes made that affect trees after Stage II review of a development application shall be subject to review by DRB. Where mitigation is required for tree removal, such mitigation may be considered as part of the landscaping requirements as set forth in this Chapter. Tree removal shall not commence until approval of the required Stage II application and the expiration of the appeal period following that decision. If a decision approving a Type C permit is appealed, no trees shall be removed until the appeal has been settled.*

Response: The proposed development requires removal of trees; a landscaping plan has been submitted as part of the site development application, and the application includes a request for a Tree Removal Permit. Mitigation is required and addressed in the responses to Section 4.620.00.

- (.02)** *The applicant must provide ten copies of a Tree Maintenance and Protection Plan completed by an arborist that contains the following information:*
- A. *A plan, including a topographical survey bearing the stamp and signature of a qualified, registered professional containing all the following information:*
 1. *Property Dimensions. The shape and dimensions of the property, and the location of any existing and proposed structure or improvement.*

Response: See Sheets P1.00 and P1.10 Existing Conditions for the location of existing structures and improvements; see Sheet 2.00 Preliminary Site Plan for the location of proposed improvements.

2. *Tree survey. The survey must include:*
 - a. *An accurate drawing of the site based on accurate survey techniques at a minimum scale of one inch (1") equals one hundred feet (100') and which provides a) the location of all trees having six inches (6") or greater d.b.h. likely to be impacted, b) the spread of canopy of those trees, (c) the common and botanical name of those trees, and d) the approximate location and name of any other trees on the property.*
 - b. *A description of the health and condition of all trees likely to be impacted on the site property. In addition, for trees in a present or proposed public street or road right-of-way that are described as unhealthy, the description shall include recommended actions to restore such trees to full health. Trees proposed to remain, to be transplanted or to be removed shall be so designated. All trees to remain on the site are to be designated with metal tags that are to remain in place throughout the development. Those tags shall be numbered, with the numbers keyed to the tree survey map that is provided with the application.*
 - c. *Where a stand of twenty (20) or more contiguous trees exist on a site and the applicant does not propose to remove any of those trees, the required tree survey may be simplified to accurately show only the perimeter area of that stand of trees, including its drip line. Only those trees on the perimeter of the stand shall be tagged, as provided in "b," above.*
 - d. *All Oregon white oaks, native yews, and any species listed by either the state or federal government as rare or endangered shall be shown in the tree survey.*

Response: See Sheet L1.00 for a tree survey indicating the location of trees greater than 6-in DBH. See Appendix E Tree Plan and Sheet L1.10 for information about the condition of the trees, crown diameter, and proposed action for each tree. One (1) Oregon white oak (Garry oak) tree was identified on the site and are shown on the tree survey; the tree will be protected.

3. *Tree Protection. A statement describing how trees intended to remain will be protected during development, and where protective barriers are necessary, that they will be erected before work starts. Barriers shall be sufficiently substantial to withstand nearby construction activities. Plastic tape or similar forms of markers do not constitute "barriers."*

Response: See Appendix E page 1 for a description of activities permitted and prohibited within the root protection zone of trees to be protected. See also the Tree Protection Detail and note on Sheet L1.00.

4. *Easements and Setbacks. Location and dimension of existing and proposed easements, as well as all setbacks required by existing zoning requirements.*

Response: See Sheet P2.00 Preliminary Site Plan for setbacks required by zoning requirements. See Sheet P3.00 for the location and dimensions of proposed easements.

5. *Grade Changes. Designation of grade changes proposed for the property that may impact trees.*

Response: Sheet L1.00 Tree Removal and Protection Plan includes proposed grading contours.

6. *Cost of Replacement. A cost estimate for the proposed tree replacement program with a detailed explanation including the number, size and species.*

Response: This estimate will be provided if/as required.

7. *Tree Identification. A statement that all trees being retained will be identified by numbered metal tags, as specified in subsection "A," above in addition to clear identification on construction documents.*

Response: The Tree Plan Legend on Sheet L1.00 includes a statement identifying the purpose of the tree tags.

C. Section 4.620.00. Tree Relocation, Mitigation, Or Replacement

- (.01) **Requirement Established.** A Type B or C Tree Removal Permit grantee shall replace or relocate each removed tree having six (6) inches or greater d.b.h. within one year of removal.
- (.02) **Basis For Determining Replacement.** The permit grantee shall replace removed trees on a basis of one (1) tree replanted for each tree removed. All replacement trees must measure two inches (2") 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 proposed tree removal requires replacement of each tree having 6 inches or greater DBH within one year of removal. As noted on Sheet L1.00, 152 trees of 6 inches or greater DBH are proposed for removal. As shown and noted on Sheet L2.00, there are 31 street trees proposed on site and 72 trees proposed within Tract A, a total of 103 trees. Payment into the tree fund is requested for 47 trees.

- (.03) **Replacement Tree Requirements.** A mitigation or replacement tree plan shall be reviewed by the City prior to planting and according to the standards of this subsection.
- 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 (2) 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: There are 103 replacement trees proposed, including street trees. The replacement street trees have been selected from the City's street tree list. Replacement trees will be maintained and replaced if they die within the two-year establishment period.

- (.04) All trees to be planted shall consist of nursery stock that meets requirements of the American Association of Nurserymen (AAN) American Standards for Nursery Stock (ANSI Z60.1) for top grade.
- (.05) **Replacement Tree Location.**
- A. *City Review Required.* The City shall review tree relocation or replacement plans in order to provide optimum enhancement, preservation and protection of wooded areas. To the extent feasible and desirable, trees shall be relocated or replaced on-site and within the same general area as trees removed.
 - B. *Relocation or Replacement Off-Site.* When it is not feasible or desirable to relocate or replace trees on-site, relocation or replacement may be made at another location approved by the City.

Response: The tree replacement plan/landscaping plan is included as Sheet L2.00. Replacement trees consist of street trees and trees within Tract A. Trees will likely be planted on the individual dwelling lots at the time of site development but are not proposed to be included in the replacement tree plans. The standard is met.

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

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

Response: There are 152 trees proposed for removal, and 105 replacement trees proposed on site. Payment into the City Tree Fund is requested for 47 trees.

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

Response: The applicant is not requesting an exception to the tree replacement requirement.

Section 4.620.10. Tree Protection During Construction

- (.01)** *Where tree protection is required by a condition of development under Chapter 4 or by a Tree Maintenance and Protection Plan approved under this subchapter; the following standards apply:*
- A. *All trees required to be protected must be clearly labeled as such.*
 - B. *Placing Construction Materials Near Tree. No person may conduct any construction activity likely to be injurious to a tree designated to remain, including, but not limited to, placing solvents, building material, construction equipment, or depositing soil, or placing irrigated landscaping, within the drip line, unless a plan for such construction activity has been approved by the Planning Director or Development Review Board based upon the recommendations of an arborist.*
 - C. *Attachments to Trees During Construction. Notwithstanding the requirement of WC 4.620.10(1)(A), no person shall attach any device or wire to any protected tree unless needed for tree protection.*
 - D. *Protective Barrier. Before development, land clearing, filling or any land alteration for which a Tree Removal Permit is required, the developer shall erect and maintain suitable barriers as identified by an arborist to protect remaining trees. Protective barriers shall remain in place until the City authorizes their removal or issues a final certificate of occupancy, whichever occurs first. Barriers shall be sufficiently substantial to withstand nearby construction activities. Plastic tape or similar forms of markers do not constitute "barriers." The most appropriate and protective barrier shall be utilized. Barriers are required for all trees designated to remain, except in the following cases:*
 - 1. *Right-of-Ways and Easements. Street right-of-way and utility easements may be cordoned by placing stakes a minimum of fifty (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: Sheet L1.00 and the Tree Plan included as Appendix E provide direction regarding the protection of trees on the site.

X. Annexations and Urban Growth Boundary Amendments

A. Section 4.700. Procedures Relating To The Processing Of Requests For Annexation And Urban Growth Boundary Amendments.

(.01) *The City of Wilsonville is located within the Portland Metropolitan Area, and is therefore subject to regional government requirements affecting changes to the city limits and changes to the Urban Growth Boundary (UGB) around Wilsonville. The City has the authority to annex properties as prescribed in State law, but the City's role in determining the UGB is primarily advisory to Metro, as provided in Oregon Revised Statutes. The following procedures will be used to aid the City Council in formulating recommendations to those regional entities. [Amended by Ordinance No. 538, 2/21/02.]*

- A. *Proponents of such changes shall provide the Planning Director with all necessary maps and written information to allow for review by city decision-makers. The Planning Director, after consultation with the City Attorney, will determine whether each given request is quasi-judicial or legislative in nature and will make the necessary arrangements for review based upon that determination.*

Response: The applicant has provided the required information. The Planning Director has determined that the annexation request is subject to quasi-judicial review.

- B. *Written information submitted with each request shall include an analysis of the relationship between the proposal and the City's Comprehensive Plan, applicable statutes, as well as the Statewide Planning Goals and any officially adopted regional plan that may be applicable.*

Response: See Section III of this narrative for a discussion of the relationship between the proposed annexation and the City's Comprehensive Plan.

XI. Conclusion

The request for the Frog Pond Terrace development and related approvals has been shown to be consistent with the applicable standards of the City of Wilsonville. West Hills Land Development LLC respectfully requests approval of the applications.

Appendix A

City of Wilsonville Annexation Petitions and Certifications

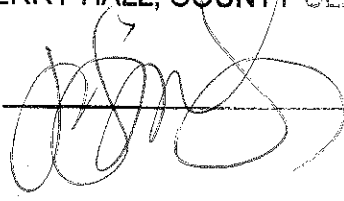
CERTIFICATION OF REGISTERED VOTERS

I hereby certify that the attached petition contains the names of at least 50% of the electors registered in the territory proposed for annexation as described in the attached petition.



NAME Jennifer Wessels
TITLE Deputy Clerk
DEPARTMENT Elections
COUNTY OF Clackamas
DATE 2-3-2028

**CERTIFIED COPY OF THE ORIGINAL
SHERRY HALL, COUNTY CLERK**

BY: 

CERTIFICATION OF LEGAL DESCRIPTION AND MAP

I hereby certify that the description of the property included within the attached petition (located on Assessor's Map 351W12D) has been checked by me and it is a true and exact description of the property under consideration, and the description corresponds to the attached map indicating the property under consideration.

NAME Andrew T Mehos
TITLE GIS Cartographer II
DEPARTMENT Assessment And Taxation
COUNTY OF Clackamas
DATE: 3 February 2022



EXHIBIT A
LEGAL DESCRIPTION for ANNEXATION
 May 17, 2022 (Otak #20015)

Those properties described in Statutory Warranty Deed to Marchil Investments, LLC recorded February 6, 2006 as Document No. 2006-011023, in Quitclaim Deed to Donnie L. Martin recorded November 5, 2021 as Document No. 2021-098893, and in Statutory Bargain and Sale Deed to Douglas E. George and Colleen R. George, Trustees, recorded September 8, 2020 as Document No. 2020-073265, all of Clackamas County Records, together with portions of S.W. Frog Pond Lane, (County Road No. 2362), in the southeast quarter of Section 12, Township 3 South, Range 1 West, Willamette Meridian, Clackamas County, Oregon, more particularly described as follows:

BEGINNING at a 5/8 inch iron rod with yellow plastic cap marked "PIONEER DESIGN" found at the northwest corner of MORGAN FARM NO. 2, Plat No. 4610, Clackamas County Records which bears North 01°40'13" East along the east line of the southeast quarter of said section a distance of 858.59 feet, and North 88°36'41" West along the north line of said MORGAN FARM NO. 2 and the easterly extension thereof a distance of 3212.90 feet from the southeast corner of said section, said POINT OF BEGINNING being the southwest corner of said Marchil Investments property;

thence along the east lines of those properties described in deeds to William Z. Spring recorded June 1, 1985 recorded as Document No. 1985-019621, and to Jonathan A. and Laurie E. Clarke recorded June 2, 2015, as Document No. 2015-033122, both of Clackamas County Records, North 05°28'14" West a distance of 173.82 feet to a 2 inch by 2 inch H-beam survey monument found at an angle point in the east lines of said Document No. 2015-033122 property;

thence along the east line of said Clarke property, North 12°48'33" East a distance of 31.08 feet to a 5/8 inch iron rod found at the southeast corner of Partition Plat No. 1998-137, Clackamas County Records

thence along the east line of said Partition Plat, North 13°45'33" East a distance of 184.36 feet to a 5/8 inch iron rod with red plastic cap marked "CENTERLINE CONCEPTS" found at the southeast corner of Tract E, COPPER CREEK, Plat No. 4357, Clackamas County Records;

thence along the east lines of said Tract E through the following two courses:
 North 13°21'42" East a distance of 219.83 feet to a 5/8 inch iron rod with yellow plastic cap marked "DE HASS ASSOC. INC.",
 and North 62°40'55" East a distance of 165.32 feet to a 5/8 inch iron rod with yellow plastic cap marked "DE HASS ASSOC. INC." found at an angle point in the east lines of said Tract E;

thence along the east lines of said Tract E, of that property described deed to the City of Wilsonville recorded March 7, 1997 as Document No. 97-016880, Clackamas County Records, and of Tract R of CANYON CREEK MEADOWS recorded in Book 108, Page 16, Clackamas County Plat Records, North 50°52'05" East a distance of 278.16 feet to a point on the south right of way line of 33.00 foot wide S.W. Frog Pond Lane at the westerly terminus thereof;

thence along said westerly terminus of S.W. Frog Pond Lane (County Road No. 2362) also being a portion of the southeast line of said Tract R, North 50°52'05" East a distance of 50.77 feet to a point on the north right of way line of said S.W. Frog Pond Lane;

thence along said north right of way line, South 88°35'30" East a distance of 288.75 feet;

thence South 01°24'30" West a distance of 33.00 feet to a point on said south right of way line;

thence along said south right of way line, North 88°35'30" West a distance of 80.43 feet to the northeast corner of that property described in Quitclaim Deed to Donnie L. Martin recorded November 5, 2021 as Document No. 2021-098893, Clackamas County Records;

thence along the southeast line of said Martin property, South 46°32'22" West a distance of 36.85 feet to the southwest corner of said Martin property and a point on the west line of that property described in Statutory Bargain and Sale Deed to P.J. O'Hogan and Sharon L. O'Hogan, Trustees, recorded June 30, 2003 as Document No. 2003-083133, Clackamas County Records;

thence along said west line, South 01°40'13" West a distance of 832.25 feet to a point on the north line of said MORGAN FARMS NO. 2 referenced by a 5/8 inch iron rod with no cap found North 51°42'34" East a distance of 0.07 feet of said point;

thence along said north line, North 88°36'41" West a distance of 643.63 feet to the POINT OF BEGINNING.

Contains 11.168 acres, more or less.

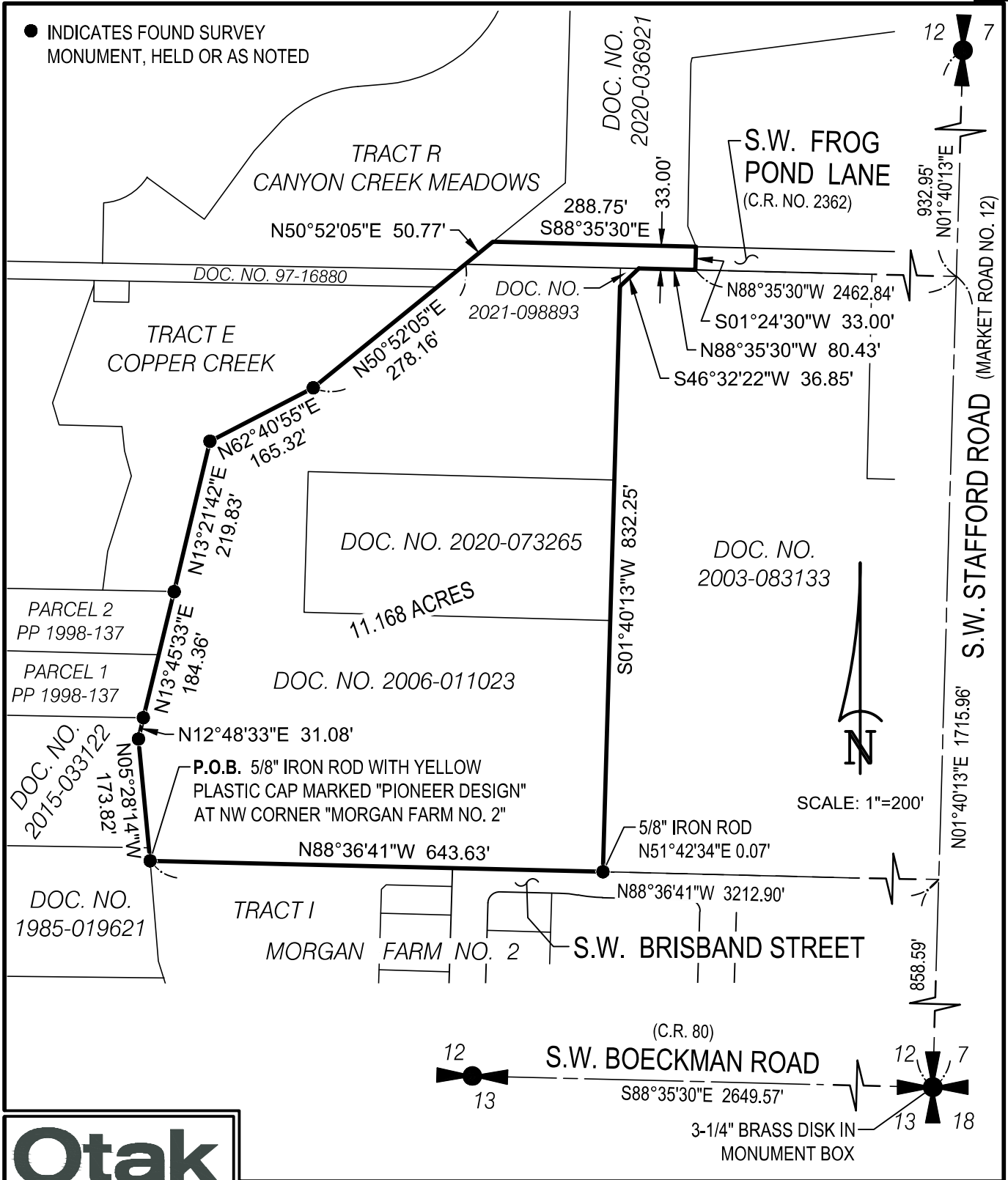
REGISTERED
PROFESSIONAL
LAND SURVEYOR

2022.05.17
11:26:47-07'00'

OREGON
NOVEMBER 12, 2013
MICHAEL D. SPELTS
87475PLS

RENEWS: JUNE 30, 2024

● INDICATES FOUND SURVEY MONUMENT, HELD OR AS NOTED



Otak

808 SW 3rd Ave., Ste. 800
Portland, Oregon 97204
Phone: (503) 287-6825
www.otak.com
project: 20015

EXHIBIT B

ANNEXATION OF THE MARTIN, MARCHIL & GEORGE
PROPERTIES & A PORTION OF S.W. FROG POND LANE
IN THE SOUTHEAST QUARTER OF SECTION 12, TOWNSHIP 3 SOUTH, RANGE 1
WEST, WILLAMETTE MERIDIAN, CLACKAMAS COUNTY, OREGON

MAY 17, 2022

**CERTIFICATION OF PROPERTY OWNERSHIP OF
100% OF LAND AREA**

I hereby certify that the attached petition contains the names of the owners¹ (as shown on the last available complete assessment roll) of 100% of the land area of the territory proposed for annexation as described in the attached petition.

NAME Andrew T Mehos
TITLE GIS Cartographer II
DEPARTMENT Assessment And Taxation
COUNTY OF Clackamas
DATE 3 February 2022



¹ Owner means the legal owner of record or, where there is a recorded land contract which is in force, the purchaser thereunder. If a parcel of land has multiple owners, each consenting owner shall be counted as a percentage of their ownership interest in the land. That same percentage shall be applied to the parcel's land mass and assessed value for purposes of the consent petition. If a corporation owns land in territory proposed to be annexed, the corporation shall be considered the individual owner of that land.

SEE MAP 3 1W 12CA

3-27 UR

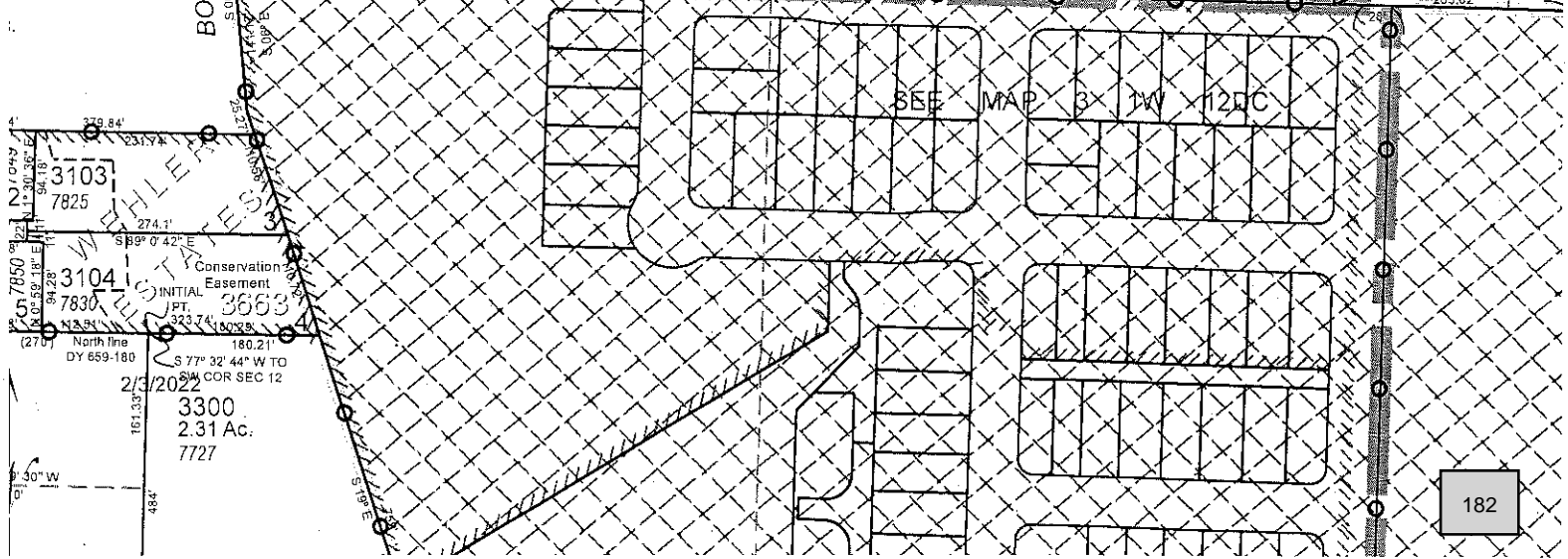
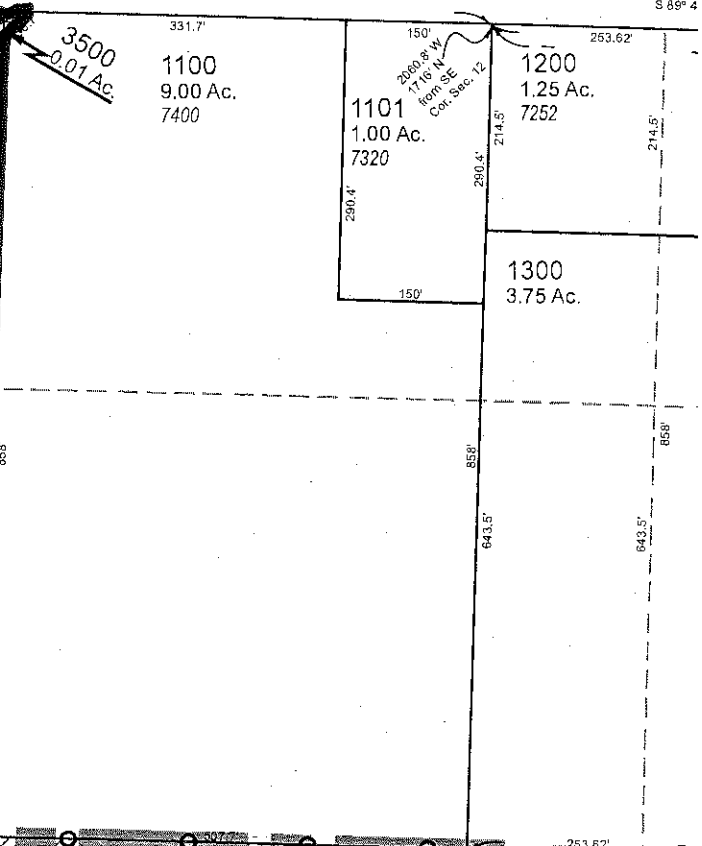
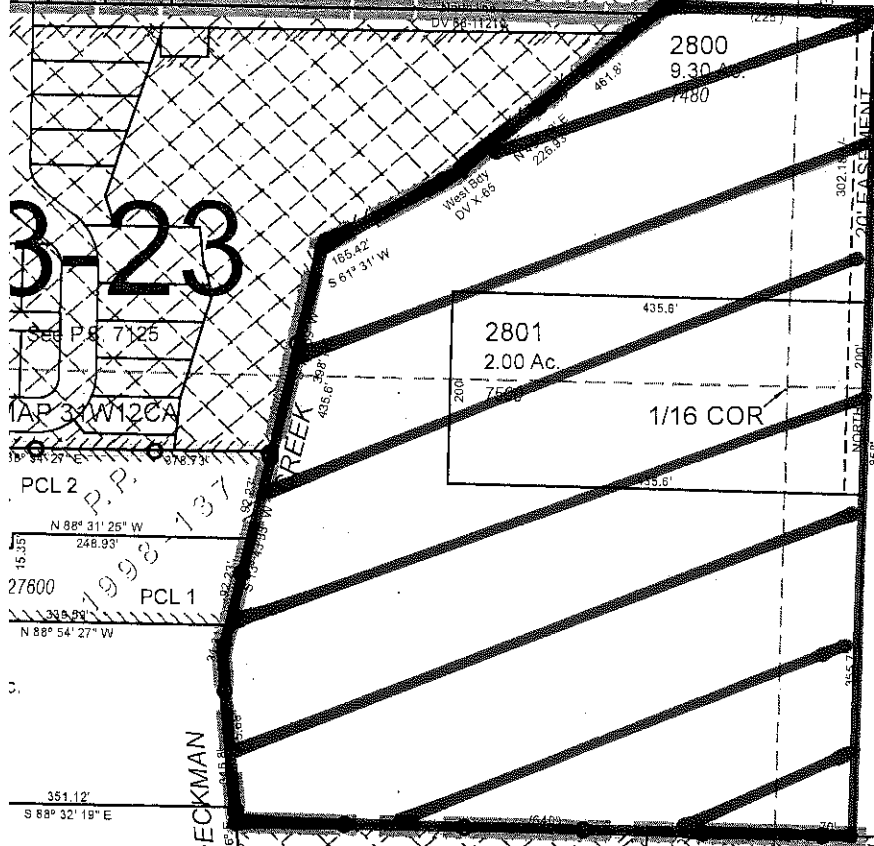
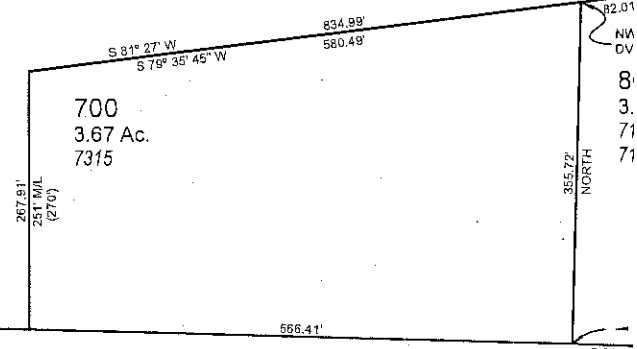


EXHIBIT A
LEGAL DESCRIPTION for ZONE CHANGE
 May 17, 2022 (Otak #20015)

Those properties described in Statutory Warranty Deed to Marchil Investments, LLC recorded February 6, 2006 as Document No. 2006-011023, in Quitclaim Deed to Donnie L. Martin recorded November 5, 2021 as Document No. 2021-098893, and in Statutory Bargain and Sale Deed to Douglas E. George and Colleen R. George, Trustees, recorded September 8, 2020 as Document No. 2020-073265, all of Clackamas County Records, in the southeast quarter of Section 12, Township 3 South, Range 1 West, Willamette Meridian, Clackamas County, Oregon, more particularly described as follows:

BEGINNING at a 5/8 inch iron rod with yellow plastic cap marked "PIONEER DESIGN" found at the northwest corner of MORGAN FARM NO. 2, Plat No. 4610, Clackamas County Records which bears North 01°40'13" East along the east line of the southeast quarter of said section a distance of 858.59 feet, and North 88°36'41" West along the north line of said MORGAN FARM NO. 2 and the easterly extension thereof a distance of 3212.90 feet from the southeast corner of said section, said POINT OF BEGINNING being the southwest corner of said Marchil Investments property;

thence along the east lines of those properties described in deeds to William Z. Spring recorded June 1, 1985 recorded as Document No. 1985-019621, and to Jonathan A. and Laurie E. Clarke recorded June 2, 2015, as Document No. 2015-033122, both of Clackamas County Records, North 05°28'14" West a distance of 173.82 feet to a 2 inch by 2 inch H-beam survey monument found at an angle point in the east lines of said Document No. 2015-033122 property;

thence along the east line of said Clarke property, North 12°48'33" East a distance of 31.08 feet to a 5/8 inch iron rod found at the southeast corner of Partition Plat No. 1998-137, Clackamas County Records

thence along the east line of said Partition Plat, North 13°45'33" East a distance of 184.36 feet to a 5/8 inch iron rod with red plastic cap marked "CENTERLINE CONCEPTS" found at the southeast corner of Tract E, COPPER CREEK, Plat No. 4357, Clackamas County Records;

thence along the east lines of said Tract E through the following two courses:
 North 13°21'42" East a distance of 219.83 feet to a 5/8 inch iron rod with yellow plastic cap marked "DE HASS ASSOC. INC.",
 and North 62°40'55" East a distance of 165.32 feet to a 5/8 inch iron rod with yellow plastic cap marked "DE HASS ASSOC. INC." found at an angle point in the east lines of said Tract E;

thence along the east lines of said Tract E, of that property described deed to the City of Wilsonville recorded March 7, 1997 as Document No. 97-016880, Clackamas County Records, and of Tract R of CANYON CREEK MEADOWS recorded in Book 108, Page 16, Clackamas County Plat Records, North 50°52'05" East a distance of 278.16 feet to a point on the south right of way line of 33.00 foot wide S.W. Frog Pond Lane (County Road No. 2362) at the westerly terminus thereof;

thence along said south right of way line, South 88°35'30" East a distance of 246.90 feet to the northeast corner of that property described in Quitclaim Deed to Donnie L. Martin recorded November 5, 2021 as Document No. 2021-098893, Clackamas County Records;

thence along the southeast line of said Martin property, South 46°32'22" West a distance of 36.85 feet to the southwest corner of said Martin property and a point on the west line of that property described in Statutory Bargain and Sale Deed to P.J. O'Hogan and Sharon L. O'Hogan, Trustees, recorded June 30, 2003 as Document No. 2003-083133, Clackamas County Records;

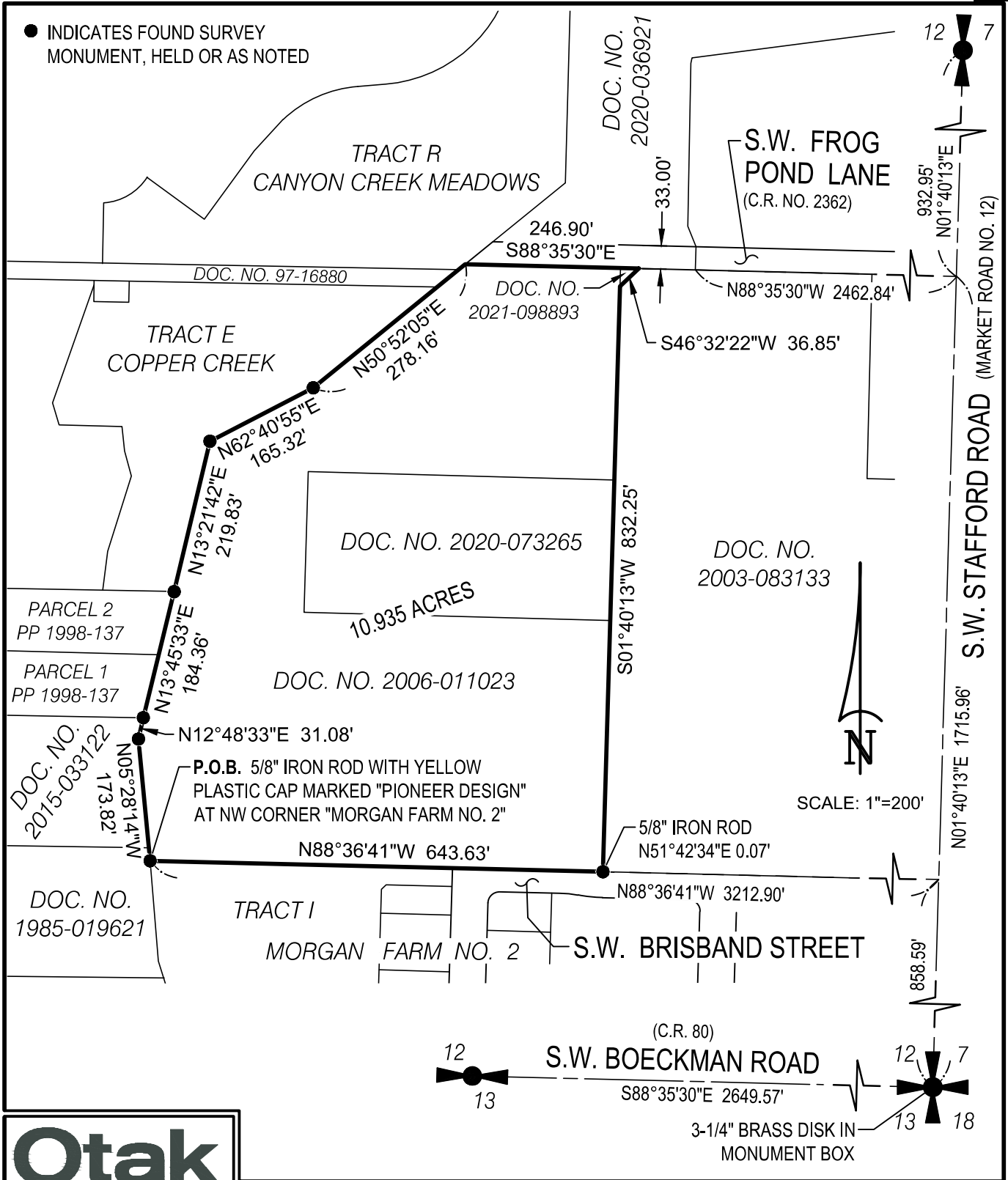
thence along said west line, South 01°40'13" West a distance of 832.25 feet to a point on the north line of said MORGAN FARMS NO. 2 referenced by a 5/8 inch iron rod with no cap found North 51°42'34" East a distance of 0.07 feet of said point;

thence along said north line, North 88°36'41" West a distance of 643.63 feet to the POINT OF BEGINNING.

Contains 10.935 acres, more or less.

REGISTERED
PROFESSIONAL
LAND SURVEYOR
2022.05.17
11:24:18-07'00'
OREGON
NOVEMBER 12, 2013
MICHAEL D. SPELTS
87475PLS
RENEWS: JUNE 30, 2024

● INDICATES FOUND SURVEY MONUMENT, HELD OR AS NOTED



Otak

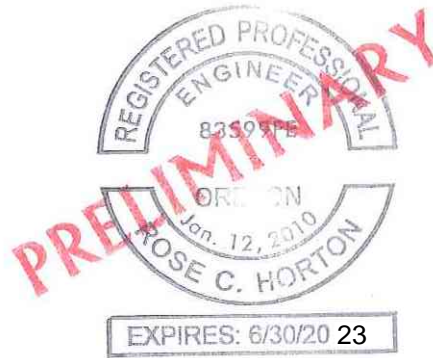
808 SW 3rd Ave., Ste. 800
Portland, Oregon 97204
Phone: (503) 287-6825
www.otak.com
project: 20015

EXHIBIT B

ZONE CHANGE, MARTIN, MARCHIL & GEORGE PROPERTIES
IN THE SOUTHEAST QUARTER OF SECTION 12, TOWNSHIP 3 SOUTH, RANGE 1
WEST, WILLAMETTE MERIDIAN, CLACKAMAS COUNTY, OREGON

MAY 17, 2022

Appendix B
Preliminary Stormwater Report dated
May 2022 by Otak, Inc.



Frog Pond Terrace, Frog Pond Overlook
Preliminary Storm Drainage Report
Land Use

Submitted to:
City of Wilsonville
29799 SW Town Center Loop E.
Wilsonville, OR 97070

Prepared by:
Otak, Inc.
808 SW Third Avenue, Suite 800
Portland, OR 97204

May 2022

Project No. 20015

Acknowledgements

Project Name: Frog Pond Terrace, Frog Pond Overlook
Type of Report: Preliminary
Submittal Level: Land Use

Site Information

Subject Property: 31W12D Tax lots 700, 2800, 2801
Applicant Information: Dan Grimberg
West Hills Land Development
3330 NW Yeon St. Suite 200
Portland, OR 97210
503-789-0358

Project Development Team

Stormwater Lead: Rose Horton, PE
Stormwater Designer: Teresa Huntsinger, PE and Roger Tiffany, EIT

TABLE OF CONTENTS

	Page
Section 1. Introduction	1
Section 2. Project Description	1
Permitting.....	2
Existing Conditions	2
Proposed Conditions	2
Section 3. Hydrology	2
Rainfall Depth	2
Pollutants of Concern	2
Wetlands.....	3
Soils	3
Flood Hazard	3
Section 4. Methodology.....	3
BMP Sizing Tool Hydrology	4
Drainage	4
Conveyance.....	4
Section 5. Water Quality Treatment	5
Low Impact Development	5
Water Quality Facilities	5
Section 6. Flow Control.....	5
Section 7. Operations and Maintenance.....	6
Section 8. Conclusion	6
Section 9. References	6

TABLES

Table 1	24 Hour Precipitation Depths	2
Table 2	Pollutants of Concern	2
Table 3	Facility Summary Table.....	5

FIGURES

Figure 1	Existing Conditions
Figure 2	Frog Pond Terrace– Proposed Conditions
Figure 3	Frog Pond Overlook – Proposed Conditions

APPENDICES

Appendix A	Hydrology
Appendix B	Geotechnical Report
Appendix C	Downstream Analysis
Appendix D	BMP Sizing Tool Output
Appendix E	Operations and Maintenance Plans

Section 1. Introduction

The Frog Pond Terrace and Frog Pond Overlook sites are proposed residential developments located within the West Neighborhood of the Frog Pond Area Plan. The combined 8.81 acres of property and right-of-way are comprised of Tax map 31W12D lots 700 (Terrace), 2800 and 2801 (Overlook) in Clackamas County within the City of Wilsonville Urban Growth Boundary (UGB) (see Vicinity Map). The Frog Pond Terrace and Frog Pond Overlook developments will consist of 19 and 12 single-family residential dwellings respectively as well as associated public infrastructure improvements including SW Frog Pond Lane, resulting in 4.53 acres in new or replaced impervious surface area.

The purpose of this document is to demonstrate compliance of the Frog Pond Terrace and Frog Pond Overlook stormwater management system with the City of Wilsonville Stormwater and Surface Water Design and Construction Standards (2015). Descriptions of the existing and proposed hydrologic conditions, as well as documentation showing compliance of the proposed onsite stormwater management system with City of Wilsonville standards for water quality and quantity are included in this report.



Section 2. Project Description

The Frog Pond Terrace and Frog Pond Overlook proposed residential developments consist of 31 new single-family lots, local street extensions, as well as sidewalks, public roadway improvements, utilities, and stormwater management systems that discharge to Boeckman Creek. Additionally, this project will include frontage improvements to SW Frog Pond Lane.

Permitting

The following permit applications will be required for this project:

- City of Wilsonville Development Permit
- Section 401 water quality certification from DEQ

Existing Conditions

The project site, shown in Figure 1, is primarily agricultural with a home and outbuildings that comprise 0.46 areas of impervious area. The Frog Pond Terrace project site slopes west at about 5% while the Frog Pond Overlook project site slopes north at about 4%. The right-of-way (ROW) of SW Frog Pond Lane that fronts on the Frog Pond Overlook site includes 0.02 acres of impervious pavement. Both project sites slope towards Boeckman Creek. This proposed project will maintain drainage patterns.

Proposed Conditions

Site improvements will include construction of approximately 4.53 acres of new or replaced impervious surfaces in the form of roof, roadway, and sidewalk area. A detention pond and vegetated stormwater swales are proposed to be constructed within the right-of-way and tracts to provide low impact development water quality treatment and flow control throughout the proposed residential developments. Runoff from approximately 14.65 acres of undeveloped offsite area will be conveyed through the site's stormwater infrastructure.

Section 3. Hydrology

Rainfall Depth

The following rainfall depths listed in Table 3.1 are provided in the City of Wilsonville Public Works Standards (2015). These depths correspond to design recurrence intervals which are used in hydrologic calculations for various aspects of stormwater management design.

Table 1 24 Hour Precipitation Depths

Recurrence Interval (Years)	Total Precipitation Depth (inches)
2	2.50
10	3.45
25	3.90
100	4.50

Pollutants of Concern

The pollutants of concern are those typically found in roadway runoff. These include sediment, oil and grease, polycyclic aromatic hydrocarbons (PAHs), metals such as Copper, Zinc, and Lead as well as pesticides and other nutrients (DEQ, 2016). Table 3.2 lists each waterway affected by this project and DEQ listing status.

Table 2 Pollutants of Concern

Waterway	Parameter	Listing Status
Boeckman Creek	N/A	None
Willamette River (Middle)	Chlorophyll a	303(d), TMDL needed

Waterway	Parameter	Listing Status
Willamette River (Middle)	E. Coli	TMDL approved
Willamette River (Middle)	Mercury	303(d), TMDL needed
Willamette River (Middle)	Temperature	TMDL approved

Wetlands

Wetland and water boundaries were delineated by AKS Engineering and Forestry on December 2, 2021. Wetlands were delineated adjacent to Boeckman Creek. The project is not anticipated to impact wetlands or waters. The project will impact the Significant Resource Overlay Zone (SROZ). Discussion of the impacts to sensitive areas will be provided by the environmental consultant, AKS.

Soils

The Web Soil Survey published by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) was referenced to determine the soil names, symbols, and hydrologic soil groups found on the project site. The soil type identified within the project area is identified as Woodburn silt loam (91B/C). These soils are classified as hydrologic soil type C, which in an undrained condition generally exhibit slow infiltration rates when thoroughly wet. The USDA soil survey map and the corresponding hydrologic soil group (HSG) for the area of interest are provided in Appendix A.

A geotechnical investigation was conducted to determine the site strata and infiltration rates. The field exploitation did not encounter the static groundwater table and well data indicates that the groundwater table is at least 20 feet below ground surface. Perched groundwater conditions may occur during the wet season. Infiltration testing at a depth of five to six feet below ground surface yielded infiltration rates between 0.6 to 1.2 inches/hour. The geotechnical engineer stated that the lower value is more representative of the site and that a factor of safety of at least 2 be applied to the design infiltration rate. The onsite Geotechnical Memorandum by Hardman Geotechnical Services is included in Appendix B.

Flood Hazard

The proposed development for this site is located outside the 100-year floodplain boundary designated by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Clackamas County, Oregon and Incorporated Areas, Panel 234, June 17, 2008. See Appendix A for the FIRMette of the proposed site.

Section 4. Methodology

The stormwater system for the proposed Frog Pond Terrace/Overlook development was modeled using the following methods and design standards:

- **Water Quality:** The City of Wilsonville requires capture and treatment of 80% of the average annual runoff (approximately 1-inch in 24 hours). The City of Wilsonville has adopted a BMP Sizing Tool that was developed to aid in the design of detention and water quality low impact development facilities. The City of Wilsonville BMP Sizing Tool was used to size the minimum facility footprint areas to meet the water quality treatment standard.
- **Flow Control:** The BMP sizing tool was also simultaneously used to calculate facility sizes to include flow control. This tool provides the necessary calculations to design a facility to meet the City's flow

duration matching standards whereby the “duration of peak flow rates from post development conditions shall be less than or equal to the duration of peak flow rates from pre-development conditions for all peak flows between 42% of the 2-year storm peak flow rate up to the 10-year peak flow rate.”

- **Conveyance:** The Santa Barbara Urban Hydrograph (SBUH) method will be used to calculate design conveyance flow rates and XP-SWMM software will be used to size the project conveyance system. The City’s design event for pipe conveyance is the 25-year, 24-hour storm, requiring 1-foot of freeboard between the hydraulic grade line and finished grade at structure rims.

BMP Sizing Tool Hydrology

The BMP Sizing Tool was created to aid in designing low impact development facilities for both treating stormwater runoff and matching flow durations between target conditions and developed conditions. City standards consider target conditions to be pre-development, prior to any human settlement. City of Wilsonville standards stipulate that the pre-developed vegetation of Oak Savannah, which applies to the project site, should be modeled in the sizing tool as grass. Proposed conditions were set to paved conditions for roof, roadway, and sidewalk, and set to landscaped conditions for landscaped and other disturbed pervious areas within the project boundary.

A detention pond and vegetated filtration swales will function to provide both water quality and flow control mitigation. The BMP Sizing Tool provides minimum facility footprint areas for treatment and flow control. The BMP Sizing Tool also provides the required orifice sizes for incorporating the flow control component into these facilities.

Drainage

The developed site drains to Boeckman Creek over a mile north of its discharge point at the Willamette River. The Boeckman Creek drainage basin upstream of the project site is approximately 800 acres and the project area comprises less than 2% of the contributing drainage basin. Boeckman Creek is confined to a deep channel approximately 40 feet below the adjacent developments. A flow control structure on the creek exists in Boeckman Creek directly upstream of SW Boeckman Road (Wilsonville, 1992). Otak conducted a downstream impact analysis on the downstream section of Boeckman Creek per City of Wilsonville standards and the downstream impact analysis is included in Appendix C.

Conveyance

The proposed development will include a piped conveyance network that will convey flows to Boeckman Creek. Pipes draining the project site will be designed to meet City of Wilsonville conveyance standards.

The Santa Barbara Urban Hydrograph (SBUH) method will be used to calculate runoff rates generated under proposed developed conditions for contributing onsite areas as well as offsite upstream areas. The City of Wilsonville Public Works Standards (2015) identifies the 25-year, 24-hour storm to be used for conveyance design, maintaining 1-foot of clearance between the hydraulic grade line and conveyance structure rim elevations. The City also requires an assessment of the 100-year storm event impacts to the proposed system. Flow rates during the 100-year may be conveyed overland but are not expected to inundate existing structures. The stormwater conveyance network will be sized during final design.

Section 5. Water Quality Treatment

Low Impact Development

The City of Wilsonville promotes the use of Low Impact Development (LID) approaches to meet water quality treatment standards. Locations of LID facilities for water quality treatment for the Frog Pond Terrace and Frog Pond Overlook project site are shown on Figures 2 and 3.

Water Quality Facilities

Water quality treatment will be provided through a detention pond and filtration vegetated swales. The BMP Sizing Tool was used to calculate minimum facility sizes to satisfy water quality requirements. Facility sizing calculation reports from the BMP Sizing Tool are provided in Appendix D.

The proposed ten-foot wide pedestrian trail along the west end of the site is located adjacent to a steep slope where it is not feasible to install stormwater management facilities. Runoff from the trail will sheet flow through a vegetated area toward Boeckman Creek. The trail is located 100 – 250 feet away from the creek.

Section 6. Flow Control

City of Wilsonville Public Works Standards (2015) requires the use of flow attenuation when a proposed development increases impervious surface area by more than 5,000 square feet. Therefore, this project site will require flow control mitigation prior to discharging site runoff to downstream conveyance systems (open or closed channels or conduits). Per City requirements, the “post-development conditions shall be less than or equal to the duration of peak flow rates from pre-development conditions for all peak flows between 42% of the 2-year storm peak flow rate up to the 10-year peak flow rate.”

Flow control structures will be located immediately downstream of the detention pond and vegetated filtration swales, per the City’s standard detail. These facilities provide flow control by installing orifices at the end of their corresponding underdrain pipes to backwater flows into the available storage and voids present in facility soil and rock layers. Water is released from the facility through the orifice, which is sized to meter flows at a rate that meets flow control standards.

Orifices are provided for flow control purposes only; construction details of the flow control structures are provided on the plan sheets. Construction details of the flow control structures are provided on the plan sheets. A summary of facilities to serve this project is presented in Tables 3 and 4.

Table 3 Facility Summary Table

Basin ID	Facility ID	Function	LID Min. Size, BMP Output (sf)	LID Treatment Size, Site Plan (sf)	Orifice Diameter (in)
T11	Swale 1	WQ	150	342	0.6
T12	Swale 2	WQ, FC	314	336	0.8
T13	Swale 3	WQ, FC	357	384	0.9
O3	Swale 4	WQ	180	221	0.6
O4	Swale 5	WQ	162	192	0.6
FP2	Swale 6	WQ, FC	113	183	0.5
FP3	Swale 7	WQ, FC	179	248	0.6

Table 4 Detention Pond Summary Table

Basin ID	Facility ID	Function	Max Depth (ft)	Treatment Area (sf)
T1-T10, T14, O1, O2, O5, FP1, FP4	Pond	WQ, FC	5.0	7,523

Section 7. Operations and Maintenance

Vegetated facilities will be maintained by the private development. Operations and Maintenance requirements are included in Appendix E in conjunction with corresponding standard details for each type of facility. The following representative will be responsible for ongoing maintenance of onsite facilities: Dan Grimberg, Director of Land Development at West Hills Development, 503-641-7342.

Section 8. Conclusion

The proposed Frog Pond Terrace and Frog Pond Overlook developments will include a stormwater management system designed to comply with standards set forth by the City of Wilsonville. The proposed development will create 4.53 acres of impervious area. Runoff from impervious areas will be treated by LID facilities, including a detention pond and vegetated filtration swales. Flow control requirements will also be met by adding orifices at the downstream end of underdrain to regulate outflows from the detention pond and vegetated swales. The BMP Sizing Tool was used to calculate minimum facility and orifice sizes to satisfy water quality and flow control requirements. In accordance with City of Wilsonville standards, the conveyance system will be sized to convey the 25-year, 24-hour storm event with a minimum of one foot of freeboard between the hydraulic grade line (HGL) and the finished grade elevation.

Section 9. References

- AKS, 2021A. *Natural Resources Feasibility Map SW Frog Pond Lane Martin Properties*, AKS Engineering & Forestry, October 2021.
- AKS, 2021B. *Natural Resources Feasibility Map SW Frog Pond Lane Ross Properties*, AKS Engineering & Forestry, October 2021.
- AKS, 2021C. *Frog Pond Terrace Significant Resource Impact Report*, AKS Engineering & Forestry, December 2021.
- DEQ, 2016. *Section 401 Water Quality Certification*, State of Oregon Department of Environmental Quality, May 2016.
- FEMA, 2017. *FEMA Map Service Center*. <<http://msc.fema.gov/>> Accessed: December 11, 2019.
- Hardman, 2021. *Geotechnical Engineering and Infiltration Testing Report – Frog Pond West-West – Martin, George and Ross Properties, Wilsonville, Oregon*, Hardman Geotechnical Services Inc., December 15, 2021
- National Resource Conservation Services, 2018. *United States Department of Agriculture. Web Soil Survey*. <<http://websoilsurvey.nrcs.usda.gov/>> Accessed: August 17, 2021.

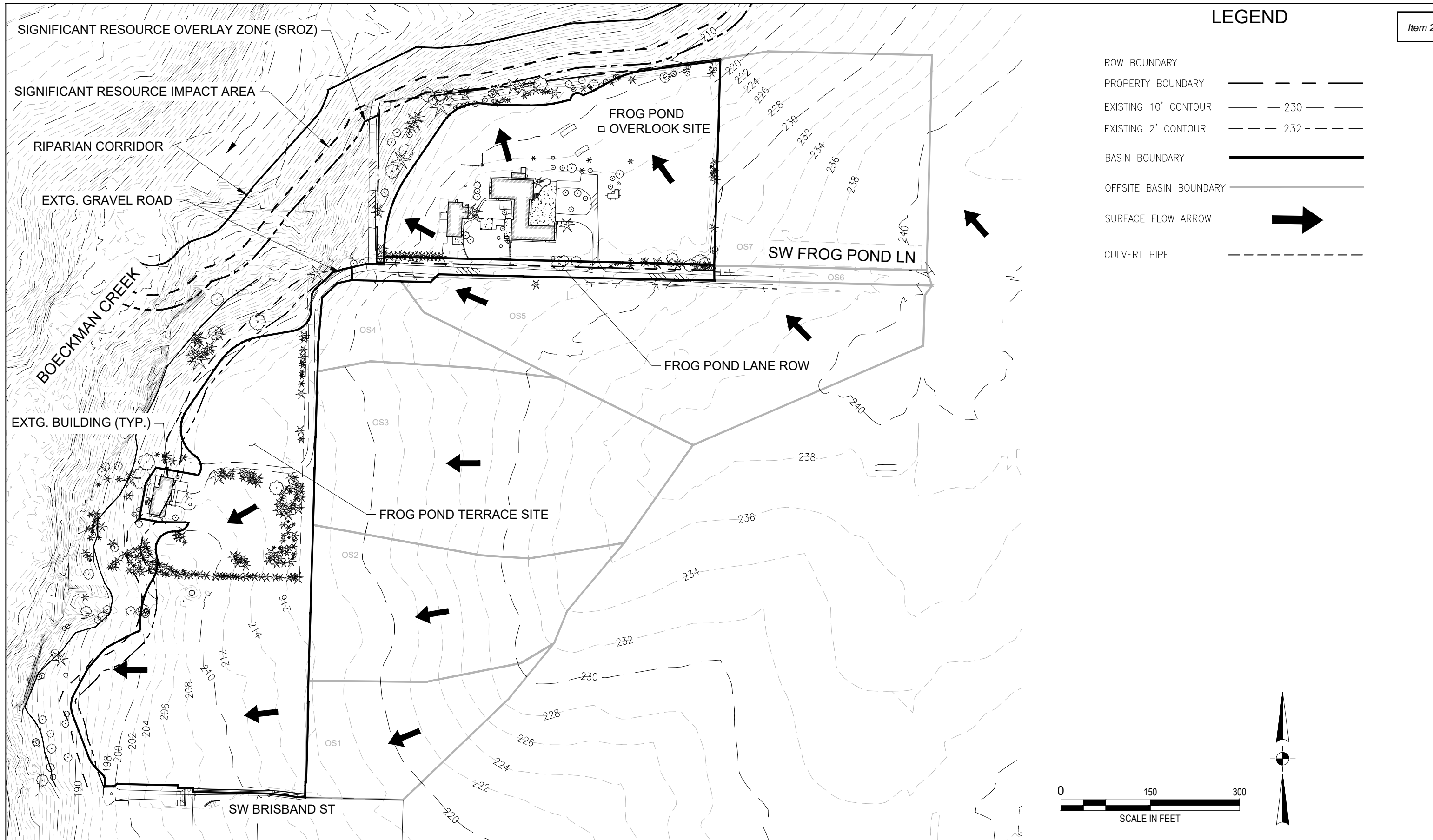
SCS, 1986. *Technical Release 55: Urban Hydrology for Small Watersheds*, United States Department of Agriculture Soil Conservation Service, June 1986.

USACE, 2014. *Standard Local Operating Procedures for Endangered Species (SLOPES V) to Administer Maintenance or Improvement of Stormwater, Transportation or Utility Actions*, United States Army Corps of Engineers, March 14, 2014.

Wilsonville, 1992. *Boeckman Creek Detention. Job No. 92-06-001*, City of Wilsonville, June 1992.

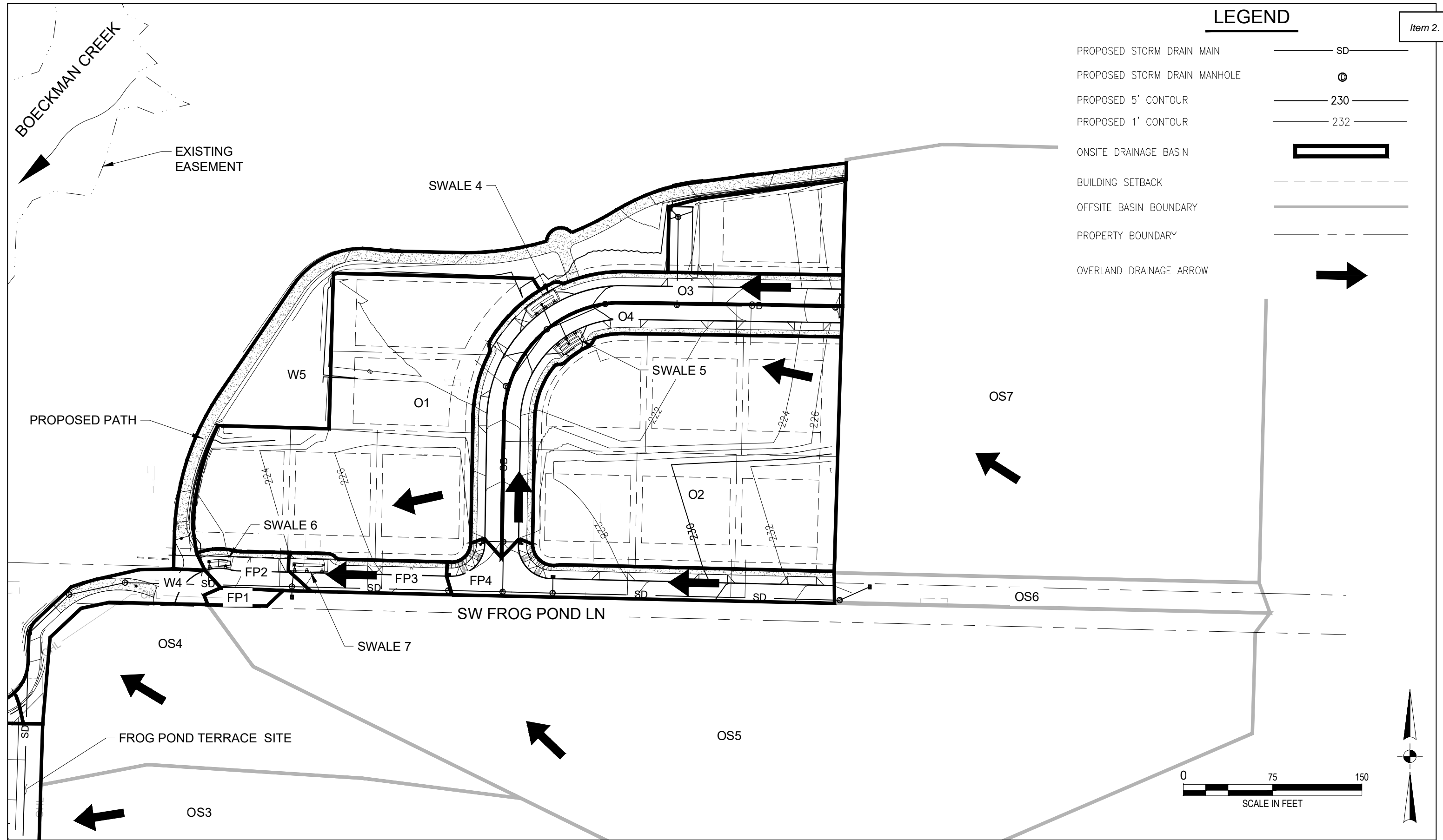
Wilsonville, 2015. *City of Wilsonville Public Works Standards. Section 3, Stormwater & Surface Water Design and Construction Standards 2015*; Revised December 2015.

Figures



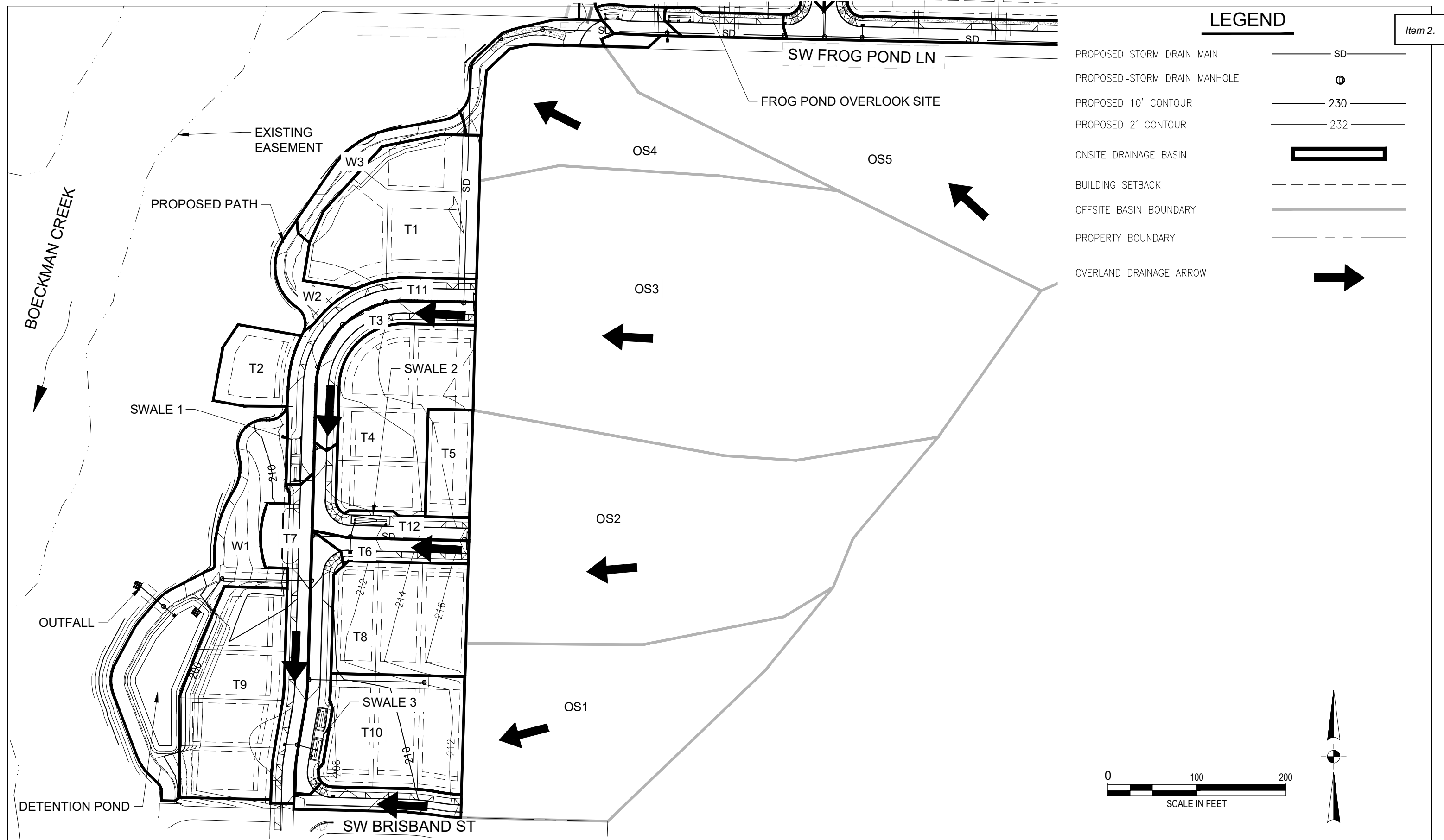
FROG POND TERRACE & OVERLOOK | PRELIMINARY DESIGN | EXISTING CONDITIONS

FIG 1 | MAY 2022 | PROJECT NUMBER: 20015



FROG POND OVERLOOK | PRELIMINARY DESIGN | PROPOSED CONDITIONS

FIG 3 | MAY 2022 | PROJECT NUMBER: 20015



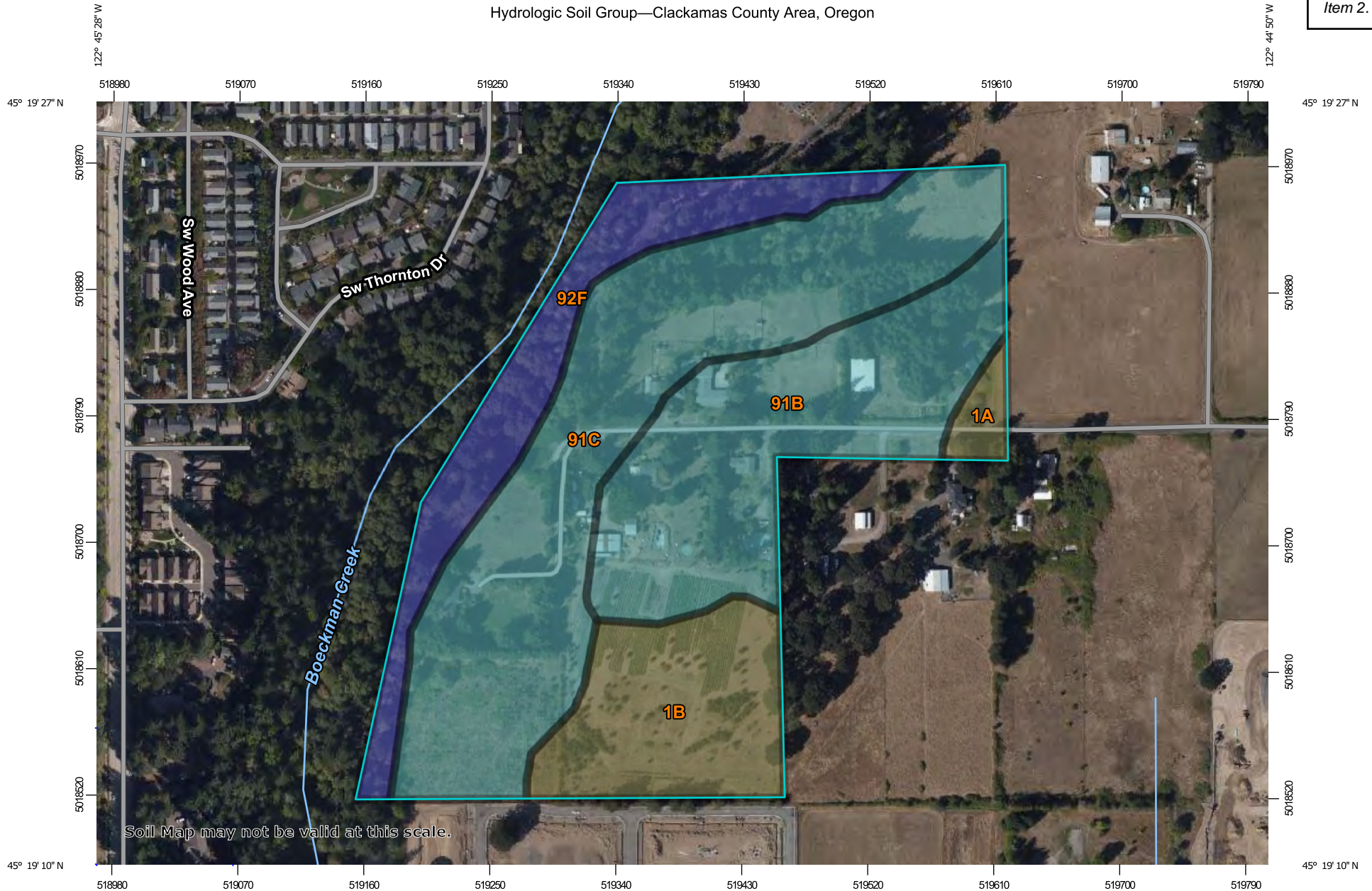
FROG POND TERRACE | PRELIMINARY DESIGN | PROPOSED CONDITIONS

Appendix A

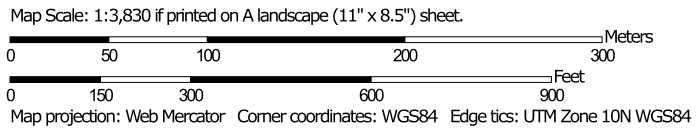
Hydrology

Hydrologic Soil Group—Clackamas County Area, Oregon

Item 2.




Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Lines

-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Points






-  A
-  A/D
-  B
-  B/D

-  C
-  C/D
-  D
-  Not rated or not available


Water Features

 Streams and Canals

Transportation

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

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

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

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

Soil Survey Area: Clackamas County Area, Oregon
 Survey Area Data: Version 16, Jun 11, 2020

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

Date(s) aerial images were photographed: Aug 1, 2019—Sep 12, 2019

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1A	Aloha silt loam, 0 to 3 percent slopes	C/D	0.6	1.9%
1B	Aloha silt loam, 3 to 6 percent slopes	C/D	5.1	15.1%
91B	Woodburn silt loam, 3 to 8 percent slopes	C	8.9	26.7%
91C	Woodburn silt loam, 8 to 15 percent slopes	C	13.9	41.3%
92F	Xerochrepts and Haploxerolls, very steep	B	5.0	15.0%
Totals for Area of Interest			33.5	100.0%

Description

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

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

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

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

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

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

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

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

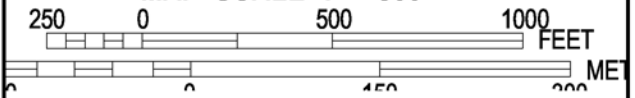
Tie-break Rule: Higher



JOINS PANEL 0253



MAP SCALE 1" = 500'



NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0234D

FIRM
FLOOD INSURANCE RATE MAP
CLACKAMAS COUNTY,
OREGON
AND INCORPORATED AREAS

PANEL 234 OF 1175
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

<u>COMMUNITY</u>	<u>NUMBER</u>	<u>PANEL</u>	<u>SUFFIX</u>
CLACKAMAS COUNTY	415588	0234	D
WILSONVILLE, CITY OF	410025	0234	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



MAP NUMBER
41005C0234D
EFFECTIVE DATE
JUNE 17, 2008

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Drainage Basin Areas

20015 Frog Pond Terrace, Frog Pond Overlook

Existing Conditions:

Basin Name	Impervious Area		Pervious Area		Total Area	
	Total (sf)	Total (ac)	Total (sf)	Total (ac)	(sf)	(ac)
Site Total	21076	0.48	362,700	8.33	383,776	8.81
Terrace	3,451	0.08	214,181	4.92	217,632	5.00
Overlook	16,780	0.39	131,665	3.02	148,445	3.41
ROW	845	0.02	16,854	0.39	17,699	0.406

Impervious Area per Lot 2,750 SF (2015 Public Works Stds 301.4.01)

Proposed Conditions:

31.0 lots

HSG Type C

Basin	Treated By	Impervious Area				Pervious Area		Total Area	
		Roadway (sf)	Roof (sf)	Total (sf)	Total (ac)	(sf)	(ac)	(sf)	(ac)
Site Total		110,770	85,250	197,378	4.53	152,956	3.51	383,550	8.81
T1	Pond	2,281	8,250	10,531	0.24	15,541	0.36	26,072	0.60
T2	Pond	0	2,750	2,750	0.06	4,073	0.09	6,823	0.16
T3	Pond	6,349	0	6,349	0.15	867	0.02	7,216	0.17
T4	Pond	0	11,000	11,000	0.25	14,166	0.33	25,166	0.58
T5	Pond	0	2,750	2,750	0.06	3,313	0.08	6,063	0.14
T6	Pond	3,553	0	3,553	0.08	475	0.01	4,028	0.09
T7	Pond	11,600	0	11,600	0.27	475	0.01	11,600	0.27
T8	Pond	0	8,250	8,250	0.19	475	0.01	18,955	0.44
T9	Pond	0	11,000	11,000	0.25	475	0.01	24,021	0.55
T10	Pond	0	8,250	8,250	0.19	475	0.01	19,640	0.45
T11	Swale 1	9,707	0	9,707	0.22	548	0.01	10,255	0.24
T12	Swale 2	5,835	0	5,835	0.13	889	0.02	6,724	0.15
T13	Swale 3	6,251	0	6,251	0.14	1,775	0.04	8,026	0.18
T14	Pond	4,741	0	4,741	0.11	0	0.00	4,741	0.11
O1	Pond	0	13,750	13,750	0.32	28,494	0.65	42,244	0.97
O2	Pond	0	16,500	16,500	0.38	32,114	0.74	48,614	1.12
O3	Swale 4	11,467	0	11,467	0.26	998	0.02	12,465	0.29
O4	Swale 5	10,399	0	10,399	0.24	815	0.02	11,214	0.26
O5	Pond	1,101	2,750	3,851	0.09	6,315	0.14	10,166	0.23
FP1	Pond	783	0	783	0.02	0	0.00	783	0.02
FP2	Swale 6	2,177	0	2,177	0.05	183	0.00	2,360	0.05
FP3	Swale 7	3,445	0	3,445	0.08	248	0.01	3,693	0.08
FP4	Pond	9,700	0	9,700	0.22	0	0.00	9,700	0.22
W1	Veg Corridor	8,128	0	8,128	0.19	18,324	0.42	26,452	0.61
W2	Veg Corridor	1,305	0	1,305	0.03	2,667	0.06	3,972	0.09
W3	Veg Corridor	2,398	0	2,398	0.06	2,472	0.06	4,870	0.11
W4	Veg Corridor	1,087	0	2,445	0.06	2,751	0.06	5,196	0.12
W5	Veg Corridor	8,463	0	8,463	0.19	14,028	0.32	22,491	0.52
OS1	Offsite*			30,737	0.71	25,149	0.58	55,886	1.28
OS2	Offsite*			52,874	1.21	43,260	0.99	96,134	2.21
OS3	Offsite*			89,730	2.06	73,415	1.69	163,145	3.75
OS4	Offsite*			17,929	0.41	14,670	0.34	32,599	0.75
OS5	Offsite*			83,168	1.91	68,046	1.56	151,214	3.47
OS6	Offsite*			4,990	0.11	4,083	0.09	9,073	0.21
OS7	Offsite*			70,520	1.62	57,699	1.32	128,219	2.94
Pond Total				125,358	2.88	107,258	2.46	265,832	6.10

* For conveyance sizing offsite areas are assumed to be developed to 55% imperviousness

Appendix B

Geotechnical Report



HARDMAN GEOTECHNICAL SERVICES INC.

Practical, Cost-Effective
Engineering Solutions

December 15, 2021
HGSI Project No. 21-2824

Dan Grimberg / Kristi Hosea
West Hills Land Development
3330 NW Yeon Avenue, Suite 200
Portland, Oregon 97210

Via e-mail (pdf format); hard copies mailed upon request

**Subject: GEOTECHNICAL ENGINEERING AND INFILTRATION TESTING REPORT
FROG POND WEST-WEST
MARTIN, GEORGE AND ROSS PROPERTIES
WILSONVILLE, OREGON**

This report presents the results of a geotechnical engineering study conducted by Hardman Geotechnical Services Inc. (HGSI) for Frog Pond West-West (Martin, George and Ross Properties) in Wilsonville, Oregon (Figure 1). The purpose of this study was to evaluate subsurface conditions at the site and to provide geotechnical recommendations for site development.

SITE DESCRIPTION AND PROPOSED DEVELOPMENT

The project totals about 15.07 acres, as summarized below. Please note that the parcel addresses and acreages were taken from the Clackamas County GIS website and are only as accurate as the information provided.

Property	Tax Lot No.	Address	Acreage	House Constructed Date
Ross	31W12D 00700	7315 SW Frog Pond Ln	4.09	1964
George	31W12D 02801	7500 SW Frog Pond Ln	2.00	1972
Martin	31W12D 02800	No address	8.98	--

The Ross and George properties are currently occupied by residential homes, with several detached shops, garages and barns. Existing facilities are present only within the eastern, more flat-lying portion of the overall site. The areas surrounding the homes and other structures are landscaped with lawn, shrubbery and ornamental or fruit-bearing trees. No structures are present on the Martin property, which is overgrown with blackberries, etc. Along the western edge of the site is an area of steep slopes descending down to Boeckman Creek. The steep slope is vegetated with large deciduous and evergreen trees, and undergrowth.

Preliminary plans indicate the site will be developed into a 31-lot residential subdivision that will include two separate tracts with the intention of having one or both serve as water quality/detention facilities. The actual number of lots may vary as project design progresses. Site development will also include construction of on-site streets and underground utilities. All of the proposed development is within the eastern, flat to gently sloping portion of the site. The steep slopes in the western portion of the site are to remain open space.

In the northwest portion of the site, a temporary access easement extends near the top of the steep slope area. HGSI has studied potential landslide hazards and slope stability specific to this area, in a previous report (HGSI, 2021). The report concludes that the planned utility lines and temporary access way can be safely constructed, with a low-height soldier pile wall along the downslope (northwest) portion of the easement to protect against surficial soil sloughing/erosion.

REGIONAL GEOLOGY AND SEISMIC SETTING

The subject site lies within the heart of the Portland Basin, a broad structural depression situated between the Coast Range on the west and the Cascade Range on the east. The Portland Basin is a northwest-southwest trending structural basin produced by broad regional downwarping of the area. The Portland Basin is approximately 20 miles wide and 45 miles long and is filled with consolidated and unconsolidated sedimentary rocks of late Miocene, Pliocene and Pleistocene age.

Geologic maps indicate the subject site is underlain by Quaternary age (last 1.6 million years) Willamette Silt, fine flood deposits that mantles basalt bedrock (Madin, 1990). This generally consists of massive fine sand and silt deposited following repeated catastrophic flooding events in the Willamette Valley, the last of which occurred between 15,000 and 10,000 years ago. In localized areas, the light brown sandy silts include buried paleosols that developed between depositional events. Regionally, the total thickness of catastrophic flood deposits range from 5 feet to greater than 100 feet.

The Willamette Formation is underlain by residual soil formed by in place weathering of the underlying Columbia River Basalt Formation (Madin, 1990). The Miocene aged (about 14.5 to 16.5 million years ago) Columbia River Basalts are a thick sequence of lava flows which form the crystalline basement of the Tualatin Valley. The basalts are composed of dense, finely crystalline rock that is commonly fractured along blocky and columnar vertical joints. Individual basalt flow units typically range from 25 to 125 feet thick and interflow zones are typically vesicular, scoriaceous, brecciated, and sometimes include sedimentary rocks.

At least three major fault zones capable of generating damaging earthquakes are known to exist in the region. These include the Portland Hills Fault Zone, Gales Creek-Newberg-Mt. Angel Structural Zone, and the Cascadia Subduction Zone. These potential earthquake source zones are included in the determination of seismic design values for structures, as presented in the *Seismic Design* section. None of the known faults extend beneath the site.

FIELD EXPLORATION

Test Pits and Exploratory Hand Auger Borings

The site-specific exploration for this study was conducted on October 22, 2021 and December 3 and 9, 2021. On October 22, 2021 HGSI oversaw the excavation of two test pits using a medium-sized excavator in the area of the temporary easement (Figure 2). Test pits TP-3 through TP-11 were excavated on December 3, 2021, using a rubber-tired backhoe with extend-a-hoe attachment. Six hand auger borings (HA-1 through HA-6) were drilled on December 3 and 9, 2021 by HGSI staff using hand auger tools. Explorations were conducted at the approximate locations shown on the attached Site Plan, Figure 2.

Explorations were conducted under the full-time observation of HGSI personnel. Soil samples obtained from the borings were classified in the field and representative portions were placed in relatively air-tight plastic bags. These soil samples were then returned to the laboratory for further examination. Pertinent information including soil sample depths, stratigraphy, soil engineering characteristics, and groundwater occurrence was recorded. Soils were classified in general accordance with the Unified Soil Classification System.

Summary exploration logs are attached to this report. The stratigraphic contacts shown on the individual exploration logs represent the approximate boundaries between soil types. The actual transitions may be more gradual. The soil and groundwater conditions depicted are only for the specific dates and locations reported, and therefore, are not necessarily representative of other locations and times.

Infiltration Testing

On December 3, 2021, HGSI performed falling head infiltration tests using the open-hole method in hand auger borings HA-1, HA-2 and HA-3. The infiltration testing was performed by measuring the water level at one-minute intervals using HOBOTM data loggers, which measures water pressure corrected for temperature and barometric pressure. See attached HOBOTM water level data logger plot. The infiltration rate was determined based on the slope of the water depth line near the end of the test. Table 1 presents the results of the falling head infiltration tests.

Table 1. Summary of Infiltration Test Results

Boring	Depth (feet)	Soil Type	Infiltration Rate (in/hr)	Hydraulic Head Range during Testing (inches)
HA-1	5	Silt with Clay (ML)	0.6	7.8 – 6.6
HA-2	6	Fine Sandy Silt (ML)	1.1	15 - 14
HA-3	6	Fine Sandy Silt (ML)	1.2	14 – 13

The average of the three infiltration tests is 1.0 inches/hour. Reported values are ultimate and should be adjusted using an appropriate factor of safety for design purposes.

SUBSURFACE CONDITIONS

The following discussion is a summary of subsurface conditions encountered in our explorations. For more detailed information regarding subsurface conditions at specific exploration locations, refer to the attached hand auger logs. Also, please note that subsurface conditions can vary between exploration locations, as discussed in the *Uncertainty and Limitations* section below.

Soil

On-site soils are anticipated to consist of undocumented fill, topsoil, colluvium, and Willamette Formation soils as described below.

Undocumented Fill – In the northeast portion of the Ross Property, we encountered an area of undocumented fill. Test Pits TP-8, TP-9 and TP-10; and hand auger boring HA-3 encountered undocumented fill extending to 4.5 to 5 feet bgs. Between the fill and native soils a zone of old

topsoil was encountered in all three of the test pits. Undocumented fill consisted generally of soft silt with trace organics, and trace amounts of crushed rock and other erratic material.

Topsoil – Beginning at the surface level, all explorations encountered a zone of topsoil about 6 to 12 inches thick. The topsoil was generally comprised of soft, wet to moist dark brown organic silt. The upper roughly 6 inches of the topsoil appeared highly organic.

Colluvium – In TP-1 we encountered a zone of colluvium, comprised of stiff clayey silt with black and orange mottling. This material had a weathered, slightly disturbed appearance and extended to a depth of about 2.5 feet bgs. Colluvium, a zone of down-slope creep occurring due to weathering of surficial soils on natural slopes, was not encountered in the other test pits and hand auger borings.

Willamette Silt – Beneath the undocumented fill, topsoil and/or colluvium, all explorations encountered stiff to very stiff, moist to very moist, brown silt, clayey silt and silt with fine sand interpreted as Willamette Formation. The upper several feet of this unit exhibited orange and gray mottling. All explorations were terminated in the Willamette Silt unit, at depths ranging from 5 to 13 feet bgs.

Groundwater

Seepage was encountered in two of the deeper test pits, TP-4 and TP-7, at depths of about 13 and 10 feet respectively. During the field exploration, no seepage or static groundwater table was encountered in the other explorations. Based on nearby water well data, depth to static groundwater is at least 20 feet below the ground surface. Perched groundwater conditions often occur over fine-grained native deposits such as those beneath the site, particularly during the wet season. It is anticipated that groundwater conditions will vary depending on the season, local subsurface conditions, changes in site utilization, and other factors. The perched groundwater conditions reported above are for the specific date and locations indicated, and therefore may not necessarily be indicative of other times and/or locations.

CONCLUSIONS AND RECOMMENDATIONS

Results of this study indicate that the proposed development is geotechnically feasible, provided that the recommendations of this report are incorporated into the design and construction phases of the project. The proposed development avoids the steep slope area to the west; slope stability impacts are considered minimal as discussed in the *Slope Stability and Landslide Hazards* section. Recommendations are presented below regarding site preparation and undocumented fill removal, engineered fill, fill slope keying and benching, wet weather earthwork, spread footing foundations, below grade structural retaining walls, concrete slabs-on-grade, perimeter footing drains, seismic design, excavating conditions and utility trench backfill, stormwater infiltration systems, and erosion control considerations.

Slope Stability and Landslide Hazards

For the purpose of evaluating slope stability, we reviewed published geologic and hazard mapping, reviewed regional site topography and LIDAR images, performed a field reconnaissance, and evaluated subsurface soil conditions in exploratory test pits and hand auger borings.

Reconnaissance observations indicate that slope geomorphology at the site is generally smooth and uniform, consistent with stable slope conditions. No geomorphic evidence of prior slope instability (such as hummocky topography, benches or old scarps) was observed. No seeps or springs were observed on site.

Regional geologic mapping and the Oregon Department of Geology and Mineral Industries online landslide database (SLIDO, 2017) shows a small mapped landslide in the western portion of the Martin/George

property (Figure 3). This feature is mapped with low (<10%) confidence level, and historical (<150 years) in age. In our opinion this mapped ancient slide is not indicative of a significant slope stability hazard to the site, and is located far enough away from the proposed development that slope stability impacts are not anticipated.

In the northwest portion of the site between the Ross and Martin Properties (Figures 2 and 3), a temporary access easement extends near the top of the steep slope area. HGSI has studied potential landslide hazards and slope stability specific to this area, in a previous report (HGSI, 2021). The report concludes that the planned utility lines and temporary access way can be safely constructed, with a low-height soldier pile wall along the downslope (northwest) portion of the easement to protect against surficial soil sloughing/erosion.

The planned development does not extend onto the steep slope areas in the western portion of the site. Based on our observations and results of the slope stability evaluation, it is our opinion that no special design or construction provisions are needed to address slope issues on the site, with the exception of the soldier pile wall planned in conjunction with the temporary access easement (HGSI, 2021). The project will be designed and constructed per current building codes, City of Wilsonville requirements, and the current standard-of-practice in geotechnical engineering. As such, it is our opinion that adequate slope stability factors of safety will be maintained for both temporary construction, and long-term conditions.

We understand that the proposed storm water management plan may consist of flow through planters, stormwater ponds or swales, with overflow to an approved outlet. Significant infiltration of stormwater via stormwater chambers or dry wells is not proposed for this site based on soil conditions and infiltration test results. The planned storm water facilities are not anticipated to impact slope stability on site, or to create any unstable conditions. Storm water management systems should be designed such that potential overflow is discharged in a controlled manner away from structures and slopes, and all systems should include an adequate factor of safety.

Site Preparation and Undocumented Fill Removal

The areas of the site to be graded should first be cleared of vegetation and any loose debris; and debris from clearing should be removed from the site. Organic-rich topsoil should then be removed to competent native soils. We anticipate that the average depth of topsoil stripping will be 6 to 12 inches over most of the site. Deeper stripping / root picking may be needed in areas that are or were formerly treed. The final depth of stripping removal may vary depending on local subsurface conditions and the contractor's methods, and should be determined on the basis of site observations after the initial stripping has been performed. Stripped organic soil should be stockpiled only in designated areas or removed from the site and stripping operations should be observed and documented by HGSI. Existing subsurface structures (tile drains, old utility lines, septic leach fields, etc.) beneath areas of proposed structures and pavement should be removed and the excavations backfilled with engineered fill.

Undocumented fill was encountered in the northeast portion of the Ross Property, in TP-8, TP-9 and TP-10; and HA-3, at depths of about 4.5 to 5 feet bgs. There is potential for old fills to be present on site in areas beyond our explorations. Where encountered beneath proposed structures, pavements, or other settlement-sensitive improvements, undocumented fill should be removed down to firm inorganic native soils and the removal area backfilled with engineered fill (see below). HGSI should observe removal excavations (if any) prior to fill placement to verify that overexcavations are adequate and an appropriate bearing stratum is exposed.

In construction areas, once stripping has been verified, the area should be ripped or tilled to a depth of 12 inches, moisture conditioned, and compacted in-place prior to the placement of engineered fill. Exposed subgrade soils should be evaluated by HGSI. For large areas, this evaluation is normally performed by

proof-rolling the exposed subgrade with a fully loaded scraper or dump truck. For smaller areas where access is restricted, the subgrade should be evaluated by probing the soil with a steel probe. Soft/loose soils identified during subgrade preparation should be compacted to a firm and unyielding condition or over-excavated and replaced with engineered fill, as described below. The depth of overexcavation, if required, should be evaluated by HGSI at the time of construction.

Engineered Fill

In general, we anticipate that on-site soils will be suitable for use as engineered fill in dry weather conditions, provided they are relatively free of organics and are properly moisture conditioned for compaction. Imported fill material must be approved by the geotechnical engineer prior to being imported to the site. Oversize material greater than 6 inches in size should not be used within 3 feet of foundation footings, and material greater than 12 inches in diameter should not be used in engineered fill.

Engineered fill should be compacted in horizontal lifts not exceeding 8 inches using standard compaction equipment. We recommend that engineered fill be compacted to at least 90 percent of the maximum dry density determined by ASTM D1557 (Modified Proctor) or equivalent. On-site soils may be wet or dry of optimum; therefore, we anticipate that moisture conditioning of native soil will be necessary for compaction operations.

Proper test frequency and earthwork documentation usually requires daily observation and testing during stripping, rough grading, and placement of engineered fill. Field density testing should conform to ASTM D2922 and D3017, or D1556. Engineered fill should be periodically observed and tested by the project geotechnical engineer or his representative. Typically, one density test is performed for at least every 2 vertical feet of fill placed or every 500 yd³, whichever requires more testing.

Fill Slope Keying and Benching

Engineered fill placed on slopes requires keying and benching. We recommend that cut and fill slopes for the project be planned no steeper than 2H:1V. Fill slopes constructed over sloping ground should be constructed in accordance with the Fill Slope Detail, Figure 4. For fill slopes constructed at 2H:1V or flatter, and comprised of engineered fill placed and compacted as recommended herein, we anticipate that adequate factors of safety against global failure will be maintained.

Prior to placing compacted fill against the existing natural slopes, all loose undocumented fill, topsoil, and soft soils must first be removed. Adequate benching must be maintained. Fill slope keyways should be constructed with a minimum depth of 2 feet and minimum width of H/3 (10 feet minimum), where H equals the vertical height between the base and top of the fill slope. Both benches and keyways should be roughly horizontal in the down slope direction. A subdrain should be incorporated in the fill slope keyway, and HGSI should observe the keyway excavations prior to the placement of fill.

Measures should be taken to prevent surficial instability and/or erosion of embankment material. This can be accomplished by conscientious compaction of the embankment fills all the way out to the slope face, by maintaining adequate drainage, and planting the slope face as soon as possible after construction. To achieve the specified relative compaction at the slope face, it may be necessary to overbuild the slopes several feet, and then trim back to design finish grade. In our experience, compaction of slope faces by “track-walking” is generally ineffective and is therefore not recommended.

Wet Weather Earthwork

The on-site soils are moisture sensitive and may be difficult to handle or traverse with construction equipment during periods of wet weather. Earthwork is typically most economical when performed under dry weather conditions. Earthwork performed during the wet-weather season will probably require

expensive measures such as cement treatment or imported granular material to compact fill to the recommended engineering specifications. If earthwork is to be performed or fill is to be placed in wet weather or under wet conditions when soil moisture content is difficult to control, the following recommendations should be incorporated into the contract specifications.

- Earthwork should be performed in small areas to minimize exposure to wet weather. Excavation or the removal of unsuitable soils should be followed promptly by the placement and compaction of clean engineered fill. The size and type of construction equipment used may have to be limited to prevent soil disturbance. Under some circumstances, it may be necessary to excavate soils with a backhoe to minimize subgrade disturbance caused by equipment traffic;
- The ground surface within the construction area should be graded to promote run-off of surface water and to prevent the ponding of water;
- Material used as engineered fill should consist of clean, granular soil containing less than about 7 percent fines. The fines should be non-plastic. Alternatively, cement treatment of on-site soils may be performed to facilitate wet weather placement;
- The ground surface within the construction area should be sealed by a smooth drum vibratory roller, or equivalent, and under no circumstances should be left uncompacted and exposed to moisture. Soils which become too wet for compaction should be removed and replaced with clean granular materials;
- Excavation and placement of fill should be observed by the geotechnical engineer to verify that all unsuitable materials are removed and suitable compaction and site drainage is achieved; and
- Bales of straw and/or geotextile silt fences should be strategically located to control erosion.

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

Spread Footing Foundations

Shallow, conventional isolated or continuous spread footings may be used to support the proposed structures, provided they are founded on competent native soils, or compacted engineered fill placed directly upon the competent native soils. We recommend a maximum allowable bearing pressure of 2,000 pounds per square foot (psf) for designing spread footings bearing on undisturbed native soils or engineered fill. The recommended maximum allowable bearing pressure may be increased by a factor of 1.33 for short term transient conditions such as wind and seismic loading. Exterior footings should be founded at least 18 inches below the lowest adjacent finished grade. Minimum footing widths should be determined by the project engineer/architect in accordance with applicable design codes.

Assuming construction is accomplished as recommended herein, and for the foundation loads anticipated, we estimate total settlement of spread foundations of less than about 1 inch and differential settlement between two adjacent load-bearing components supported on competent soil of less than about ½ inch. We anticipate that the majority of the estimated settlement will occur during construction, as loads are applied.

Wind, earthquakes, and unbalanced earth loads will subject the proposed structure to lateral forces. Lateral forces on a structure will be resisted by a combination of sliding resistance of its base or footing on the underlying soil and passive earth pressure against the buried portions of the structure. For use in design, a coefficient of friction of 0.5 may be assumed along the interface between the base of the footing and subgrade soils. Passive earth pressure for buried portions of structures may be calculated using an equivalent fluid weight of 390 pounds per cubic foot (pcf), assuming footings are cast against dense, natural soils or engineered fill. The recommended coefficient of friction and passive earth pressure values do not include a

safety factor. The upper 12 inches of soil should be neglected in passive pressure computations unless it is protected by pavement or slabs on grade.

Footing excavations should be trimmed neat and the bottom of the excavation should be carefully prepared. Loose, wet or otherwise softened soil should be removed from the footing excavation prior to placing reinforcing steel bars. HGSI should observe foundation excavations prior to placing crushed rock, to verify that adequate bearing soils have been reached. Due to the high moisture sensitivity of on-site soils, construction during wet weather may require overexcavation of footings and backfill with compacted, crushed aggregate.

Below-Grade Cantilever Concrete Retaining Walls

Recommendations are provided below for design of concrete retaining walls. Footings for below-grade cantilever concrete walls should be designed using the 2,000 psf allowable soil bearing pressure recommended in the *Spread Footing Foundations* section. Lateral earth pressures against below-grade retaining walls will depend upon the inclination of any adjacent slopes, type of backfill, degree of wall restraint, method of backfill placement, degree of backfill compaction, drainage provisions, and magnitude and location of any adjacent surcharge loads. At-rest soil pressure is exerted on a retaining wall when it is restrained against rotation. In contrast, active soil pressure will be exerted on a wall if its top is allowed to rotate or yield a distance of roughly 0.001 times its height or greater.

Table 2 below provides recommended lateral earth pressure values for unrestrained and restrained walls, for both level backfill conditions and 2H:1V (Horizontal:Vertical) sloping ground conditions at the top of the wall. These values assume that the recommended drainage provisions are incorporated, and hydrostatic pressures are not allowed to develop against the wall.

Table 2. Recommended Lateral Earth Pressures for Below-Grade Structural Walls

Earth Pressure Condition	Level at Top of Wall	2H:1V Slope at Top of Wall
Active (unrestrained wall)	35	54
At-rest (restrained wall)	55	74

During a seismic event, lateral earth pressures acting on below-grade structural walls will increase by an incremental amount that corresponds to the earthquake loading. Based on the Mononobe-Okabe equation and peak horizontal accelerations appropriate for the site location, seismic loading should be modeled using the active or at-rest earth pressures recommended above, plus an incremental rectangular-shaped seismic load of magnitude 5H, where H is the total height of the wall.

We assume relatively level ground surface below the base of the walls. As such, we recommend passive earth pressure of 390 pcf for use in design, assuming wall footings are cast against competent native soils or engineered fill. If the ground surface slopes down and away from the base of any of the walls, a lower passive earth pressure should be used and HGSI should be contacted for additional recommendations.

A coefficient of friction of 0.5 may be assumed along the interface between the base of the wall footing and subgrade soils. The recommended coefficient of friction and passive earth pressure values do not include a safety factor, and an appropriate safety factor should be included in design. The upper 12 inches of soil should be neglected in passive pressure computations unless it is protected by pavement or slabs on grade.

The above recommendations for lateral earth pressures assume that the backfill behind the subsurface walls will consist of properly compacted structural fill, and no adjacent surcharge loading. If the walls will be subjected to the influence of surcharge loading within a horizontal distance equal to or less than the height of the wall, the walls should be designed for the additional horizontal pressure. For uniform surcharge pressures, a uniformly distributed lateral pressure of 0.3 times the surcharge pressure should be added.

The recommended equivalent fluid densities assume a free-draining condition behind the walls so that hydrostatic pressures do not build up. This can be accomplished by placing a 12-inch wide zone of crushed drain rock containing less than 5 percent fines against the walls. A 3-inch minimum diameter perforated, plastic drain pipe should be installed at the base of the walls and connected to a sump to remove water from the crushed drain rock zone. The drain pipe should be wrapped in filter fabric (Mirafi 140N or other as approved by the geotechnical engineer) to minimize clogging. The above drainage measures are intended to remove water from behind the wall to prevent hydrostatic pressures from building up. Additional drainage measures may be specified by the project architect or structural engineer, for damp-proofing or other reasons.

HGSI should be contacted during construction to verify subgrade strength in wall keyway excavations, to verify that backslope soils are in accordance with our assumptions, and to take density tests on the wall backfill materials.

Concrete Slabs-on-Grade

Preparation of areas beneath concrete slab-on-grade floors should be performed as recommended in the *Site Preparation* section. Care should be taken during excavation for foundations and floor slabs, to avoid disturbing subgrade soils. If subgrade soils have been adversely impacted by wet weather or otherwise disturbed, the surficial soils should be scarified to a minimum depth of 8 inches, moisture conditioned to within about 3 percent of optimum moisture content, and compacted to engineered fill specifications. Alternatively, disturbed soils may be removed and the removal zone backfilled with additional crushed rock. For evaluation of the concrete slab-on-grade floors using the beam on elastic foundation method, a modulus of subgrade reaction of 200 kcf (115 pci) should be assumed for the soils anticipated at subgrade depth. This value assumes the concrete slab system is designed and constructed as recommended herein, with a minimum thickness of crushed rock of 8 inches beneath the slab.

Interior slab-on-grade floors should be provided with an adequate moisture break. The capillary break material should consist of ODOT open graded aggregate per ODOT Standard Specifications 02630-2. The minimum recommended thickness of capillary break materials on re-compacted soil subgrade is 8 inches. The total thickness of crushed aggregate will be dependent on the subgrade conditions at the time of construction, and should be verified visually by proof-rolling. Under-slab aggregate should be compacted to at least 90% of its maximum dry density as determined by ASTM D1557 or equivalent.

In areas where moisture will be detrimental to floor coverings or equipment inside the proposed structure, appropriate vapor barrier and damp-proofing measures should be implemented. A commonly applied vapor barrier system consists of a 10-mil polyethylene vapor barrier placed directly over the capillary break material. Other damp/vapor barrier systems may also be feasible. Appropriate design professionals should be consulted regarding vapor barrier and damp proofing systems, ventilation, building material selection, radon and mold prevention issues, which are outside HGSI's area of expertise.

Perimeter Footing Drains

Due to the potential for perched surface water above fine grained deposits such as those encountered at the site, we recommend the outside edge of perimeter footings be provided with a drainage system consisting of 3-inch minimum diameter perforated PVC pipe embedded in a minimum of 1 ft³ per lineal foot of clean, free-draining sand and gravel or 1"- 1/4" drain rock. The drain pipe and surrounding drain rock should be

wrapped in non-woven geotextile (Mirafi 140N, or approved equivalent) to minimize the potential for clogging and/or ground loss due to piping. Water collected from the footing drains should be directed into the local storm drain system or other suitable outlet. A minimum 0.5 percent fall should be maintained throughout the drain and non-perforated pipe outlet. The footing drains should include clean-outs to allow periodic maintenance and inspection.

Down spouts and roof drains should collect roof water in a system separate from the footing drains in order to reduce the potential for clogging. Roof drain water should be directed to an appropriate discharge point well away from structural foundations. Grades should be sloped downward and away from buildings to reduce the potential for ponded water near structures.

Seismic Design

Structures should be designed to resist earthquake loading in accordance with the methodology described in the current Oregon Residential Specialty Code (ORSC). We recommend Site Class D (Stiff Soils) be used for design per the ORSC. Design values determined for the site using the ASCE 7-16 Hazard Tool are summarized on Table 3, for Risk Category II.

Table 3. Recommended Earthquake Ground Motion Parameters (ASCE 7-16)

Parameter	Value
Location (Lat, Long), degrees	45.3211, -122.7494
Mapped Spectral Acceleration Values (MCE, Site Class B):	
Short Period, S_s	0.82 g
1.0 Sec Period, S_1	0.381 g
Design Values for Site Class D (Stiff Soils):	
Peak Ground Acceleration PGA_M	0.458
F_a	1.172
$SD_s = 2/3 \times F_a \times S_s$	0.641 g
Seismic Design Category (2021 ORSC)	D_0

Soil liquefaction is a phenomenon wherein saturated soil deposits temporarily lose strength and behave as a liquid in response to earthquake shaking. Soil liquefaction is generally limited to loose, granular soils located below the water table. Following development, on-site soils will consist predominantly of stiff to very stiff silt which are not considered susceptible to liquefaction. Therefore, it is our opinion that special design or construction measures are not required to mitigate the effects of liquefaction.

Excavating Conditions and Utility Trench Backfill

We anticipate that on-site soils can be excavated using conventional heavy equipment such as scrapers and trackhoes to depths of 13 feet and likely greater. Maintenance of safe working conditions, including temporary excavation stability, is the responsibility of the contractor. Actual slope inclinations at the time of construction should be determined based on safety requirements and actual soil and groundwater conditions. All temporary cuts in excess of 4 feet in height should be sloped in accordance with U.S. Occupational Safety and Health Administration (OSHA) regulations (29 CFR Part 1926), or be shored. The existing native soils classify as Type B Soil and temporary excavation side slope inclinations as steep as 1H:1V may be assumed for planning purposes. This cut slope inclination is applicable to excavations above the water table only.

Perched groundwater conditions often occur over fine-grained native deposits such as those beneath the site, particularly during the wet season. If encountered, the contractor should be prepared to implement an appropriate dewatering system for installation of the utilities. At this time, we anticipate that dewatering systems consisting of ditches, sumps and pumps would be adequate for control of groundwater where encountered during construction conducted during the dry season. Regardless of the dewatering system used, it should be installed and operated such that in-place soils are prevented from being removed along with the groundwater.

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

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

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

Stormwater Infiltration Facilities

Based on results of the soil infiltration testing, soils on site exhibit low infiltration rates especially in the presence of perched water or static groundwater. Infiltration rates ranged from 0.6 to 1.2 inches/hour as summarized on Table 1. We recommend shallow systems in the range of 2 to 5 feet bgs be designed using an infiltration rate of **0.6 inches/hour**. This is slightly less than the average test value of 1.0 inches/hour, but we feel 0.3 inches/hour is more representative of overall site conditions. Also, please note that the potential for infiltration of stormwater will be reduced during the wet season due to saturated soils / perched water conditions over much of the site. We do not believe the site is well suited for use of deeper infiltration facilities such as dry wells due to the very low-permeability site soils, and perched water conditions.

The designer should select an appropriate infiltration value based on our test results and the location of the proposed infiltration facility. The recommended infiltration rates do not incorporate a factor of safety. For the design infiltration rate, we recommend a factor of safety of at least 2.0. Greater factors of safety may be required by the governing agency.

Infiltration test methods and procedures attempt to simulate the as-built conditions of the planned disposal system. However, due to natural variations in soil properties, actual infiltration rates may vary from the measured and/or recommended design rates. All systems should be constructed such that potential overflow is discharged in a controlled manner away from structures, and all systems should include an adequate factor of safety. Infiltration rates presented in this report should not be applied to inappropriate or complex hydrological models such as a closed basin without extensive further studies.

Erosion Control Considerations

During our field exploration program, we did not observe soil types that would be considered highly susceptible to erosion. Erosion at the site during construction can be minimized by implementing the project erosion control plan, which should include judicious use of straw, bio-bags, silt fences, or other appropriate technology. Where used, erosion control devices should be in place and remain in place throughout site preparation and construction. Areas of exposed soil requiring immediate and/or temporary protection against exposure should be covered with either mulch or erosion control netting/blankets.

UNCERTAINTIES AND LIMITATIONS

We have prepared this report for the owner and his/her consultants for use in design of this project only. This report should not be construed as a warranty of the subsurface conditions. Experience has shown that soil and groundwater conditions can vary significantly over small distances. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, HGSI should be notified for review of the recommendations of this report, and revision of such if necessary.

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

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



We appreciate this opportunity to be of service.

Sincerely,

HARDMAN GEOTECHNICAL SERVICES INC.

Scott L. Hardman, P.E., G.E.
Geotechnical Engineer



EXPIRES: 06-30-2023

- Attachments: References
- Figure 1 – Vicinity Map
- Figure 2 – Site Plan
- Figure 3 – DOGAMI LiDAR Mapping
- Figure 4 – Fill Slope Detail
- Logs of Test Pits TP-1 through TP-11
- Logs of Hand Auger Borings HA-1 through HA-6
- Infiltration Test Data Plots (3 Pages)
- ASCE Seismic Design Hazards Report (3 Pages)



REFERENCES

Hardman Geotechnical Services Inc., 2021, *Geotechnical Evaluation of Landslide Hazards and Slope Stability; Proposed Underground Utility Easement; Frog Pond West-West; Martin, George and Ross Properties; Wilsonville, Oregon*; consultant report dated October 28.

Madin, I.P., 1990, Earthquake hazard geology maps of the Portland metropolitan area, Oregon: Oregon Department of Geology and Mineral Industries Open-File Report 0-90-2, scale 1:24,000, 22 p.

Schlicker, H.G. and Finlayson, C.T., 1979, Geology and geologic hazards of northwest Clackamas County, Oregon Department of Geology and Mineral Industries, Bulletin 99, 1:24,000

Yeats, R.S., Graven, E.P., Werner, K.S., Goldfinger, C., and Popowski, T., 1996, Tectonics of the Willamette Valley, Oregon: in *Assessing earthquake hazards and reducing risk in the Pacific Northwest*, Vol. 1: U.S. Geological Survey Professional Paper 1560, P. 183-222, 5 plates, scale 1:100,000.

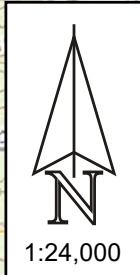
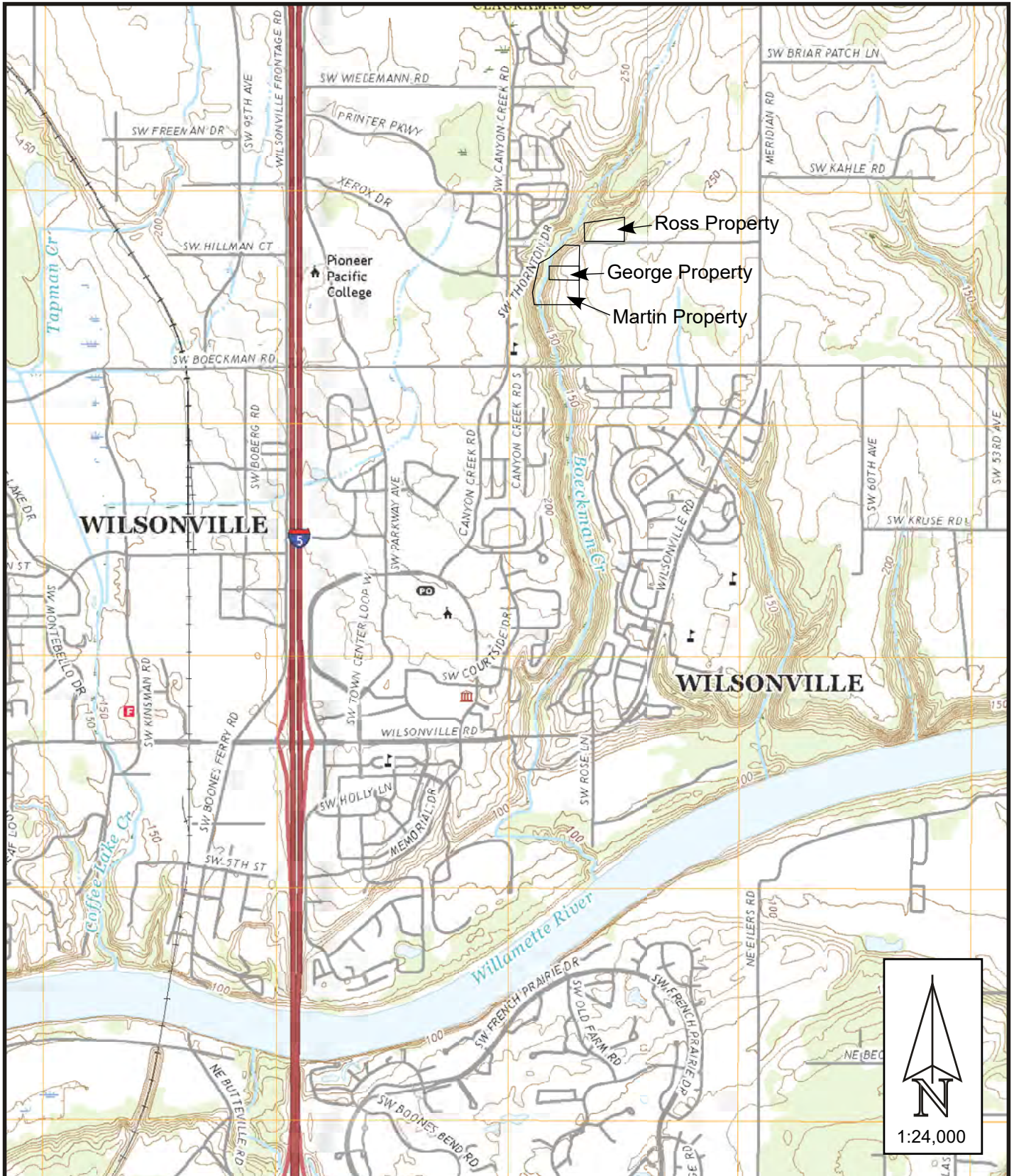


**HARDMAN
GEOTECHNICAL
SERVICES INC.**

Practical, Cost-Effective Geotechnical Solutions

Item 2.

VICINITY MAP



Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2856

FIGURE 1



**HARDMAN
GEOTECHNICAL
SERVICES INC.**

Practical, Cost-Effective Geotechnical Solutions

Item 2.

SITE PLAN AND EXPLORATION LOCATIONS



Legend

TP-X Backhoe Test Pit Designation and
Approximate Location

Base Map by Portland Maps

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 20-2642

FIGURE 2

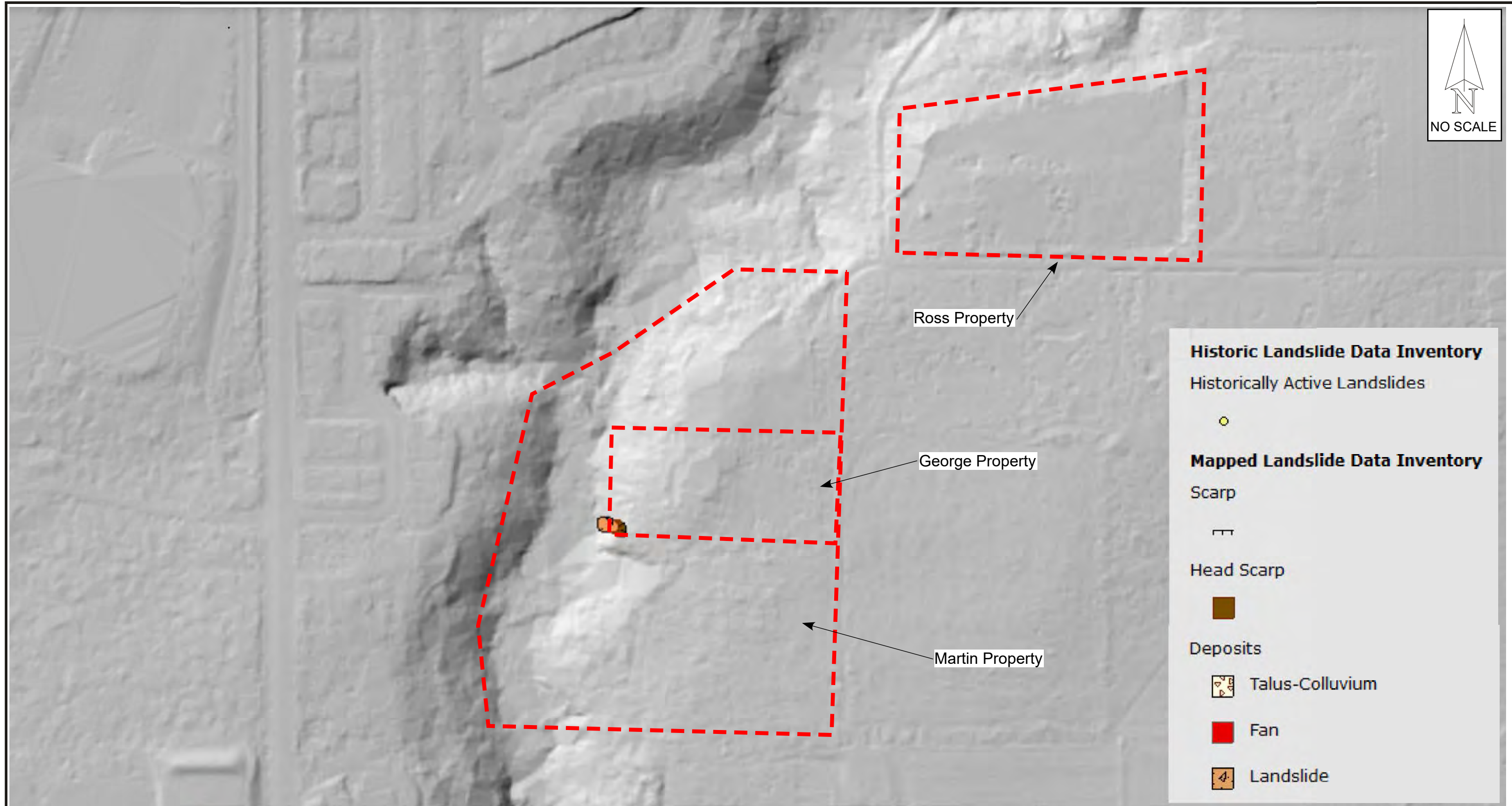


**HARDMAN
GEOTECHNICAL
SERVICES INC.**

10110 SW Nimbus Avenue, Suite B-5
Portland, Oregon 97223
Tel: (503) 530-8076

Practical, Cost-Effective Geotechnical Solutions

DOGAMI LiDAR MAPPING



LEGEND



Approximate Site Boundary

Base Map from DOGAMI SLIDO Website

Project No. 21-2824

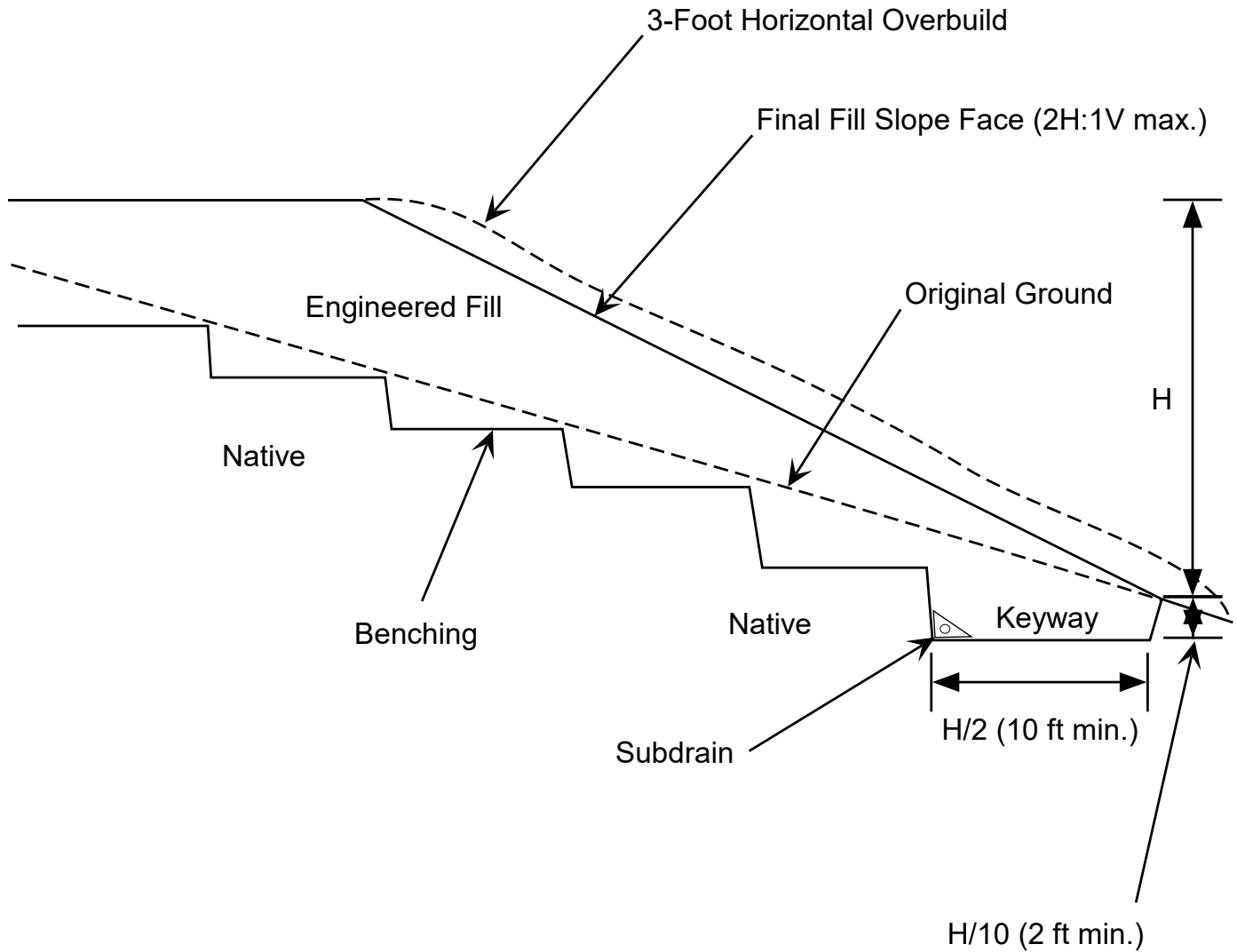
Frog Pond West-West
Wilsonville, Oregon

FIGURE 3



FILL SLOPE DETAIL

TYPICAL KEYWAY, BENCHING & FILL SLOPE DESIGN



Recommended subdrain is minimum 3-inch-diameter ADS Heavy Duty grade (or equivalent), perforated plastic pipe enveloped in a minimum of 3 cubic feet per lineal foot of 2" to 1/2" open-graded gravel drain rock wrapped with geotextile filter fabric (Mirafi 140N or equivalent).

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 1**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Soft, Organic SILT, dark brown, moist, many roots throughout (topsoil)
2	3.0					Stiff, Clayey SILT, light yellowish brown with black and orange mottling, moist, weathered (Colluvium)
3	3.5					Very stiff to hard, Clayey SILT, yellowish brown with trace mottling in upper portion of unit only, slightly moist, unweathered and intact
4	>4.5					
5	>>4.5					
6						
7						
8						Very difficult excavating at 8 feet due to hard materials.
9						Test pit terminated at 8 feet No caving of pit side walls No groundwater or seepage encountered
10						
11						
12						
13						
14						
15						
16						

HCSI **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Excavated: 10/22/2021

Logged By: SLH

Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 2**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Soft, Organic SILT, dark brown, moist, abundant grass roots (topsoil) ----- Dense, silty angular gravel, gray, moist (old driveway or pull-out area) -----
2						Very stiff to hard, Clayey SILT, yellowish brown with trace mottling in upper portion of unit only, slightly moist, unweathered and intact
3						
4						
5						
6						
7						
8						Grades to Clayey Silt with some fine sand at 8 feet
9						
10						
11						Test pit terminated at 10 feet No caving of pit sidewalls No groundwater or seepage encountered
12						
13						
14						
15						
16						

HCSI HARDMAN
GEOTECHNICAL
SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Excavated: 10/22/2021

Logged By: SLH


Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon



Project No. 21-2824

Test Pit No. **TP - 3**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, medium stiff, brown and light grey, clayey SILT (ML), orange and dark brown mottling. [Willamette Formation]
3						
4	4.2					Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling, heavily micaceous. [Willamette Formation]
5						
6						
7						
8			S-1			
9						
10						<i>Test Pit terminated at 10 feet No groundwater or seepage encountered No caving</i>
11						
12						
13						
14						
15						
16						

HCSI **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND

 S-# 
 Soil Sample Depth Interval and Designation Water Level at Time of Excavation

Date Excavated: 12/3/2021
 Logged By: CSH
 Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 4**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling, micaceous. [Willamette Formation]
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						Saturated, medium stiff, brown, sandy SILT (ML) with clay, heavily micaceous. [Willamette Formation]
13					▽	
14						<i>Test Pit terminated at 13 feet Seepage observed in the bottom of the test pit No caving</i>
15						
16						

HCSI **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Excavated: 12/3/2021
 Logged By: CSH
 Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 5**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics [Topsoil]
2	3.0					Moist, medium stiff, brown and light grey, silty CLAY (CL), orange and dark brown mottling. [Willamette Formation]
3						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling. [Willamette Formation]
4						
5						
6						
7						
8						
9						
10						
11						<i>Test Pit terminated at 10 feet No groundwater or seepage encountered No caving</i>
12						
13						
14						
15						
16						

HCSI **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Excavated: 12/3/2021
 Logged By: CSH
 Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 6**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics [Topsoil]
2						Moist, stiff, brown, clayey SILT (ML) with sand, orange and dark brown mottling. [Willamette Formation] Sandiness increasing with depth
3						
4						
5						
6						
7						Moist, stiff, brown, sandy SILT (ML), orange and dark brown mottling, slightly micaceous. [Willamette Formation]
8						
9						
10						
11						<i>Test Pit terminated at 10 feet</i> <i>No groundwater or seepage encountered</i> <i>No caving</i>
12						
13						
14						
15						
16						

HCSI **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Excavated: 12/3/2021
 Logged By: CSH
 Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 7**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics [Topsoil]
2						Moist, medium stiff, brown and light grey, silty CLAY (CL), orange and dark brown mottling. [Willamette Formation]
3						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling. [Willamette Formation]
4						
5						
6						
7						
8						
9						Very moist to saturated, medium stiff, brown, silty fine grained SAND (SM), heavily micaceous. [Willamette Formation]
10					▽	
11						
12						<i>Test Pit terminated at 12 feet Seepage observed around 10 feet bgs No caving</i>
13						
14						
15						
16						

HCSI HARDMAN
GEOTECHNICAL
SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Excavated: 12/3/2021
Logged By: CSH
Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 8**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, soft, brown silt interbedded with dark brown silt and organics. Strata matrix is disturbed and there are some crushed rock fragments. [Undocumented Fill]
3						
4						Decomposing grass layer and buried topsoil
5						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling, micaceous. [Willamette Formation]
6						
7						
8						
9						
10						
11						<i>Test Pit terminated at 10 feet No groundwater or seepage encountered No caving</i>
12						
13						
14						
15						
16						

HCSI HARDMAN
GEOTECHNICAL
SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Excavated: 12/3/2021
Logged By: CSH
Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 9**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, soft, brown silt interbedded with dark brown silt and organics. Strata matrix is disturbed and there are some crushed rock fragments. [Undocumented Fill]
3						
4	1.8					Decomposing grass layer and buried topsoil
5						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling, micaceous. [Willamette Formation]
6						
7						
8						
9						
10						
11						<i>Test Pit terminated at 10 feet No groundwater or seepage encountered No caving</i>
12						
13						
14						
15						
16						

HCSI HARDMAN GEOTECHNICAL SERVICES INC.
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Excavated: 12/3/2021
 Logged By: CSH
 Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 10**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, soft, dark brown silt with organics and fractured rock. [Undocumented Fill]
3						
4						
5						
6						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling, micaceous. [Willamette Formation]
7						
8						
9						
10						
11						<i>Test Pit terminated at 10 feet No groundwater or seepage encountered No caving</i>
12						
13						
14						
15						
16						

HCSI HARDMAN GEOTECHNICAL SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND

S-#
 Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Excavated: 12/3/2021
 Logged By: CSH
 Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 11**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics [Topsoil]
2						Moist, stiff, brown, clayey SILT (ML) with sand, orange and dark brown mottling. [Willamette Formation] Sandiness increasing with depth
3						
4						
5						
6						
7						Moist, stiff, brown, sandy SILT (ML), orange and dark brown mottling, slightly micaceous. [Willamette Formation]
8						
9						
10						
11						<i>Test Pit terminated at 10 feet</i> <i>No groundwater or seepage encountered</i> <i>No caving</i>
12						
13						
14						
15						
16						

HCSI **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Excavated: 12/3/2021
 Logged By: CSH
 Surface Elevation: Unknown

LOG OF HAND AUGER BORING

Project: Frog Pond West West Wilsonville, Oregon	Project No. 21-2824	Boring No. HA - 1
---	---------------------	--------------------------

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, medium stiff, brown and light grey, clayey SILT (ML), orange and dark brown mottling. [Willamette Formation]
3						
4						
5						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling, heavily micaceous. [Willamette Formation]
6						<i>Boring terminated at 5 feet No groundwater or seepage encountered No caving</i>
7						
8						
9						
10						



**HARDMAN
GEOTECHNICAL
SERVICES INC.**
Practical. Cost-Effective Geotechnical Solutions

10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Bored: 12/9/2021

Logged By: CSH

Surface Elevation:

LOG OF HAND AUGER BORING

Project: Frog Pond West West Wilsonville, Oregon	Project No. 21-2824	Boring No. HA - 2
---	---------------------	--------------------------

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
0						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
1						Moist, medium stiff, brown and light grey, clayey SILT (ML), orange and dark brown mottling. [Willamette Formation]
2						
3						Moist, stiff to very stiff, brown, sandy SILT (ML), micaceous. [Willamette Formation]
4						
5						
6						<i>Boring terminated at 6 feet No groundwater or seepage encountered No caving</i>
7						
8						
9						
10						

HCSI HARDMAN GEOTECHNICAL SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND

S-#
Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Bored: 12/9/2021
 Logged By: CSH
 Surface Elevation:

LOG OF HAND AUGER BORING

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Boring No. **HA - 3**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, soft, dark brown silt with organics and fractured rock. [Undocumented Fill]
3						
4						
5						Moist, stiff to very stiff, brown, sandy SILT (ML) [Willamette Formation]
6						<i>Boring terminated at 5 feet No groundwater or seepage encountered No caving</i>
7						
8						
9						
10						

HCSI HARDMAN
GEOTECHNICAL
SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Bored: 12/9/2021

Logged By: CSH

Surface Elevation:

LOG OF HAND AUGER BORING

Project: Frog Pond West West Wilsonville, Oregon	Project No. 21-2824	Boring No. HA - 4
---	---------------------	--------------------------

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics [Topsoil]
2						Moist, medium stiff, brown, clayey SILT (ML) with sand, orange and dark brown mottling. [Willamette Formation]
3						Dry, very stiff, light brown, sandy SILT (ML), orange and dark brown mottling. [Willamette Formation]
4						
5						
6						
7						<i>Test Pit terminated at 6 feet No groundwater or seepage encountered No caving</i>
8						
9						
10						

HCSI **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Bored: 12/9/2021

Logged By: CSH

Surface Elevation:

LOG OF HAND AUGER BORING

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Boring No. **HA - 5**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics [Topsoil]
2						Moist, medium stiff, brown, clayey SILT (ML) with sand, orange and dark brown mottling. [Willamette Formation]
3						
4						
5						
6						<i>Test Pit terminated at 5 feet No groundwater or seepage encountered No caving</i>
7						
8						
9						
10						



**HARDMAN
GEOTECHNICAL
SERVICES INC.**
Practical. Cost-Effective Geotechnical Solutions

10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Bored: 12/9/2021

Logged By: CSH

Surface Elevation:

LOG OF HAND AUGER BORING

Project: Frog Pond West West Wilsonville, Oregon	Project No. 21-2824	Boring No. HA - 6
---	---------------------	--------------------------

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Slightly Moist, Medium Dense, Poorly Graded, Subangular, 1"-0" GRAVEL (GP) in Dark Brown Silty Matrix, Top 3" Highly Organic with Grass Roots <i>[Undocumented Fill]</i>
2						Boring refusal on gravel at 1.1 feet (13 inches) No groundwater or seepage encountered No caving
3						
4						
5						
6						
7						
8						
9						
10						

HCSI HARDMAN GEOTECHNICAL SERVICES INC.
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND

S-# Soil Sample Depth Interval and Designation	 Water Level at Time of Excavation
---	---------------------------------------

Date Bored: ~~10/09/2021~~
 Logged By: CSH
 Surface Elevation:

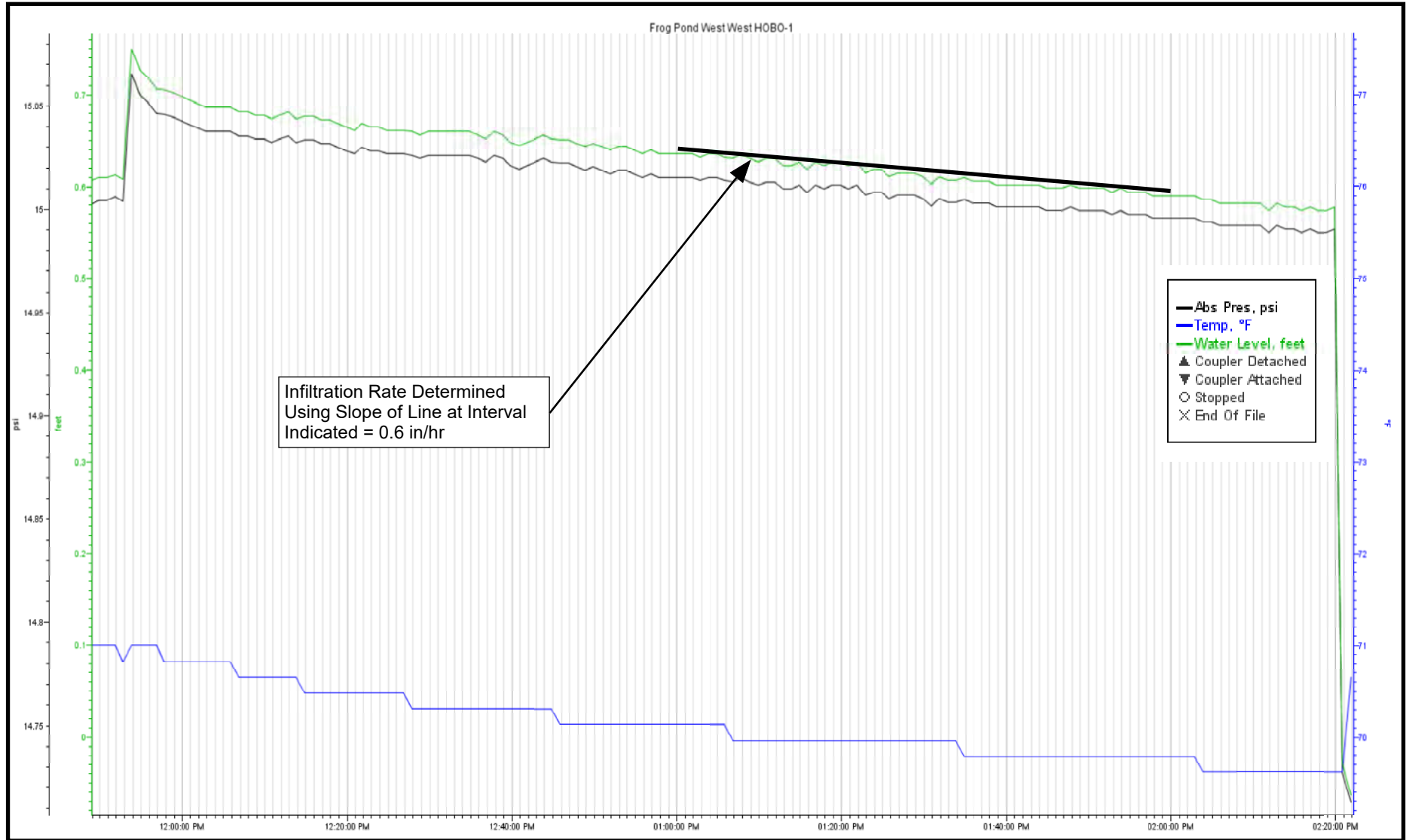


**HARDMAN
GEOTECHNICAL
SERVICES INC.**

Practical, Cost-Effective Geotechnical Solutions

INFILTRATION TEST DATA

Item 2.



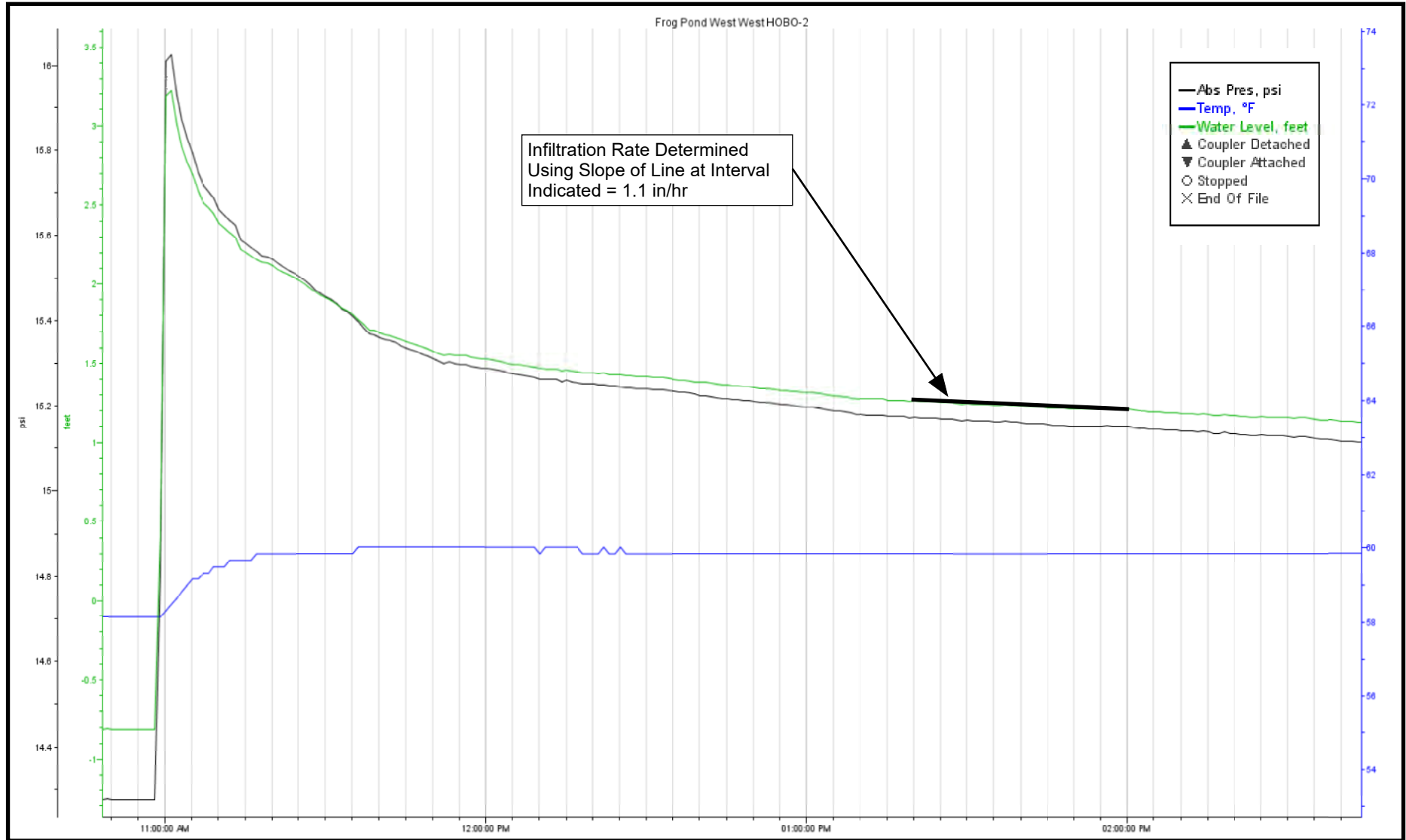
Project: Frog Pond West West
Wilsonville, Oregon

Date Tested: 12/7/2021
Tested By: CSH
Project No: 21-2824

Boring: HA-1
Depth: 5 Feet



INFILTRATION TEST DATA



Project: Frog Pond West West
Wilsonville, Oregon

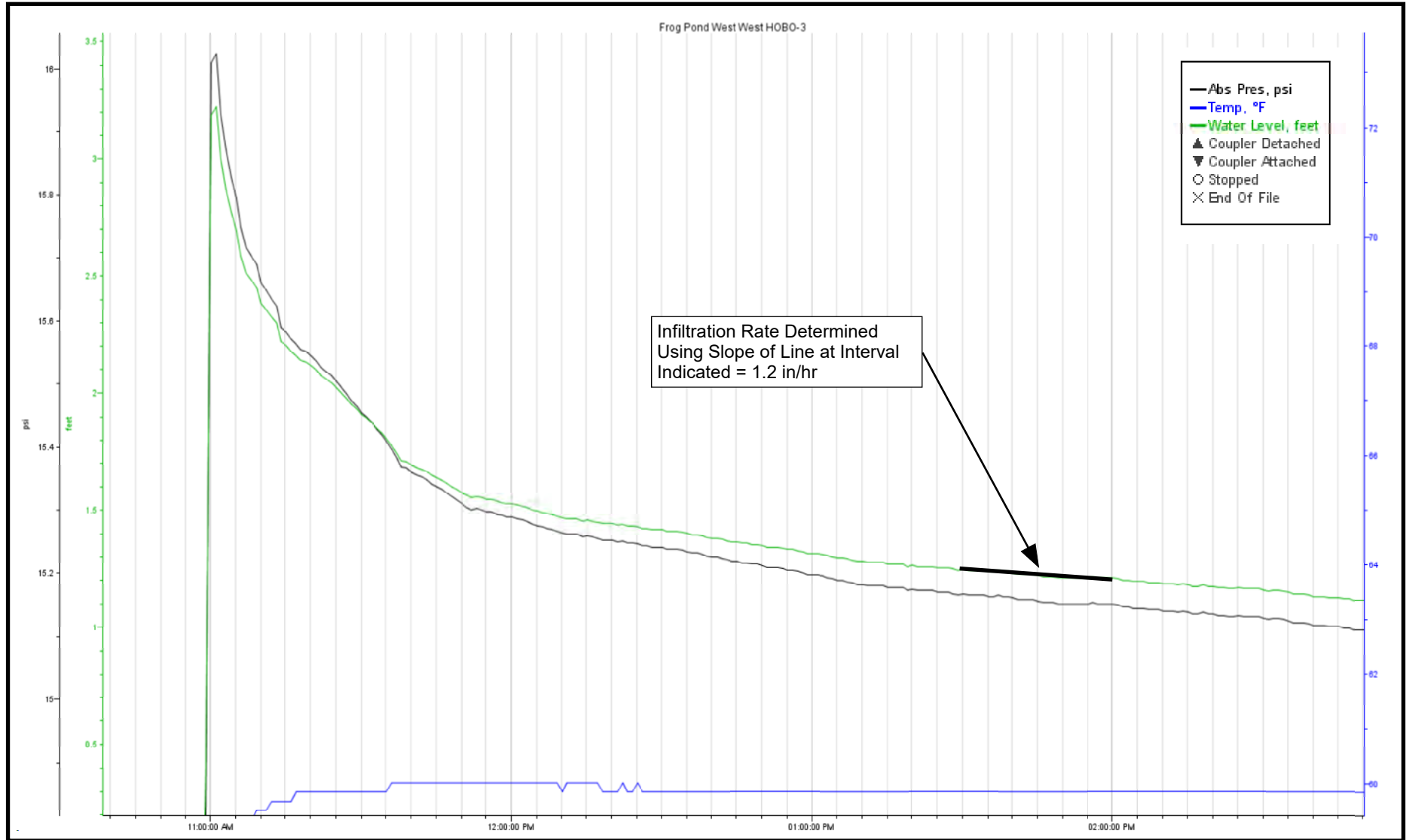
Date Tested: 12/7/2021
Tested By: CSH
Project No: 21-2824

Boring: HA-2
Depth: 6 Feet



INFILTRATION TEST DATA

Item 2.



Project: Frog Pond West West
Wilsonville, Oregon

Date Tested: 12/7/2021
Tested By: CSH
Project No: 21-2824

Boring: HA-3
Depth: 6 Feet

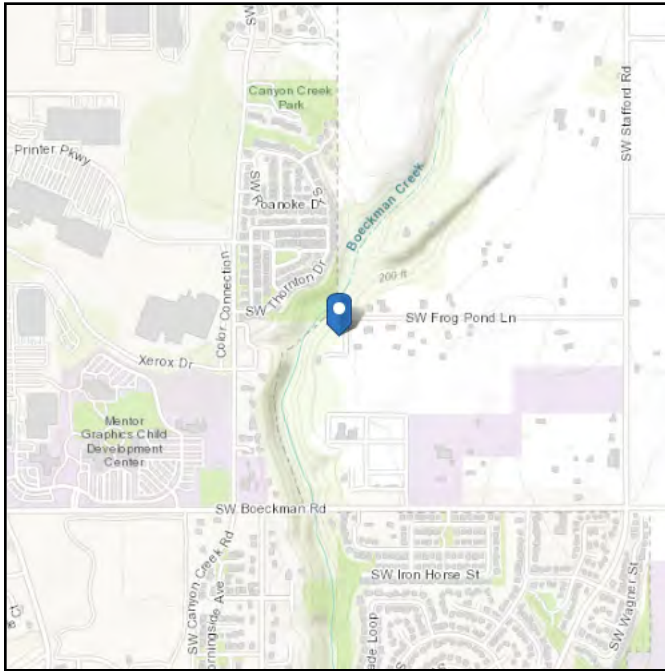


ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 216.52 ft (NAVD 88)
Latitude: 45.3218
Longitude: -122.754





Site Soil Class: D - Stiff Soil

Results:

S_s :	0.82	S_{D1} :	N/A
S_1 :	0.381	T_L :	16
F_a :	1.172	PGA :	0.373
F_v :	N/A	PGA _M :	0.458
S_{MS} :	0.961	F_{PGA} :	1.227
S_{M1} :	N/A	I_e :	1
S_{DS} :	0.641	C_v :	1.21

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.

Data Accessed: Tue Dec 14 2021

Date Source: [USGS Seismic Design Maps](#)

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

Appendix C

DownStream Analysis

Memorandum

To: Keith Buisman, PE
From: Roger Tiffany, EI and Rose Horton, PE
Copies: File
Date: May 17, 2022
Subject: Downstream Impact Analysis of Boeckman Creek
Project No.: 20015

Introduction

Otak has conducted a downstream impact analysis on the downstream storm conveyance system for the proposed Frog Pond Terrace and Frog Pond Overlook developments, per City of Wilsonville 2015 standards. These proposed developments are located adjacent to Frog Pond Lane and east of Boeckman Creek, as shown on Figure 1.



Figure 1 Vicinity Map

The development will meet the City of Wilsonville Public Work Standards Section 301.4.04 which requires flow control from post-development conditions for peak flow rates generated by between 42% of the 2-year storm up to the 10-year storm.

To meet the requirements of City of Wilsonville Public Work Standards Section 301.5.01, a downstream analysis shall include:

- verifying that the downstream system has the capacity to convey the 25-year design storm.
- extending the analysis downstream to a point in the drainage system where the proposed development site contributes 10% or less of the total tributary drainage flow or for one-quarter mile downstream of the approved point of discharge.

Per email communications with Kerry Rappold on March 3, 2022, the downstream analysis should extend down to the flow control structure directly upstream of SW Boeckman Road.

Existing Conveyance System

The existing conveyance system used in this analysis is shown on Figure 2 (attached), which also includes the drainage basin delineation, time of concentration (T_c) flow paths, and runoff node locations represented in the hydraulic model. Cross sections of the open channel system were obtained from LiDAR and field observation. The proposed Frog Pond Terrace and Frog Pond Overlook developments will discharge runoff into the existing Boeckman Creek channel approximately 1,330 feet upstream of the existing flow control structure.

The stretch of channel downstream of the project site was visited on March 16, 2022. The purpose of the field visit was to observe and document existing channel conditions, outfalls, and contributing waterways. Visual documentation of the drainage system along the channel is included in the Photo Log in Appendix A.

Conveyance Hydrology

Peak runoff rates from the drainage basins delineated in Figure 2 during proposed conditions were calculated using XPSWMM V2021. The Santa Barbara Urban Hydrograph (SBUH) method was used to apply the conveyance design event (25-year recurrence interval, 24-hour duration, NRCS Type 1A rainfall distribution), per Section 301.5.01. Time of Concentration values were calculated for delineated drainage basin using TR-55 equations. Time of Concentration (T_c) flow paths are shown in Figure 2 and corresponding calculations for each drainage basin are included in Appendix B. A time of concentration of five minutes, the minimum allowable, was applied to steep and developed basins for a conservative estimate.

The study area is primarily comprised of Aloha silt loam categorized in the hydrologic soil groups (HSG) Type D and Woodburn silt loam categorized as HSG Type C. HSG D soils generally exhibit very slow infiltration rates when thoroughly wet. The steep area of the channel is Xerochrepts and Haploxerolls which is categorized as HSG Type B with moderate infiltration. A Curve Number (CN) of 98 was used for all impervious areas. The pervious areas were open space with good grass cover, thus a CN of 74 (HSG Type C) was used as applicable.

The basins downstream of the proposed project site are developed residential areas. Impervious percentages were estimated based on existing impervious surfaces captured in 2022 aerial imagery.

The upstream flow in Boeckman Creek was obtained from StreamStats (see Appendix B). It is not recommended to mix hydrologic methods and this data should not be used for design. In this case, the StreamStats data was used provide a rough order of magnitude flowrate for the large upstream basin in comparison with the flowrates generated from the proposed development. Table 1 summarizes the 25-year peak flowrates in Boeckman Creek for proposed project conditions calculated in XP-SWMM. The stationing represents the distance upstream from the existing Boeckman Road flow control structure. The existing flow control structure at the end of the analysis is 1,331 feet downstream from the project's proposed discharge location.

Table 1 Peak 25-Year Flowrates

Node	Station	Total Contributing Basin Area (ac)	Flow Rate (cfs)
Drainage Node 4	16+95	910	116.62
Drainage Node 3	13+31	978	158.38
Drainage Node 2	5+78	992	160.6
Drainage Node 1	2+00	1,025	173.6

Downstream Conveyance Modeling Analysis

The stormwater conveyance network was analyzed in XP-SWMM. The conveyance system was modeled to determine whether the existing downstream system has sufficient capacity to support the Frog Pond Overlook and Frog Pond Terrace developments runoff undetained during the 25-year, 24-hour storm event. The inverts are from as-builts of the flow control structure and LiDAR data. Manning's n values of 0.035 or 0.04 were applied to the channel of Boeckman Creek depending on the amount of wood located in the channel along the reach. A Manning's n value of 0.1 was applied to the overbanks. A minimum of one-foot of freeboard between the hydraulic grade line (HGL) and the top of bank was confirmed. The model does not include the effect of the existing flow control structure on the system. Appendix C includes output information from the XP-SWMM model, summarizing the channel network characteristics and results of the hydraulic routing during the design storm.

Conclusions

The downstream stormwater conveyance system was analyzed to confirm conveyance capacity for the proposed development to Boeckman Road. The system consists entirely of open channel upstream of the existing flow control structure at Boeckman Road. A site visit along the downstream reach provided a qualitative assessment of the storm conveyance system and found no evidence of capacity restrictions under existing conditions. The channel was modeled using XP-SWMM software and shows adequate capacity for the proposed flows and the existing flow control structure creates ponding in the downstream reach.

References

Wilsonville, 2015. *City of Wilsonville Public Works Standards. Section 3, Stormwater & Surface Water Design and Construction Standards*, City of Wilsonville, Revised December 2015.

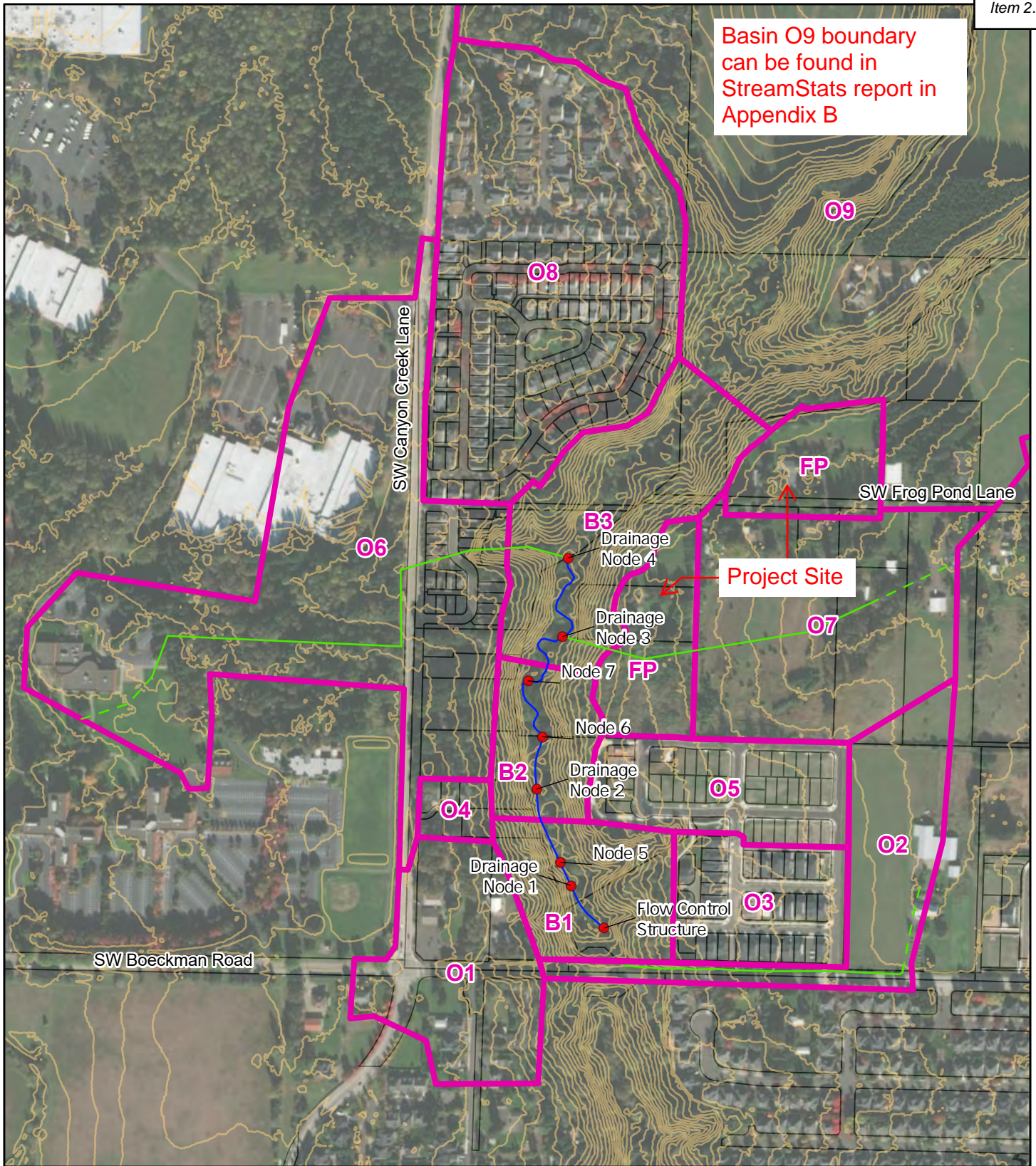
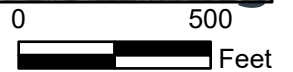


FIGURE 2
DOWNSTREAM ANALYSIS
BOECKMAN CREEK
WILSONVILLE, OREGON

Legend

- Nodes
- Stream Centerline (Analysis Extent)
- ▭ Drainage Basins
- Contours (5 ft)
- Time of Concentration Path
 - Shallow Concentrated Flow
 - - - Sheet Flow



Data Sources:
 Date: 4/18/2022
 Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.
 L:\Project\2000\2015\CADD\GIS\MXD\2015-DSA Analysis\2015-DSA Analysis.aprx

Downstream Analysis of Boeckman Creek

Appendix A

Photo Log

2015 Frog Pond Terrace/Overlook DSA Photolog

Reach 1 - Flow Control Structure

Photo looking upstream



- Measured bank full depth – 52"
- Wide activated overbank floodplain
- Minimal wood and vegetation in channel

Reach 2

Photo looking upstream



- Measured bank full depth – 30"
- Activated overbank floodplain
- Higher density of wood in channel and beaver dams

Reach 3

Photo looking downstream



- Measured bank full depth – 48”
- More wood in channel than other reaches

Reach 4

Photo looking upstream



- Measured bank full depth – 32”
- More wood located in channel than other reaches

Reach 5

Photo looking downstream



- Measured bank full depth – 24"
- Scattered wood in channel

Reach 6 – Outfall General Location

Photo looking upstream



- Measured depth 2 ft
- Additional 14" above water surface to TOB at 1:1 slope
- Scattered wood in channel

Downstream Analysis of Boeckman Creek

Appendix B

Hydrology

DSA Drainage Basin Areas

Boeckman Creek

Basin	XP-SWMM Node	Pervious Curve #	Impervious Area		Total Area	
			Tc	%	(sf)	(ac)
Site Total				390	44,646,105	1,025
O1	1	74	5	30	440,423	10.11
O3	1	74	5	50	288,301	6.62
O5	2	74	5	60	335,041	7.69
O4	2	74	5	30	58,509	1.34
O6	4	74	55.4	50	1,520,186	34.90
O8	3	74	5	80	1,250,809	28.71
B1	1	74	5	0	292,661	6.72
B2	2	74	5	0	206,554	4.74
B3	3	74	5	0	542,471	12.45
O9*	4	74			38,128,714	875.31
O2	1	74	28.2	20	405,690	9.31
O7	3	74	48.4	10	759,013	17.42
FP	3	74	5	60	417,733	9.59

*Modeled flow rates from Stream Stats

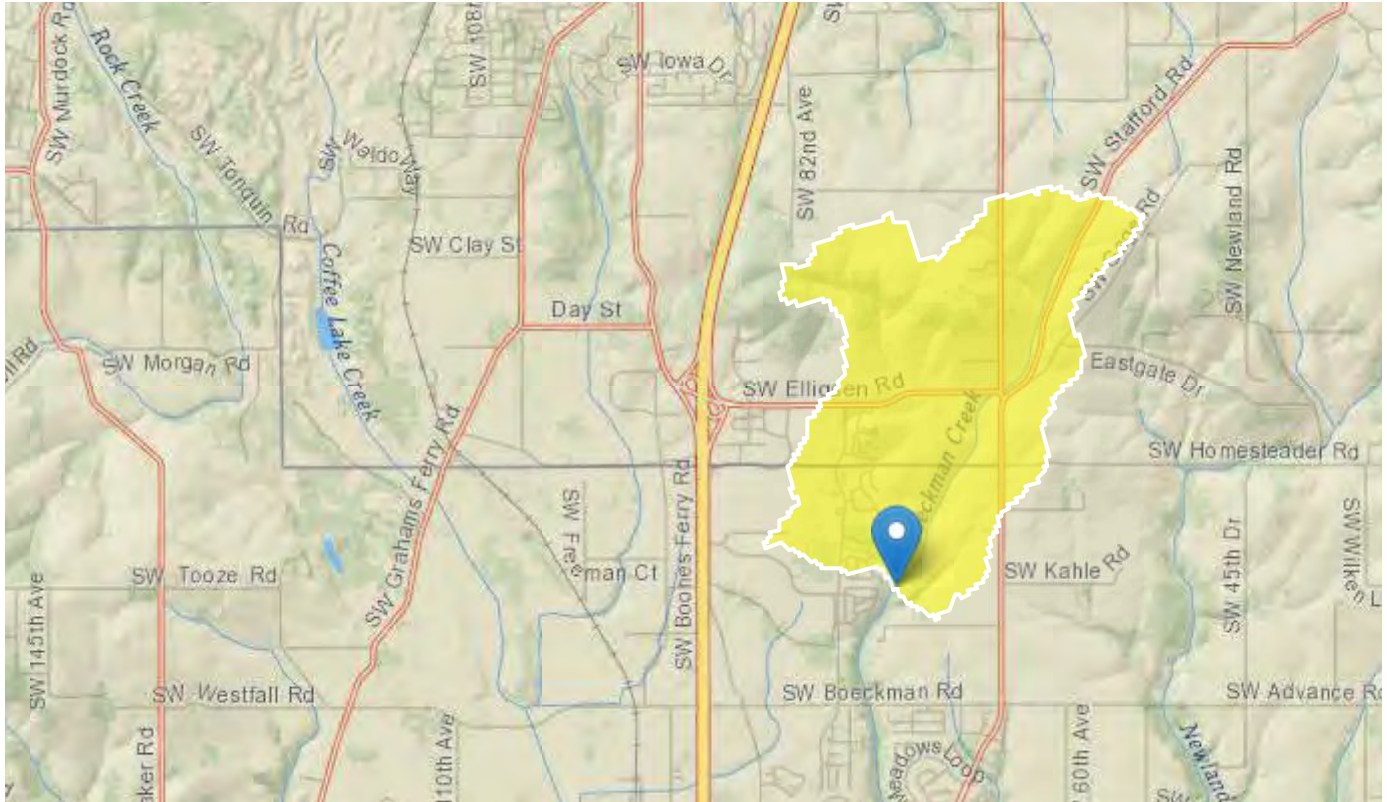
StreamStats Report - Boeckman Creek

Region ID: OR

Workspace ID: OR20220117180346388000

Clicked Point (Latitude, Longitude): 45.32457, -122.75288

Time: 2022-01-17 10:04:08 -0800



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.59	square miles
I24H2Y	Maximum 24-hour precipitation that occurs on average once in 2 years - Equivalent to precipitation intensity index	1.81	inches
SOILPERM	Average Soil Permeability	0.71	inches per hour
JANMAXT2K	Mean Maximum January Temperature from 2K resolution PRISM 1961-1990 data	46.2	degrees F

Parameter Code	Parameter Description	Value	Unit
WATCAPORC	Available water capacity from STATSGO data using methods from SIR 2005-5116	0.13	inches
ORREG2	Oregon Region Number	10001	dimensionless
BSLOPD	Mean basin slope measured in degrees	4.36	degrees
JANMINT2K	Mean Minimum January Temperature from 2K resolution PRISM PRISM 1961-1990 data	33.2	degrees F
ELEV	Mean Basin Elevation	338	feet
PRECIP	Mean Annual Precipitation	44.6	inches
DRNDENSITY	Basin drainage density defined as total stream length divided by drainage area.	0.63	dimensionless
MINBELEV	Minimum basin elevation	170	feet
MINTEMP	Mean annual minimum air temperature over basin surface area as defined in SIR 2008-5126	42.8	degrees F
JANMINTMP	Mean Minimum January Temperature	33.8	degrees F
MAXTEMP	Mean annual maximum air temperature over basin area from PRISM 1971-2000 800-m grid	62.4	degrees F
LC11DVOPN	Percentage of developed open area from NLCD 2011 class 21	13	percent
LC11WETLND	Percentage of wetlands, classes 90 and 95, from NLCD 2011	0	percent
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	13.4	percent
STRMTOT	total length of all mapped streams (1:24,000-scale) in the basin	1.62	miles

Peak-Flow Statistics Parameters [Reg 2B Western Interior LT 3000 ft Cooper]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.59	square miles	0.37	7270
BSLOPD	Mean Basin Slope degrees	4.36	degrees	5.62	28.3
I24H2Y	24 Hour 2 Year Precipitation	1.81	inches	1.53	4.48
ELEV	Mean Basin Elevation	338	feet		

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
ORREG2	Oregon Region Number	10001	dimensionless		

Peak-Flow Statistics Disclaimers [Reg 2B Western Interior LT 3000 ft Cooper]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Peak-Flow Statistics Flow Report [Reg 2B Western Interior LT 3000 ft Cooper]

Statistic	Value	Unit
50-percent AEP flood	45.8	ft ³ /s
20-percent AEP flood	68.7	ft ³ /s
10-percent AEP flood	84.7	ft ³ /s
4-percent AEP flood	105	ft ³ /s
2-percent AEP flood	121	ft ³ /s
1-percent AEP flood	137	ft ³ /s
0.2-percent AEP flood	174	ft ³ /s

Peak-Flow Statistics Citations

Cooper, R.M., 2005, Estimation of Peak Discharges for Rural, Unregulated Streams in Western Oregon: U.S. Geological Survey Scientific Investigations Report 2005-5116, 76 p. (<http://pubs.usgs.gov/sir/2005/5116/pdf/sir2005-5116.pdf>)

Monthly Flow Statistics Parameters [LowFlow Apr Region02 2008 5126]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.59	square miles	3.068	2025.868
PRECIP	Mean Annual Precipitation	44.6	inches	42.7355	101.2128
SOILPERM	Average Soil Permeability	0.71	inches per hour	0.502	3.724

Monthly Flow Statistics Parameters [LowFlow Aug Region02 2008 5126]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.59	square miles	3.068	2025.868
DRNDENSITY	Basin Drainage Density	0.63	dimensionless	0.118	0.876

Time of Concentration Calculations

Boeckman Creek Downstream Analysis

BASINS:	07	06	02
SHEET FLOW			
INPUT			
Surface Description (from Table 3-1)	Short Grass/Woods mix	Short Grass	Short Grass
Manning's Roughness Coefficient	0.25	0.4	0.15
Flow Length, L (<300 ft) ft	300	300	300
2-Year, 24-Hour Rainfall, P ₂ in	2.5	2.5	2.5
Land Slope, s ft/ft	0.016	0.027	0.025
OUTPUT			
Travel Time hr	0.73	0.86	0.41
SHALLOW CONCENTRATED FLOW			
INPUT			
Surface Description (paved or unpaved)	Unpaved		Unpaved
Flow Length, L ft	1200		900
Watercourse Slope, s ft/ft	0.075		0.06
OUTPUT			
Average Velocity, V ft/s	4.42		3.95
Travel Time hr	0.08		0.06
CHANNEL FLOW			
INPUT			
Cross Sectional Flow Area, a ft ²		1.23	
Wetted Perimeter, p _w ft		3.93	
Channel Slope, s ft/ft		0.03	
Manning's Roughness Coefficient		0.013	
Flow Length, L ft		1925	
OUTPUT			
Average Velocity, V ft/s		9.15	
Hydraulic Radius, r = a/p _w ft		0.31	
Travel Time hr		0.058	
Basin Time of Concentration, T_c			
hrs	0.81	0.92	0.47
min	48.4	55.4	28.2

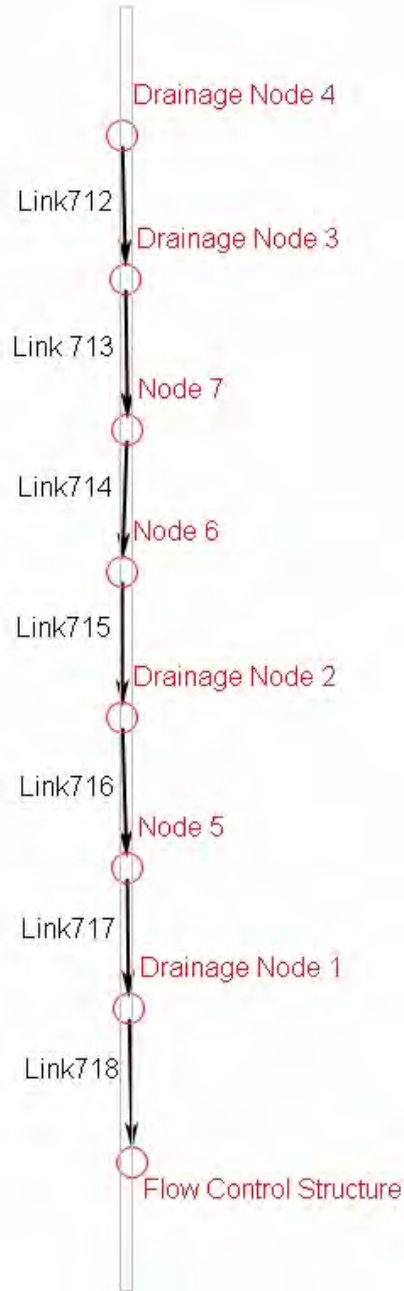
Downstream Analysis of Boeckman Creek

Appendix C

Model Results

XP-SWMM Layout

Boeckman Creek Downstream Analysis



XP-SWMM RUNOFF DATA
Boeckman Creek Downstream Analysis
Proposed Conditions

SCS Type IA 25-Year Storm Event							
XP-SWMM Input Data					XP-SWMM Output Data		
Node Name	Total Area (ac)	Impervious %	Pervious Curve Number	Tc (min)	Rainfall Depth (in)	Unit Hydrograph Method	Surface Runoff Flow (cfs)
Drainage Node 1	10.11	30	74	5	3.9	Santa Barbara	6.24
Drainage Node 1	6.62	50	74	5	3.9	Santa Barbara	5.19
Drainage Node 1	6.72	0	74	5	3.9	Santa Barbara	2.65
Drainage Node 1	9.31	20	74	28.2	3.9	Santa Barbara	2.78
Drainage Node 2	7.69	60	74	5	3.9	Santa Barbara	6.70
Drainage Node 2	1.34	30	74	5	3.9	Santa Barbara	0.83
Drainage Node 2	4.74	0	74	5	3.9	Santa Barbara	1.87
Drainage Node 3	28.71	80	74	5	3.9	Santa Barbara	29.94
Drainage Node 3	12.45	0	74	5	3.9	Santa Barbara	4.91
Drainage Node 3	17.42	10	74	48.4	3.9	Santa Barbara	3.43
Drainage Node 3	9.59	60	74	5	3.9	Santa Barbara	8.36
Drainage Node 4	34.90	50	74	55.4	3.9	Santa Barbara	11.55

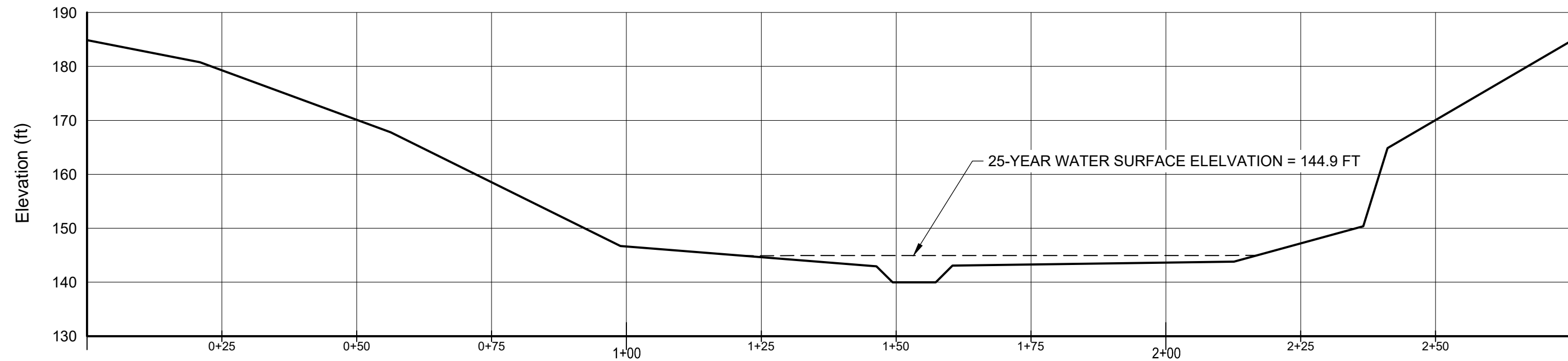
XP-SWMM HYDRAULICS DATA
Boeckman Creek Downstream Analysis
Proposed Conditions

SCS Type IA 25-Year Storm Event

Link Name	Location		Channel		Channel Profile								Channel Results			
	Node Limits		Length ft	Slope %	Ground Elevation (ft)		Invert Elevation (ft)		Max. Water Elevation (ft)		Freeboard (ft)		Max. Flow (cfs)	Max. Velocity (ft/s)	Max. Depth (ft)	y/d0
	From	To			US	DS	US	DS	US	DS	US	DS				
Link712	Drainage Node 4	Drainage Node 3	364.00	0.6	188.19	186.12	143.27	141.20	146.53	144.90	41.66	41.22	116.62	3.66	3.70	0.08
Link 713	Drainage Node 3	Node 7	309.00	0.6	186.12	184.93	141.20	139.42	144.90	143.17	41.22	41.76	158.38	3.74	3.75	0.08
Link715	Node 6	Drainage Node 2	196.00	0.2	186.41	186.00	137.41	137.00	142.07	141.44	44.34	44.56	153.78	3.20	4.66	0.10
Link717	Node 5	Drainage Node 1	93.00	1.0	185.60	184.43	136.60	135.10	139.77	137.15	45.83	47.28	160.56	4.60	3.17	0.07
Link714	Node 7	Node 6	248.00	0.8	184.93	186.41	139.42	137.41	143.17	142.07	41.76	44.34	155.45	2.99	4.66	0.10
Link716	Drainage Node 2	Node 5	285.00	0.1	186.00	185.60	137.00	136.60	141.44	139.77	44.56	45.83	160.61	3.75	4.44	0.09
Link718	Drainage Node 1	Flow Control Structure	200.00	1.6	184.43	181.33	135.10	132.00	137.15	133.96	47.28	47.37	173.66	7.02	2.05	0.04

Boeckman Road surface is higher than elevation 176

Cross Section for Link 713 is directly downstream of the proposed development



Link 713 Cross Section

Appendix D

BMP Sizing Tool Output

WES BMP Sizing Software Version 1.6.0.2, May 2018

WES BMP Sizing Report

Project Information

Project Name	Frog Pond Terrace & Frog Pond Overlook
Project Type	Subdivision
Location	7480 SW Frog Pond Lane
Stormwater Management Area	6500
Project Applicant	West Hills Development
Jurisdiction	CCSD1NCSA

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
O3 Perv	998	Grass	LandscapeCsoil	C	Swale 4
O3 Imp.	11,467	Grass	ConventionalConcrete	C	Swale 4
T13 Perv.	1,775	Grass	LandscapeCsoil	C	Swale 3
T13 Imp.	6,251	Grass	ConventionalConcrete	C	Swale 3
T11 Imp.	9,707	Grass	ConventionalConcrete	C	Swale 1
T11 Perv.	548	Grass	LandscapeCsoil	C	Swale 1
Pond Basins Imp.	125,358	Grass	ConventionalConcrete	C	Pond
Pond Basins Perv.	107,258	Grass	LandscapeCsoil	C	Pond
T12 Imp.	5,835	Grass	ConventionalConcrete	C	Swale 2
T12 Perv.	889	Grass	LandscapeCsoil	C	Swale 2
O4 Imp.	10,399	Grass	ConventionalConcrete	C	Swale 5
O4 Perv.	815	Grass	LandscapeCsoil	C	Swale 5
FP2 Imp.	2,177	Grass	ConventionalConcrete	C	Swale 6
FP2 Perv.	183	Grass	LandscapeCsoil	C	Swale 6
FP3 Imp	3,445	Grass	ConventionalConcrete	C	Swale 7
FP3 Perv.	248	Grass	LandscapeCsoil	C	Swale 7

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
Swale 2	FlowControlAndTreatment	Vegetated Swale - Filtration	C2	314.0	336.0	0.8
Swale 1	WaterQuality	Vegetated Swale - Filtration	C2	149.7	342.0	0.6
Swale 3	FlowControlAndTreatment	Vegetated Swale - Filtration	C2	356.9	384.0	0.9
Swale 4	WaterQuality	Vegetated Swale - Filtration	C2	179.5	221.0	0.6
Swale 5	WaterQuality	Vegetated Swale - Filtration	C2	162.1	192.0	0.6
Swale 6	FlowControlAndTreatment	Vegetated Swale - Filtration	C2	113.4	183.0	0.5
Swale 7	FlowControlAndTreatment	Vegetated Swale - Filtration	C2	178.5	248.0	0.6

Pond Sizing Details

Pond ID	Design Criteria(1)	Facility Soil Type	Max Depth (ft)(2)	Top Area (sq-ft)	Side Slope (1:H)	Facility Vol. (cu-ft)(3)	Water Storage Vol. (cu-ft)(4)	Adequate Size?
Pond	FCWQT	Lined	5.00	7,523.0	3	26,105.1	18,278.3	Yes

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only

2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).

3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.

4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

Simple Pond Geometry Configuration

Pond ID: Pond

Design: FlowControlAndTreatment

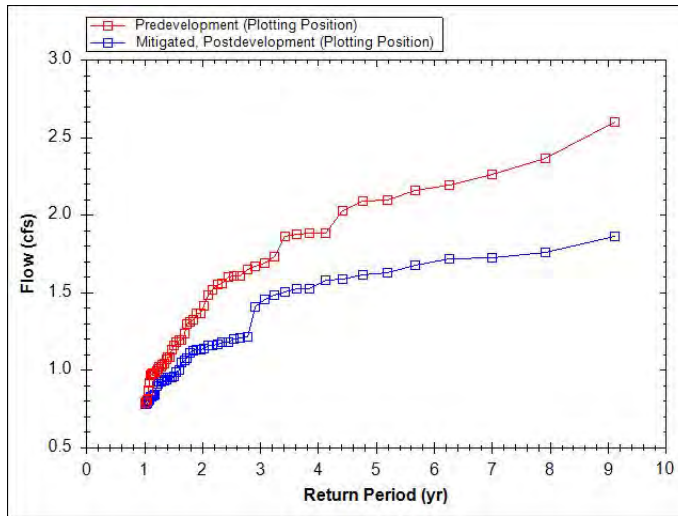
Shape Curve

Depth (ft)	Area (sq ft)
5.0	7,523.0

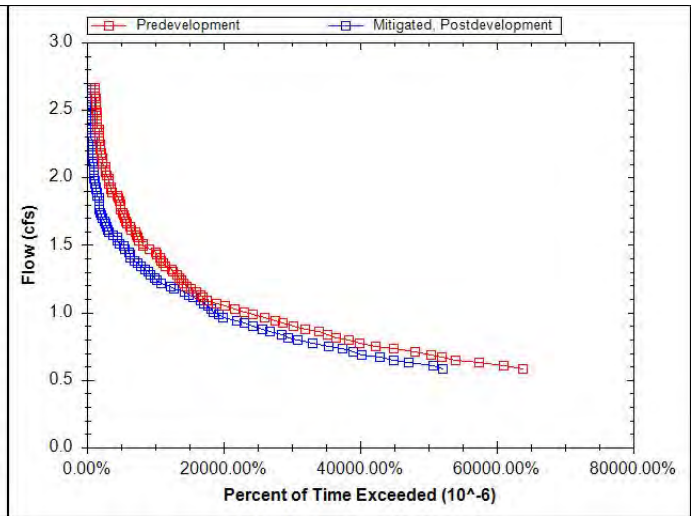
Outlet Structure Details

Lower Orifice Invert (ft)	0.0
Lower Orifice Dia (in)	3.2
Upper Orifice Invert(ft)	3.4
Upper Orifice Dia (in)	7.9
Overflow Weir Invert(ft)	4.0
Overflow Weir Length (ft)	6.3

Flow Frequency Chart

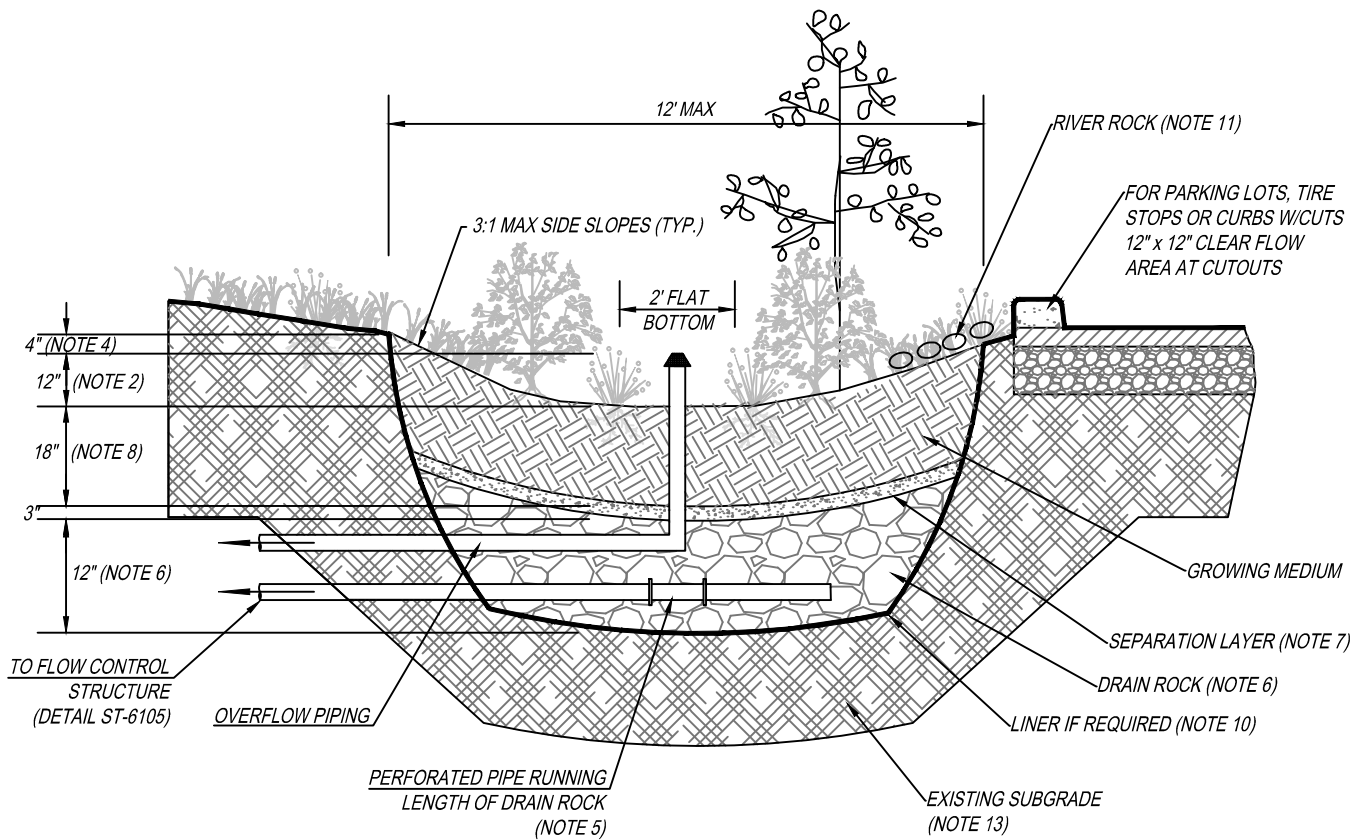


Flow Duration Chart



Appendix E

Operations and Maintenance Plans



GENERAL NOTES:

1. **PROVIDE PROTECTION** FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION. UNLESS REQUIRED BY SITE CONDITIONS, UNLINED SWALES ARE PREFERRED TO ALLOW MAXIMUM INFILTRATION.
2. **DIMENSIONS:**
 - DEPTH OF SWALE (FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION); 12"
 - LONGITUDINAL SLOPE OF SWALE: 6.0% OR LESS
 - FLAT BOTTOM WIDTH: 2' MINIMUM
 - SIDE SLOPES OF SWALE: 3:1 MAXIMUM
3. **LOCATION/SETBACKS:**
 - FILTRATION SWALES SHALL BE 10' FROM FOUNDATIONS AND 5' FROM PROPERTY LINES UNLESS APPROVED BY BUILDING OFFICIAL
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 BE ABS SCH. 40, CAST IRON, OR PVC SCH.40. MINIMUM DIAMETER IS 6". 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: 1 1/2" - 3/4" WASHED
 - DEPTH: 12"
7. **SEPARATION** BETWEEN DRAIN ROCK AND GROWING MEDIUM: SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE.
8. **GROWING MEDIUM:**
 - 18" MINIMUM
 - SEE APPENDIX C FOR SPECIFICATION OR USE SAND/LOAM/COMPOST 3-WAY MIX.
 - FACILITY SURFACE AREA MAY BE REDUCED BY 25% WHEN GROWING MEDIA DEPTH IS INCREASED TO 30" OR MORE.
9. **VEGETATION:** FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
10. **WATERPROOF LINER (IF REQUIRED):** SHALL BE 30 MIL PVC OR EQUIVALENT.
11. **INSTALL RIVER ROCK** SPLASH PAD OVER A NON WOVEN GEO TEXTILE FABRIC TO TRANSITION FROM INLETS TO GROWING MEDIUM. SIZE OF ROCK SHALL BE 1" TO 3", 4 SQUARE FEET, 6" DEEP.
12. **CHECK DAMS:** SHALL BE PLACED ACCORDING TO FACILITY DESIGN. REFER TO DETAIL ST-6100 FOR PROFILE AND SPACING.
13. **SEASONAL HIGH GROUNDWATER SEPARATION:**
 - SEPARATION DISTANCE AS REQUIRED BY CITY.

Vegetated Swale - Filtration

DRAWING NUMBER: ST-6045

DRAWN BY: SR

SCALE: N.T.S.

FILE NAME: ST-6045.DWG

APPROVED BY: NK

DATE: 6/3/16

CITY OF
WILSONVILLE



PUBLIC WORKS STANDARD

Vegetated Swales Operations & Maintenance Plan

What to Look For	What to Do
Structural Components, including inlets and outlets/overflows, shall freely convey stormwater.	
Clogged inlets or outlets	-Remove sediment and debris from catch basins, trench drains, curb inlets and pipes to maintain at least 50% conveyance capacity at all times.
Cracked Drain Pipes	-Replace/seal cracks. Replace when repair is insufficient.
Check Dams	-Maintain 4 - 10 inch deep rock check dams at design intervals.
Vegetation	
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 to 4-6 inches, 1-2 times per year. Remove cuttings
Weeds	-Manually remove weeds. Remove all plant debris.
Growing/Filter Medium, 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	-Restore or create outfalls, checkdams, or splash blocks where necessary.
Slope Sippage	-Stabilize Slope.
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.

Vegetated Swale O & M Plan

DRAWING NUMBER: ST-6055

DRAWN BY: SR

SCALE: N.T.S.

FILE NAME: ST-6055.DWG

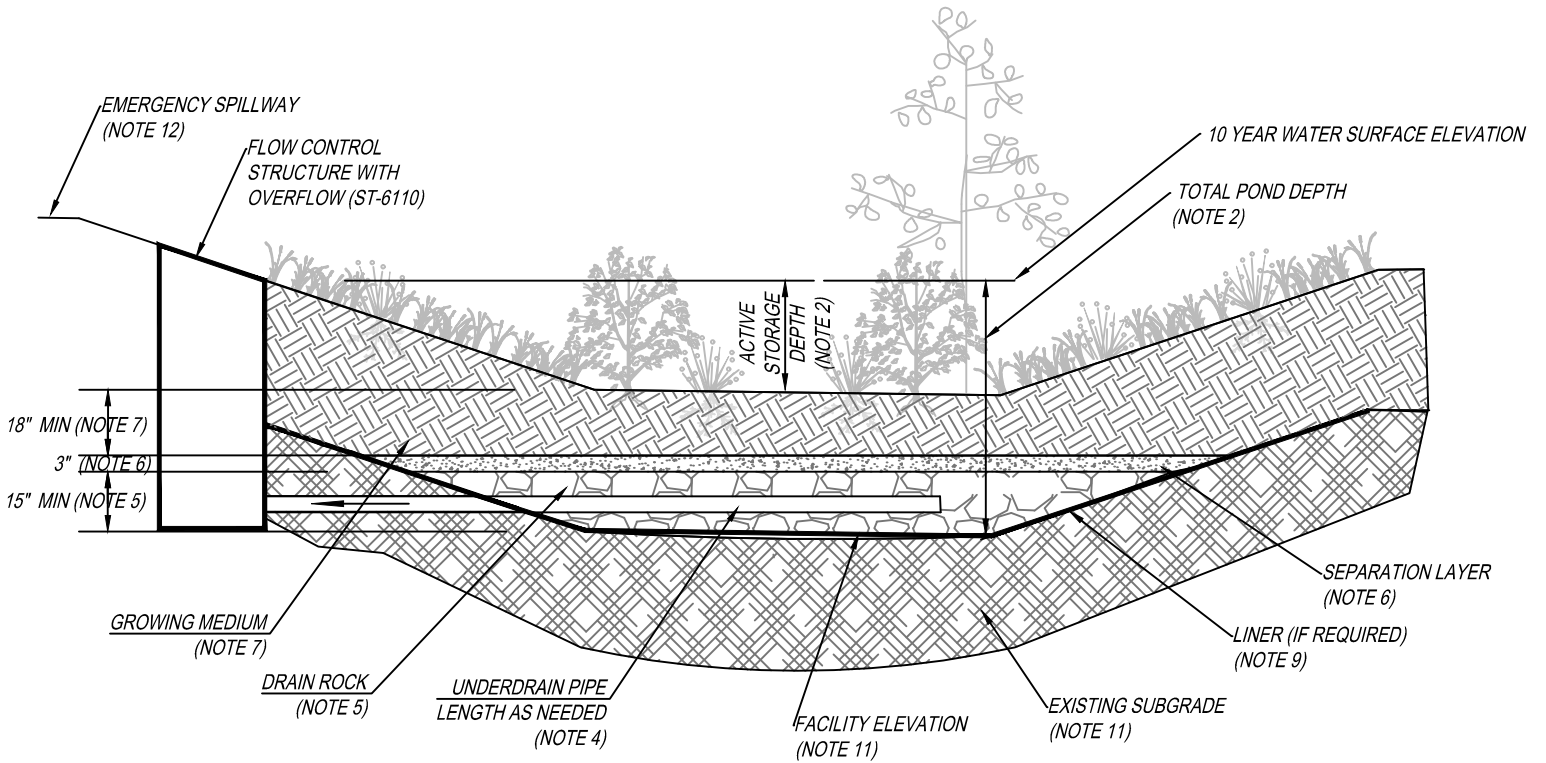
APPROVED BY: NK

DATE: 10/8/14

CITY OF
WILSONVILLE



PUBLIC WORKS STANDARD



GENERAL NOTES:

1. **PROVIDE PROTECTION** FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION. UNLESS REQUIRED BY SITE CONDITIONS, UNLINED PONDS ARE PREFERRED TO ALLOW MAXIMUM INFILTRATION.
2. **DIMENSIONS:**
 - ACTIVE STORAGE DEPTH: (FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION); PER FACILITY SIZING MODEL
 - TOTAL POND DEPTH: 4' MINIMUM, PER FACILITY SIZING MODEL
 - BOTTOM SLOPE: 2.0% OR LESS
 - SIDE SLOPES OF DETENTION POND: 3:1 MAXIMUM
3. **LOCATION/SETBACKS:**
 - DETENTION POND SHALL BE 10' FROM FOUNDATIONS AND 5' FROM PROPERTY LINES UNLESS APPROVED BY BUILDING OFFICIAL.
4. **PIPING:**
 - PERFORATED UNDER-DRAIN PIPING: SHALL BE ABS SCH. 40, CAST IRON OR PVC SCH. 40. 6" MINIMUM DIAMETER. PIPING SHALL HAVE 1% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND. WRAP UNDER-DRAIN PIPE IN FILTER FABRIC TO REDUCE TRANSPORT OF FINES.
 - OVERFLOW PIPING: SHALL BE ABS SCH. 40, CAST IRON OR PVC SCH. 40 AND SHALL NOT BE PERFORATED. MINIMUM DIAMETER IS 6". PIPING SHALL HAVE 1% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND.
5. **DRAIN ROCK:**
 - SIZE: 1 1/2" - 3/4"-0 WASHED
 - DEPTH: 15" MINIMUM
6. **SEPARATION** BETWEEN DRAIN ROCK AND GROWING MEDIUM: SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE.
7. **GROWING MEDIUM:**
 - 18" MINIMUM
 - SEE APPENDIX C FOR SPECIFICATION OR USE SAND/LOAM/COMPOST 3-WAY MIX.
8. **VEGETATION:** FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
9. **WATERPROOF LINER (IF REQUIRED):** SHALL BE 30 MIL PVC OR EQUIVALENT FOR DETENTION POND.
10. **INSTALL RIVER ROCK** SPLASH PAD OVER A NON WOVEN GEO TEXTILE FABRIC TO TRANSITION FROM INLETS TO GROWING MEDIUM. SIZE OF ROCK SHALL BE 1" TO 3", 4 SQUARE FEET 6" DEEP.
11. **SEASONAL HIGH GROUNDWATER SEPARATION:**
 - SEPARATION DISTANCE AS REQUIRED BY CITY.
12. **EMERGENCY SPILLWAY** SIZED TO CONVEY THE 100 YEAR DESIGN STORM (S-2275). SEE PUBLIC WORKS STANDARDS 301.4.09

Detention Pond

**CITY OF
WILSONVILLE**

DRAWING NUMBER: ST-6060

DRAWN BY: SR

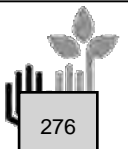
SCALE: N.T.S.

FILE NAME: ST-6060.DWG

APPROVED BY: NK

DATE: 6/3/16

PUBLIC WORKS STANDARDS



Detention Pond Operations & Maintenance Plan

Detention Pond removes pollutants through several processes: sedimentation, filtration, and biological processes. The facility owner must keep a log, recording all inspection dates, observations, and maintenance activities. The following items shall be inspected and maintained as stated:

What to Look For	What to Do
Structural Components, including inlets and outlets/overflows, shall freely convey stormwater.	
Clogged inlets or outlets	-Remove sediment and debris from catch basins, trench drains, 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 - 10 inch deep rock check dams at design intervals.
Vegetation shall cover 90% of the facility.	
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.
Growing/Filter Medium, 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 Sippage	-Stabilize 3:1 Slopes/banks with plantings from Appendix A
Ponding	-Rake, till, or amend to restore infiltration rate.

Annual Maintenance Schedule:

All facility components, vegetation, and source controls shall be inspected for proper operations and structural stability. These inspections shall occur, at a minimum, quarterly for the first 2 years from the date of installation, and 2 times per year thereafter, and within 48 hours after each major storm event.

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.

Detention Pond O & M Plan

DRAWING NUMBER: ST-6065	DRAWN BY: SR	SCALE: N.T.S.
FILE NAME: ST-6065.DWG	APPROVED BY: NK	DATE: 10/8/14

**CITY OF
WILSONVILLE**

PUBLIC WORKS STANDARDS



STORMWATER FACILITIES OPERATIONS AND MAINTENANCE CHECKLIST

Problem	Frequency	Trigger	Preferred Condition
<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

CITY OF
WILSONVILLE



PUBLIC WORKS STANDARDS

DRAWING NUMBER: ST-6115

DRAWN BY: SR

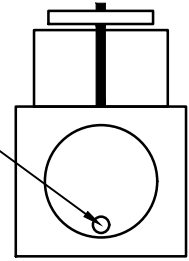
SCALE: N.T.S.

FILE NAME: ST-6115.DWG

APPROVED BY: NK

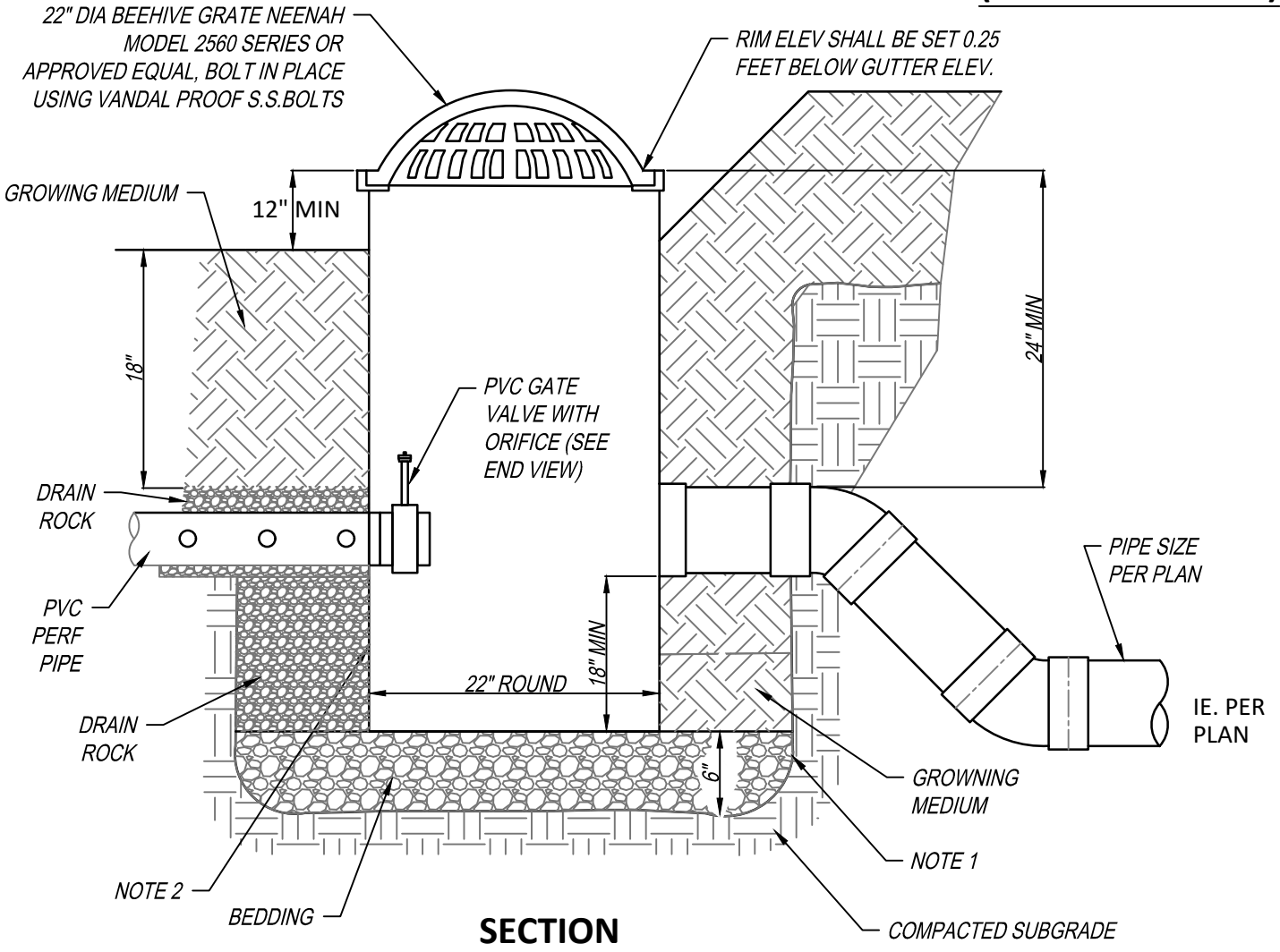
DATE: 10/3/14

This Detail Drawing may not be altered or changed in any manner except by the City Engineer. It is the responsibility of the user to acquire the most current version.



DRILLED ORIFICE IN GATE
ORIFICE SIZE SHALL BE AS
DETERMINED USING THE BMP
SIZING TOOL

**END VIEW
(PVC GATE VALVE)**



NOTES:

1. CONTRACTOR TO WIDEN EXCAVATION AS REQUIRED TO OBTAIN COMPACTION WITH CONTRACTORS COMPACTION EQUIPMENT.
2. 10 GA. STEEL PLATE, BITUMINOUS COATED BASIN AS MANUFACTURED BY GIBSON STEEL, GRATEMASTER OR APPROVED EQUAL.
3. BEDDING SHALL BE 6" OF COMPACTIONED 3/4"-0 CRUSHED ROCK BASE MATERIAL.

Beehive Overflow Inlet			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS	
DRAWING NUMBER: ST-6120	DRAWN BY: SR	SCALE: N.T.S.		
FILE NAME: ST-6120.dwg	APPROVED BY: NK	DATE: 2/15/18		

Appendix C

Wetland Delineation and Significant Resource Impact Report (SRIR)
dated January 2022 by AKS Engineering & Forestry, LLC

Frog Pond Terrace Abbreviated Significant Resource Impact Report (SRIR)

Date: January 2022

Prepared for: West Hills Land Development, LLC
3330 NW Yeon Avenue
Portland, OR 97210

Prepared by: AKS Engineering & Forestry, LLC
Lex Francis, Natural Resource Specialist
Stacey Reed, PWS, Senior Wetland Scientist
503-563-6151 | stacey@aks-eng.com

Site Information: 7480 SW Frog Pond Lane
Wilsonville, OR 97070
Clackamas County Assessor's Map 3 1 W 12D
Tax Lots 2800 and 2801

AKS Job Number: 7005



12965 SW Herman Road, Suite 100
Tualatin, OR 97062
(503) 563-6151

Table of Contents

Introduction..... 1

Background Information / Physical Analysis..... 1

 Wetlands and Waters Mapping 2

 Wilsonville Local Wetland and Riparian Inventory Maps 2

 Natural Resources Inventory Pacific Habitat Services (PHS) Map 2

 City of Wilsonville Significant Resource Overlay Zone (SROZ) Map 2

SROZ Delineation Methodology 2

 Primary Protected Water Features 3

 Boeckman Creek 3

 Wetlands A and B..... 3

 Ephemeral Tributaries 1 and 2..... 4

 Upland 4

 Riparian Corridor..... 4

 Area of Limited Conflicting Use (ALCU)..... 4

Project 4

 SROZ Impacts Ecological Analysis 5

 SROZ Buffer Enhancement Mitigation Plan 5

 Enhancement Mitigation Monitoring & Maintenance Plan 5

 Performance Standards 6

Report Preparer and Qualifications..... 6

Literature Cited and Referenced 7

Figures

- Figure 1:** USGS Vicinity Map
- Figure 2:** Clackamas County Assessor’s Map
- Figure 3:** NRCS Soil Survey Map
- Figure 4:** Local Wetland Inventory Map
- Figure 5:** Wilsonville 2009 SROZ Map
- Figure 6:** PHS Natural Resource Inventory Map
- Figure 7:** Natural Resource Existing Conditions
- Figure 8:** Natural Resource Site Plan

Appendices

- Appendix A:** Wetland Determination Data Forms
- Appendix B:** Representative Site Photographs
- Appendix C:** VECO Data Forms
- Appendix D:** Planting Specifications Table

Introduction

AKS Engineering & Forestry, LLC (AKS) was contracted by West Hills Land Development, LLC to prepare a Significant Resource Impact Report (SRIR) for the Frog Pond Terrace residential subdivision (Project) located at 7480 SW Frog Pond Lane in Wilsonville, Clackamas County, Oregon. The Project site consists of Tax Lots 2800 and 2801 of Clackamas County Assessor's Map 3 1 W 12D (Figures 1 and 2). The Project site is located within the Frog Pond West Neighborhood of the Frog Pond Urban Growth Boundary (UGB), added to the City of Wilsonville (City) in 2002. The Frog Pond Terrace consists of a single-family residential community with a park, trails, and stormwater facilities.

Boeckman Creek (Primary Protected Water Feature) was delineated on the Project site. Floodplain wetland (referred to as Wetlands A and B; Primary Protected Water Feature) were delineated adjacent to the downstream segment of Boeckman Creek.

The western portion of the site is mapped as Significant Resource Overlay Zone (SROZ) on the City of Wilsonville's 2009 SROZ map and governed by the City's SROZ Ordinance, Section 4.139.00 of the Wilsonville Development Code. Slopes adjacent to Boeckman Creek and the wetland are greater than 25 percent for less than 150 feet, requiring the Metro Regional Services' (Metro's) Title 3 Vegetated Corridor setback to extend 50 feet past the break in slope to less than 25 percent. A 25-foot-wide Significant Resource (SR) Impact Area buffer extends from the edge of the outer SROZ boundary.

No impacts will occur to Boeckman Creek, wetland, or within the Riparian Corridor Area. Permanent impacts are necessary within the outer edges of the Area of Limited Conflicting Use (ALCU)/ Vegetated Corridor (VC) and the 25-foot-wide SR Impact Area for a stormwater outfall, and 15-foot-wide paved public trail. According to Sections 4.139.04(.05) and (0.8), these development activities within SROZ are allowed uses exempt from the City's SROZ Ordinance with appropriate mitigation. Mitigation for impacts within the SROZ will be through on-site enhancement within portions of remaining degraded condition SROZ. A mitigation plan has been prepared with this report in accordance with the mitigation standards under Section 4.139.07 of the City's SROZ Ordinance.

No non-exempt SROZ impacts will occur. This report has been prepared to meet Section 4.139.06 of the City's SROZ Ordinance and describes the requirements listed under Section 4.139.06(.01)(A)-(I), updated June 2020.

Background Information / Physical Analysis

Topography on the eastern portion of the site has a gentle (less than 5 percent overall) slope westerly toward Boeckman Creek where slopes in the western portion of the site are greater than 25 percent. The Project site is bounded by a residential subdivision to the south, with rural residential area to the north and east.

The following soil units are mapped within the Project area, according to the Natural Resources Conservation Service (NRCS) Clackamas County Area Soil Survey Map and Clackamas County Hydric Soils List (Figure 3):

- (Unit 1B) Aloha Silt Loam, 3 to 6 percent slopes; Non-Hydric
- (Unit 91C) Woodburn silt loam, 8 to 15 percent slopes; Non-hydric
- (Unit 92F) Xerochrepts and Haploxerolls, very steep slopes; Non-hydric

One single-family residence with detached structures is centrally located on the site. The remainder of the site is undeveloped with evidence of past logging.

Geology of the site contains Qs-alluvium and Pleistocene age glacial-outburst flood sediment containing silt, sand, and gravel. The site also contains glaciofluvial sediments from the Cascade Range include Willamette silt, Linn gravel, lacustrine deposits, and older alluvium.

Vegetation in the eastern area above the top of slope was dominated by Douglas-fir (*Pseudotsuga menziesii*; FACU), English hawthorn (*Crataegus monogyna*; FAC), northern bracken fern (*Pteridium aquilinum*; FACU), large sweet vernal grass (*Anthoxanthum odoratum*; FACU), common velvet grass (*Holcus lanatus*; FAC), and scattered Oregon white oak (*Quercus garryana*; FACU) with patches of Scouler's willow (*Salix scouleriana*; FAC) and common rush (*Juncus effusus*; FACW) in the vicinity of Plots 5 and 6.

The vegetation within the SROZ mapped area was dominated by an upland forested community: Douglas-fir, big-leaf maple (*Acer macrophyllum*; FACU), beaked hazelnut (*Corylus cornuta*; FACU), English holly (*Ilex aquifolium*; FACU), pineland swordfern (*Polystichum munitum*; FACU), Pacific waterleaf (*Hydrophyllum tenuipes*; FAC), California dewberry (*Rubus ursinus*; FACU), large swaths of Himalayan blackberry (*Rubus armeniacus*; FAC), and very few spotted touch-me-not (*Impatiens capensis*; FACW) in the vicinity of ephemeral tributary confluence areas to Boeckman Creek.

Wetlands and Waters Mapping

Wilsonville Local Wetland and Riparian Inventory Maps

The Project site is mapped on the City of Wilsonville's 1998 Local Wetland Inventory (LWI). Boeckman Creek spans the border of the map. A wetland is shown extending from the southern edge of the study area into the upland area. AKS determined this wetland as only extending from the southern edge of Boeckman Creek to the toe slope of the adjacent east and west bank in the southern portion of the study area. No wetlands extended to the top of the slope. The LWI map is included in Figure 4.

Natural Resources Inventory Pacific Habitat Services (PHS) Map

According to the 2014 PHS Natural Resource Inventory for the Frog Pond Master Plan, Significant Natural Resources, Boeckman Creek and a floodplain wetland are mapped throughout the western portion of the study area (Figure 6). No Significant Tree Groves are mapped on the site. This figure illustrates the potential Metro Title 3 and 13 resources on the site.

City of Wilsonville Significant Resource Overlay Zone (SROZ) Map

According to the City's 2009 SROZ map, the western portion of the site is mapped in SROZ (Figure 5). Our delineation determined on-site SROZ is generally consistent with the City's 2009 SROZ map, except for the southern portion of the site. The SROZ mapping shows SROZ extending into an area that was logged sometime around 2007, after the SROZ mapping. This area lacks continuous tree canopy and was therefore removed from the SROZ mapping. The section below describes the SROZ field-delineated map verification for the site. Our SROZ delineation closely resembles the PHS 2014 Natural Resource Inventory (Figure 6).

SROZ Delineation Methodology

Natural Resource Specialists Lex Francis and Rebecca Schilling conducted a site visit on December 02, 2021. The methodology used to determine the presence of wetlands followed the *Corps of Engineers*

Wetlands Delineation Manual (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (Wakeley et al., 2010). The *National Wetland Plant List* (USACE, 2018) was used to assign wetland indicator status for the appropriate region. Six wetland determination plots were taken on standard Wetland Determination Data Forms to document site conditions (Appendix A). Sample plots were taken at the lowest topographic setting at the site or within areas of hydrophytic vegetation.

AKS mapped the on-site portion of the top of bank for Boeckman Creek as the potentially jurisdictional limits of the feature, which is shown on the attached Natural Resource Existing Conditions, Figure 7 in Appendix A. The bankfull/OHWM was below the top of bank.

Representative site photographs are included in Appendix B. A list of literature cited, and references is included at the end of the report.

On-site portions of perennial Boeckman Creek, and Palustrine Emergent (PEM) floodplain wetlands (Wetlands A and B) were delineated as Primary Protected Water Features on the Project site. The wetland and Boeckman Creek extend off site to the south. Boeckman Creek also extends off site to the north.

Primary Protected Water Features

Boeckman Creek is a sinuous perennial stream which flows southerly through the western portion of the site. The upstream portion of the creek is deeply incised with an average ± 6 -foot-wide channel bed averaging up to 4 feet tall banks, with incision lessening in the downstream segments. The channel bed is unvegetated and dominated by a silt loam substrate generally lacking gravels and cobbles. Within the Project site, the channel includes in-stream habitat (large woody debris) with evidence of recent beaver activity. The channel contained an average of ± 1 to 3 feet deep continuous flow during our December 2, 2021 site visit.

According to the Pacific States Marine Fisheries Commission's (PSMFC's) StreamNet the on-site portion of Boeckman Creek as potentially containing coastal cutthroat trout. Boeckman Creek is mapped as having a direct connection to the Willamette River, a Navigable Water of the US. According to ODFW current Essential Salmonid Habitat (ESH) Mapping, off-site downstream segments of Boeckman Creek is mapped as ESH off-site in downstream

Riparian vegetation was dominated by Douglas fir red alder (*Alnus rubra*; FAC), Himalayan blackberry, pineland swordfern, fragrant fringecup (*Tellima grandiflora*; FACU), and English ivy (*Hedera helix*; FACU).

Plots 3 and 4 document upland conditions along Boeckman Creek. Vegetation generally consists of big-leaf maple, pineland sword fern, and fragrant fringecup. Soils were described as dark brown throughout and lacked redoximorphic features. Soils were dry and lacked wetland hydrology indicators. These plots determined wetland conditions are not adjacent to Boeckman Creek in the northern portion of the site.

Wetlands A and B are located in the southern portion of the study area along a floodplain bench of Boeckman Creek. Wetland A extends off site to the south. The wetland boundary is well defined based on changes in the vegetation community coinciding with a change in landform from low elevation floodplain bench to higher elevation convex hillside. Wetland conditions were documented at Plot 1. Vegetation within the wetland was dominated by Himalayan blackberry, bentgrass (*Agrostis* SPP; FAC), and piggyback-plant (*Tolmiea menziesii*; FAC) with scattered yellow-skunk-cabbage (*Lysichiton americanus*; OBL). Soils contained a depleted matrix with prominent redoximorphic features from 9 to 16 inches,

meeting Depleted Matrix (F3) and Depleted Below Dark Surface (A11) hydric soil indicators. Wetland hydrology was met with secondary indicators as no water table or saturation was observed during our December 2, 2021 site visit.

Ephemeral Tributaries 1 and 2 are located on the slope adjacent to Boeckman Creek. Tributaries 1 and 2 were dry and lacked a well-defined bed and bank with upland vegetation throughout the channel. These drainages do not meet the definition of a Primary or Secondary Protected Water Feature; therefore, do not require a Vegetated Corridor buffer.

Upland

Plots 5 and 6 were taken in the southern portion of the study area in areas with small patches of reed canary grass were. Vegetation at Plots 5 and 6 was dominated by Douglas-fir, English hawthorn, with scattered common rush, and reed canary grass (*Phalaris arundinacea*; FACW). Soils lacked hydric soil indicators, and no evidence of wetland hydrology indicators were observed. Therefore, these plots were determined to meet upland parameters.

Riparian Corridor

The riparian corridor boundary was established per Section 4.139.00 of the City's SROZ Ordinance, as defined in Figure NR-2: Riparian Corridor Type NR-2 (stream-riparian ecosystem). The slopes adjacent to the Boeckman Creek and Wetland A exceed 25 percent for less than 150 feet, requiring ALCU/ VC to extend 50 feet past the break in slope to less than 25 percent. Slope measurements and the extent of SROZ are shown on the attached Figure 7. Existing vegetation communities were documented at VECO Plots A through E. VECO data sheets are included in Appendix C.

Vegetation in the riparian corridor consist of a predominantly native forest generally dominated by Douglas-fir, big-leaf maple, red alder, English holly, pineland swordfern, California dewberry, and fragrant fringe cup.

Area of Limited Conflicting Use (ALCU)

The ALCU was dominated by invasive Himalayan blackberry and western lady fern (*Athyrium cyclosum*; FAC). The ALCU can be described as being in *degraded* condition due to the high percentage of invasive vegetation species and lack of a native shrub layer, thus providing low quality functions.

Project

The Project consists of a residential subdivision located in the Frog Pond West community. The Project requires permanent encroachment into a portion of the ALCU for a 15-foot wide public trail and stormwater outfall, as shown on the Natural Resource Site Plan (Figure 8). The stormwater facility will impact the Impact Area buffer. Turf lawn associated with a community park will also encroach into the Impact Area buffer. The existing home will remain as part of this project.

According to Section 4.139.04(.08) of the City's SROZ Ordinance, construction of new pedestrian paths to cross or provide access to the SROZ are exempt if they are consistent with the Wilsonville Comprehensive Plan. This path will provide access and connectivity among neighborhoods and promote recreational and education opportunity within the riparian habitat.

According to Section 4.139.04(.05) of the City's SROZ Ordinance, construction and operation of stormwater facilities consistent with the Stormwater Management Plan or Wilsonville Comprehensive Plan are exempt from SROZ regulations. Due to the degraded/low functioning condition of the Impact

Area buffer, the placement of the stormwater facility within SROZ will provide a water quality and habitat benefit through planting the facility with native vegetation. Stormwater outfalls within ALCU will consist of riprap flow spreader to protect the riparian area from erosion.

SROZ Impacts Ecological Analysis

The existing condition of the upland ALCU (outer edge of SROZ) and portions of the SR Impact Area can be described as *degraded* condition (invasive dominant understory). Therefore, enhancement of the remaining area after permanent encroachments into SROZ for the pedestrian trail and stormwater facility will create a significant functional increase of resources within the City's local watershed.

SROZ Buffer Enhancement Mitigation Plan

On-site enhancement mitigation within the remaining ALCU is proposed at a 1:1 ratio to compensate for the exempted path and stormwater facility encroachments. The existing function at the encroachment area can be described as providing low. The location of the on-site enhancement area is shown on the Natural Resource Site Plan (Figure 8) and was determined based on the area of disturbance. The enhancement area is dominated by invasive vegetation, lacking a closed tree canopy. The removal of invasive non-native vegetation followed by the planting of native woody vegetation will provide functions and values.

The enhancement planting specification plan included in Appendix D provides a list of recommended native species and quantities in accordance with Section 4.139.07(.02)(E)(1)(b) of the City's SROZ Ordinance. Throughout the enhancement area, native trees will be planted at a rate of five trees per 500 square feet of impact and native woody shrubs will be planted at a rate of 25 shrubs per 500 square feet of impact.

Enhancement Mitigation Monitoring & Maintenance Plan

To meet the City of Wilsonville's mitigation requirements listed under Section 4.139.07 of the City's SROZ Ordinance, woody enhancement plantings will be monitored and maintained for a minimum of five full growing seasons beginning after installation of plantings. Monitoring will consist of establishing an appropriate number of monitoring plot locations across the mitigation area to be assessed in Years 1, 2, 3, 4 and 5. At each plot, the survivorship of planted shrubs and trees; cover of planted or naturally recruited native shrubs and trees; cover of invasive and nonnative species; and general site observations will be recorded. Representative site photographs will be taken from established "photo points" across the mitigation area. Vegetation monitoring plot and photo point locations will be determined during the first monitoring year.


Monitoring reports will be submitted to the City by November 1 of each year following the growing seasons of Years 1, 2, 3, 4, and 5. The first-year monitoring report will confirm whether the impacted areas were seeded and planted appropriately to restore buffer functions. The monitoring report will consist of photographs and a discussion of performance standards, maintenance activities, problems and successes, and any maintenance needs or contingency actions necessary to ensure success of the enhancement mitigation project. Success will be achieved when monitoring results indicate that performance standards are being met at the end of the five-year monitoring period, or thereafter as necessary.

Performance Standards

1. Within the buffer enhancement mitigation area, native tree and shrub plantings shall maintain 80 percent survival in years one through five.
2. Within the buffer enhancement mitigation area, there will be at least 20 percent aerial cover for all native trees and shrubs after five growing seasons.
3. Invasive and noxious weeds, including Himalayan blackberry, will not exceed 10 percent aerial cover in the buffer enhancement mitigation area during all monitoring years.
4. Enhancement mitigation area will provide diverse habitat structure supporting a diversity of wildlife.

Per Section 4.139.07(.02)(E)(7) of the City's SROZ Ordinance, trees and shrubs that die shall be replaced in kind to the extent necessary to ensure that a minimum of 80 percent of the trees and shrubs initially planted shall remain alive on year five of the date the enhancement plantings were completed.

Report Preparer and Qualifications



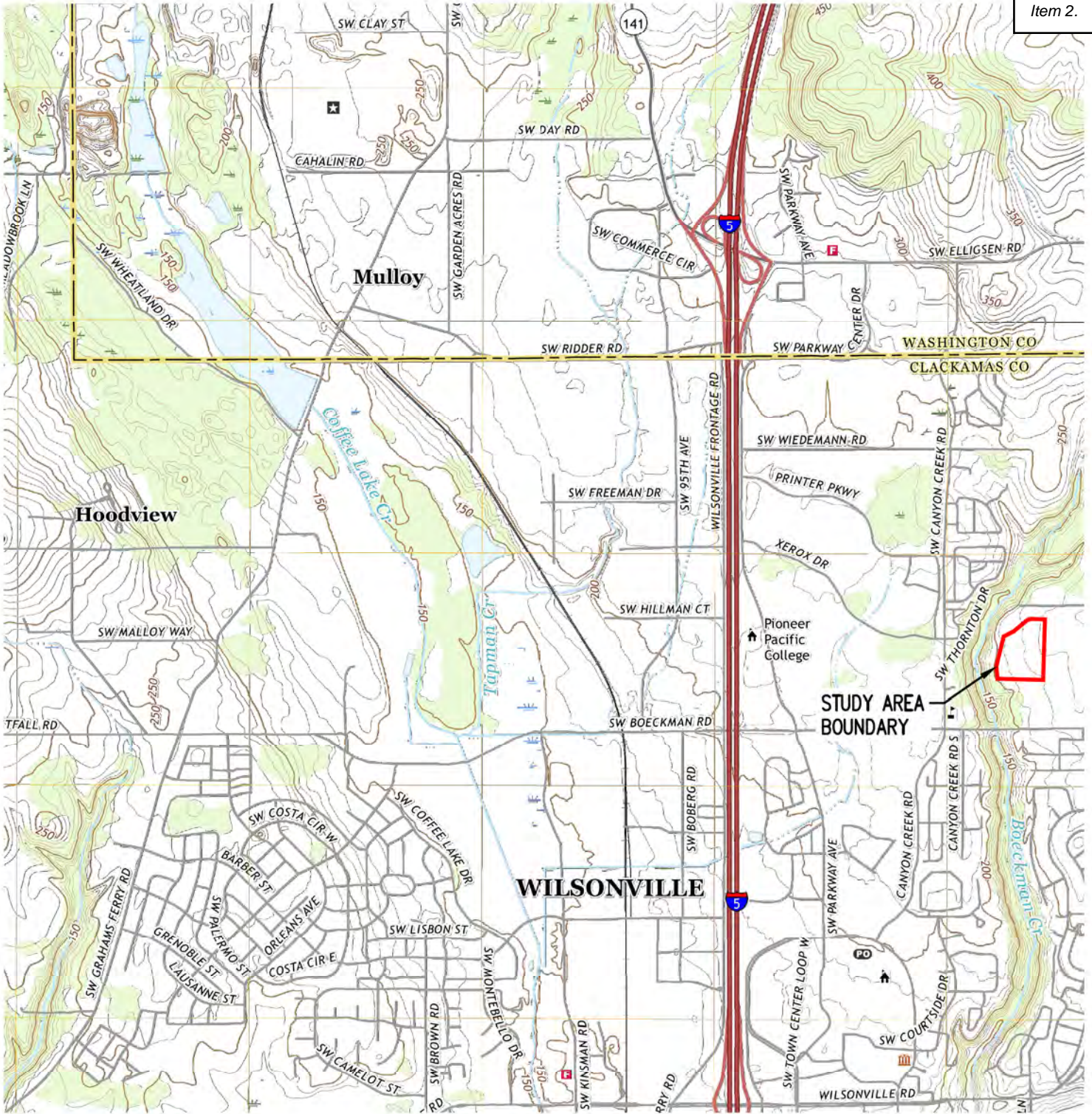
Lex Francis
Natural Resource Specialist
Field Work, Report Preparation



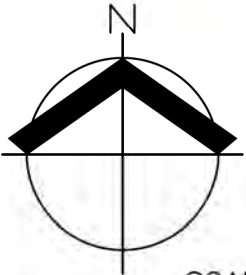
Stacey Reed, PWS
Senior Wetland Scientist
Report QA/QC
Stacey Reed is a certified Professional Wetland Scientist (PWS) with more than 20 years of experience delineating wetlands and waters, conducting wetland and stream function and value assessments, and preparing natural resource assessments throughout Oregon.

Literature Cited and Referenced

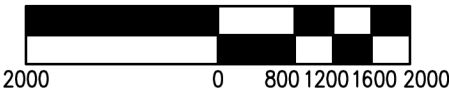
- Environmental Laboratory, 1987. Technical Report Y-87-1. In: *Corps of Engineers Wetlands Delineation Manual*. Vicksburg (MS): US Army Engineer Waterways Experiment Station. Available at: https://www.sac.usace.army.mil/Portals/43/docs/regulatory/1987_wetland_delineation_manual_reg.pdf. [Accessed December 2021].
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin, 2016. *The National Wetland Plant List: 2016 wetland ratings*. Phytoneuron 2016-30: 1-17. Published 28 April 2016. Available at: http://wetland-plants.usace.army.mil/nwpl_static/v33/home/home.html. [Accessed December 2021].
- Natural Resources Conservation Service (NRCS), 2006. *Hydric Soils List: Clackamas County, Oregon*. Washington (DC): US Department of Agriculture. [Accessed December 2021].
- Natural Resources Conservation Service (NRCS), 2014a. *Official soil series descriptions*. Washington (DC): US Department of Agriculture. Available at: http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/soils/home/?cid=nrcs142p2_053587. [Accessed December 2021].
- Natural Resources Conservation Service (NRCS), 2014b. *Web soil survey*. Washington (DC): US Department of Agriculture. Available at: <http://websoilsurvey.nrcs.usda.gov/app/>. [Accessed December 2021].
- Oregon Map, 2019. Clackamas County Assessor's Map 3 1 W 12D. Oregon: State of Oregon. Available at: <http://www.ormap.net/>. [Accessed December 2021].
- Pacific States Marine Fisheries Commission (PSMFC), 2022. *StreamNet*. Portland (OR): Pacific States Marine Fisheries Commission. Available at: <https://www.streamnet.org/> [Accessed January 2022]
- Roth, E.M., R.D. Olsen, P.L. Snow, and R.R. Sumner, April 1996. *Oregon Freshwater Wetland Assessment Methodology*, Ed. By S.G. McCannell. Salem (OR): Oregon Division of State Lands. [Accessed December 2021].
- US Army Corps of Engineers, 2018. *National Wetland Plant List, version 3.4*. Available at: <http://wetland-plants.usace.army.mil/>
- US Environmental Protection Agency, 2011. Document EPA 910-R-11-002. *Streamflow Duration Assessment Method for Oregon*. Seattle (WA): US Environmental Protection Agency Region 10. [Accessed December 2021]
- Wakeley, J.S., R.W. Lichvar, and C.V. Noble, eds., 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*. ERDC/EL TR-10-3. Vicksburg (MS): US Army Engineer Research and Development Center, US Army Corps of Engineers. [Accessed December 2021].
- Wilsonville, 2020. *Development Code (Updated June 2020)*. Wilsonville (OR): City of Wilsonville. [Accessed December 2021].



USGS 7.5' TOPOGRAPHIC SERIES
QUADRANGLE: SHERWOOD, OR (2020)



SCALE: 1" = 2000 FEET



DATE: 01/28/2022

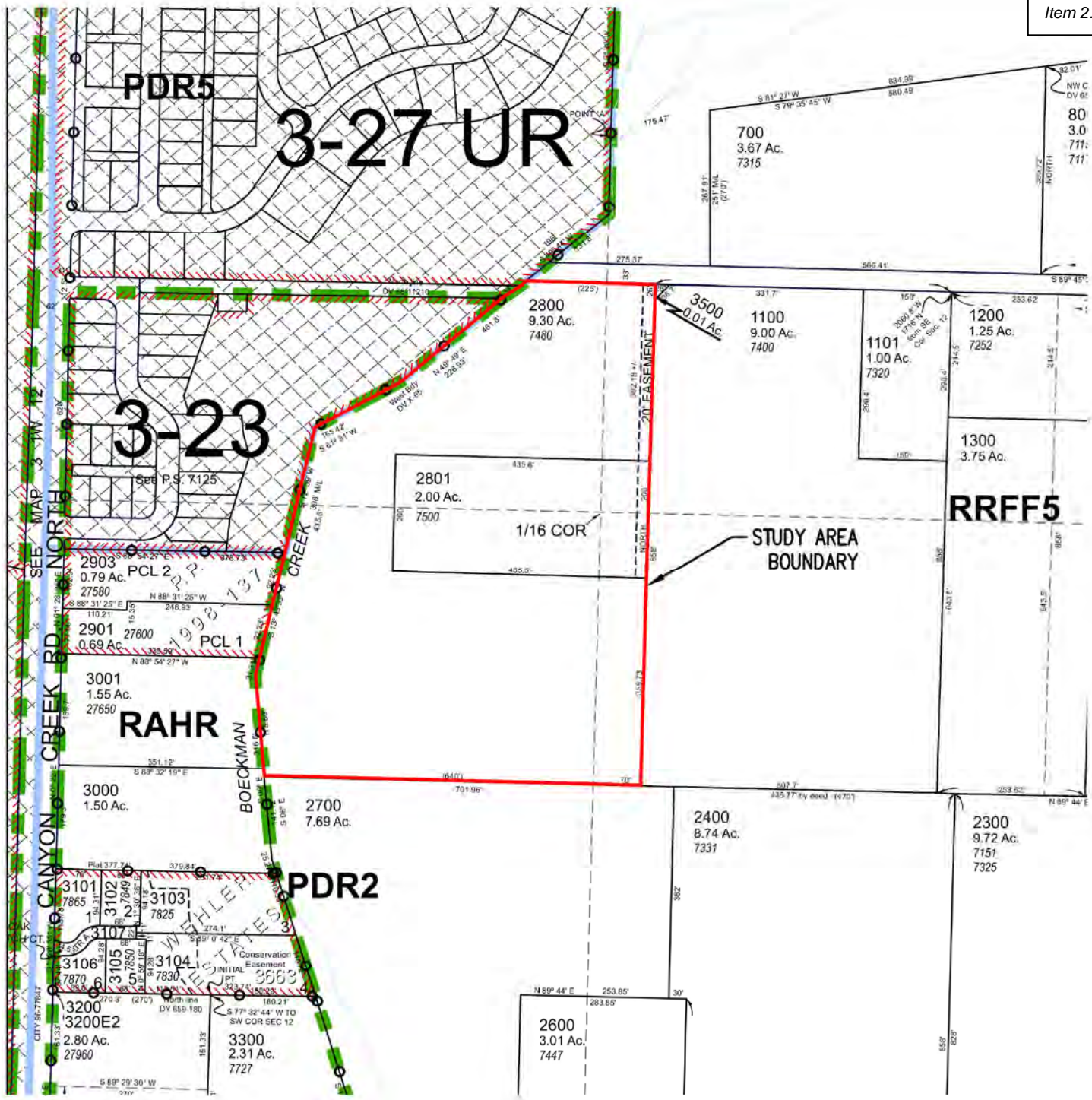
USGS VICINITY MAP
 FROG POND TERRACE SIGNIFICANT RESOURCE IMPACT REPORT

FIGURE
1

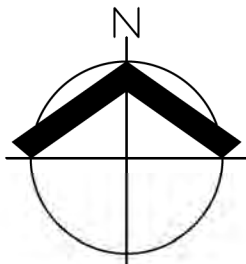
AKS ENGINEERING & FORESTRY, LLC
 12965 SW HERMAN RD, STE 100
 TUALATIN, OR 97062
 503.563.6151 WWW.AKS-ENG.COM



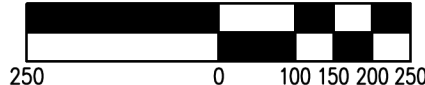
DRWN: RAS
 CHKD: SKT
 AKS 290



CLACKAMAS COUNTY
 TAX LOTS 2800 AND 2801
 TAX MAP 3 1 W 12D



SCALE: 1" = 250 FEET



DATE: 01/28/2022

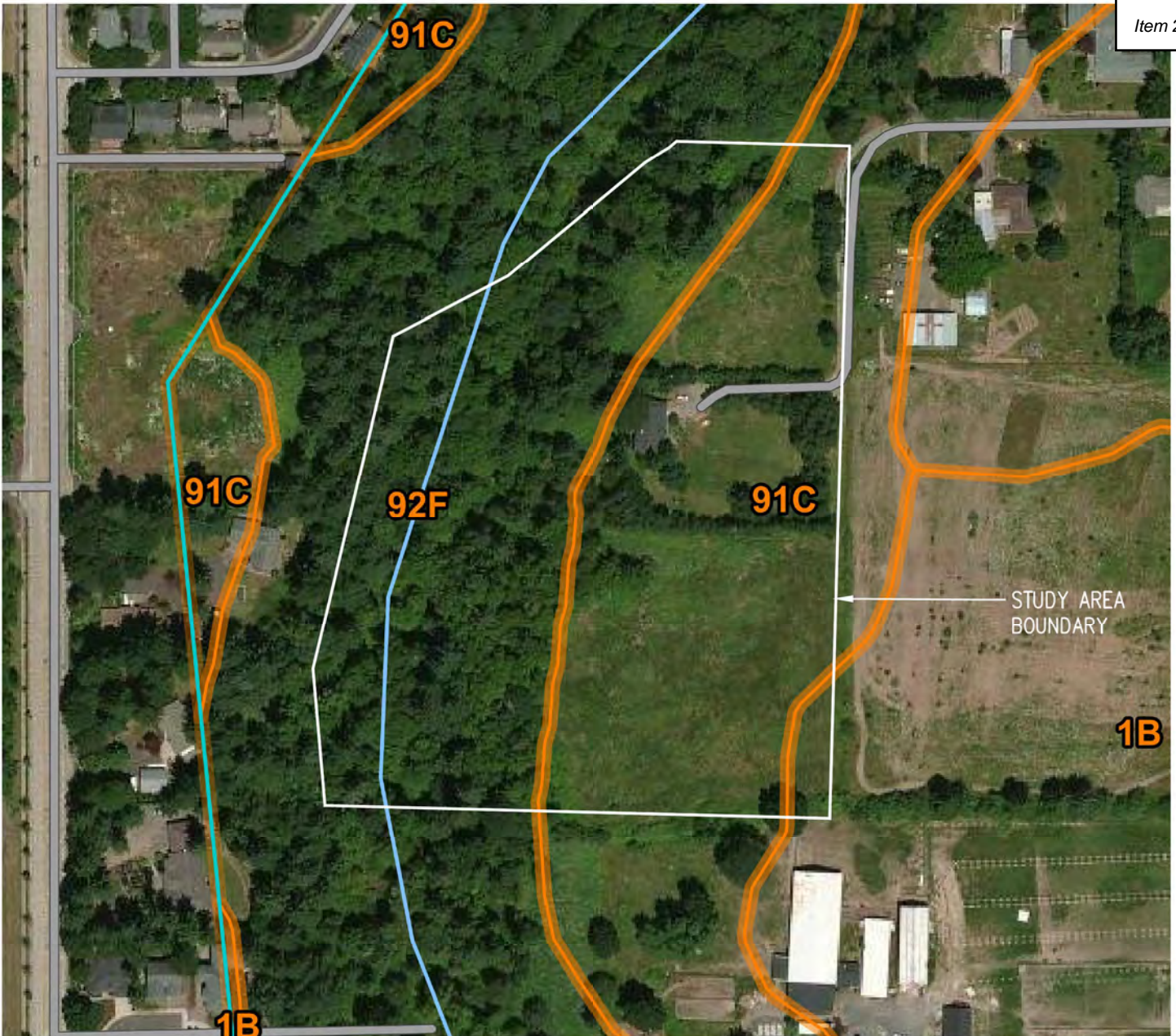
TAX MAP (MAP 3S 1 12D)
 FROG POND TERRACE SIGNIFICANT RESOURCE IMPACT REPORT

FIGURE
2

AKS ENGINEERING & FORESTRY, LLC
 12965 SW HERMAN RD, STE 100
 TUALATIN, OR 97062
 503.563.6151 WWW.AKS-ENG.COM

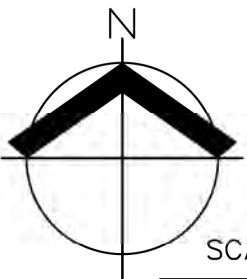


DRWN: RAS
 CHKP: SKT
 AKS 291



MAP UNIT SYMBOL	MAP UNIT NAME
1B	ALOHA SILT LOAM, 3% TO 6% SLOPES; NON-HYDRIC
91C	WOODBURN SILT LOAM, 8% TO 15% SLOPES, NON-HYDRIC
92F	XEROCHREPTS AND HAPLOXEROLLS, VERY STEEP; NON-HYDRIC

NRCS WEB SOIL SURVEY FOR
CLACKAMAS COUNTY



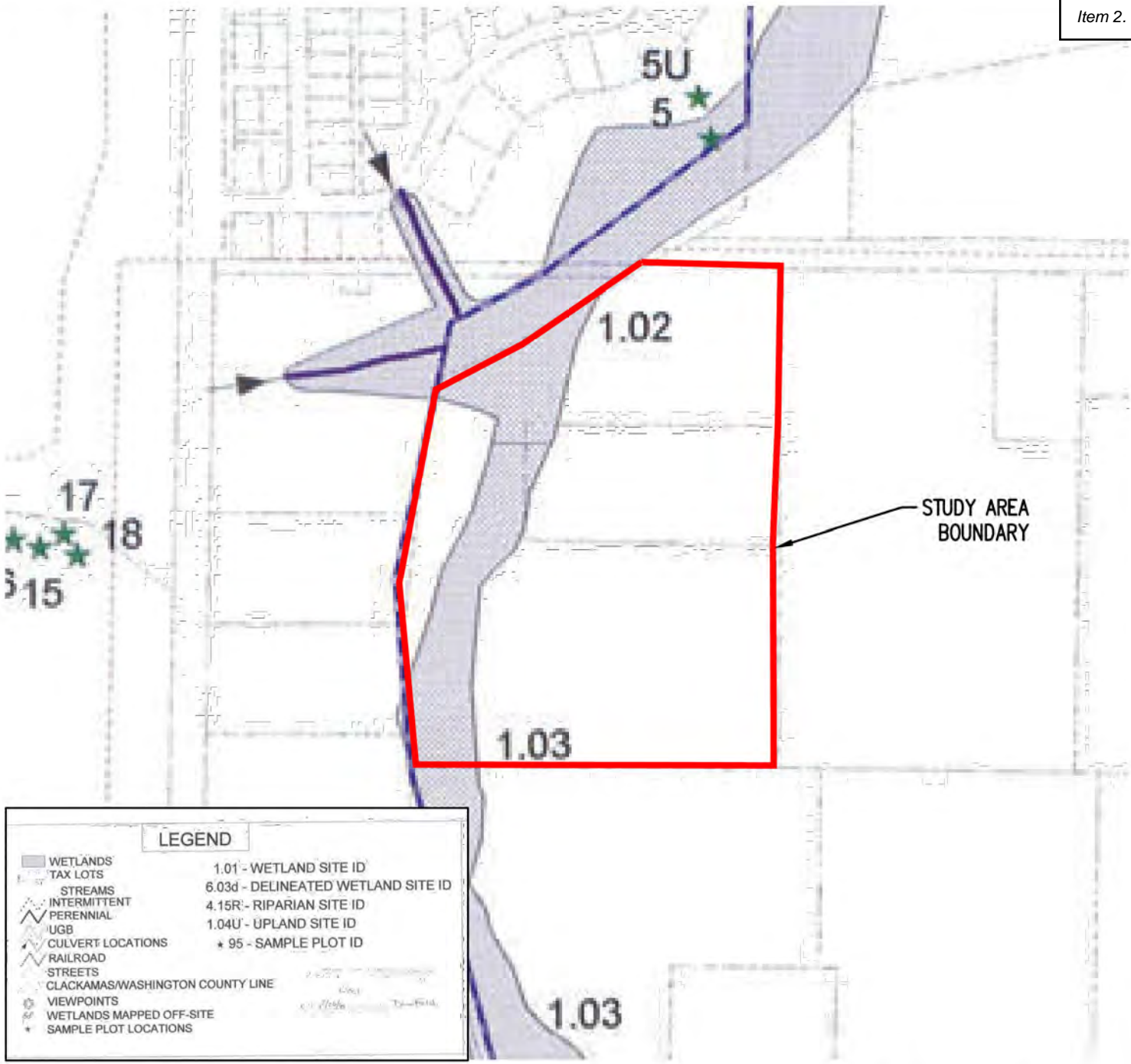
SCALE: 1" = 250 FEET



DATE: 01/28/2022

NRCS SOIL SURVEY MAP FROG POND TERRACE SIGNIFICANT RESOURCE IMPACT REPORT		FIGURE 3
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM		DRWN: RAS CHKD: SKT AKS 292

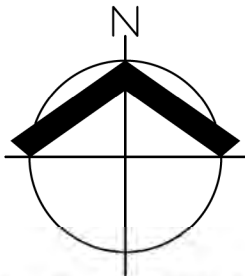




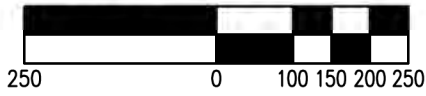
LEGEND

	WETLANDS	1.01' - WETLAND SITE ID
	TAX LOTS	6.03d - DELINEATED WETLAND SITE ID
	STREAMS	4.15R' - RIPARIAN SITE ID
	INTERMITTENT PERENNIAL UGB	1.04U' - UPLAND SITE ID
	CULVERT LOCATIONS	* 95 - SAMPLE PLOT ID
	RAILROAD	
	STREETS	
	CLACKAMAS/WASHINGTON COUNTY LINE	
	VIEWPOINTS	
	WETLANDS MAPPED OFF-SITE	
	SAMPLE PLOT LOCATIONS	

CITY OF WILSONVILLE
LOCAL WETLAND AND RIPARIAN
CORRIDOR INVENTORY MAP (1999)



SCALE: 1" = 250 FEET



DATE: 01/28/2022

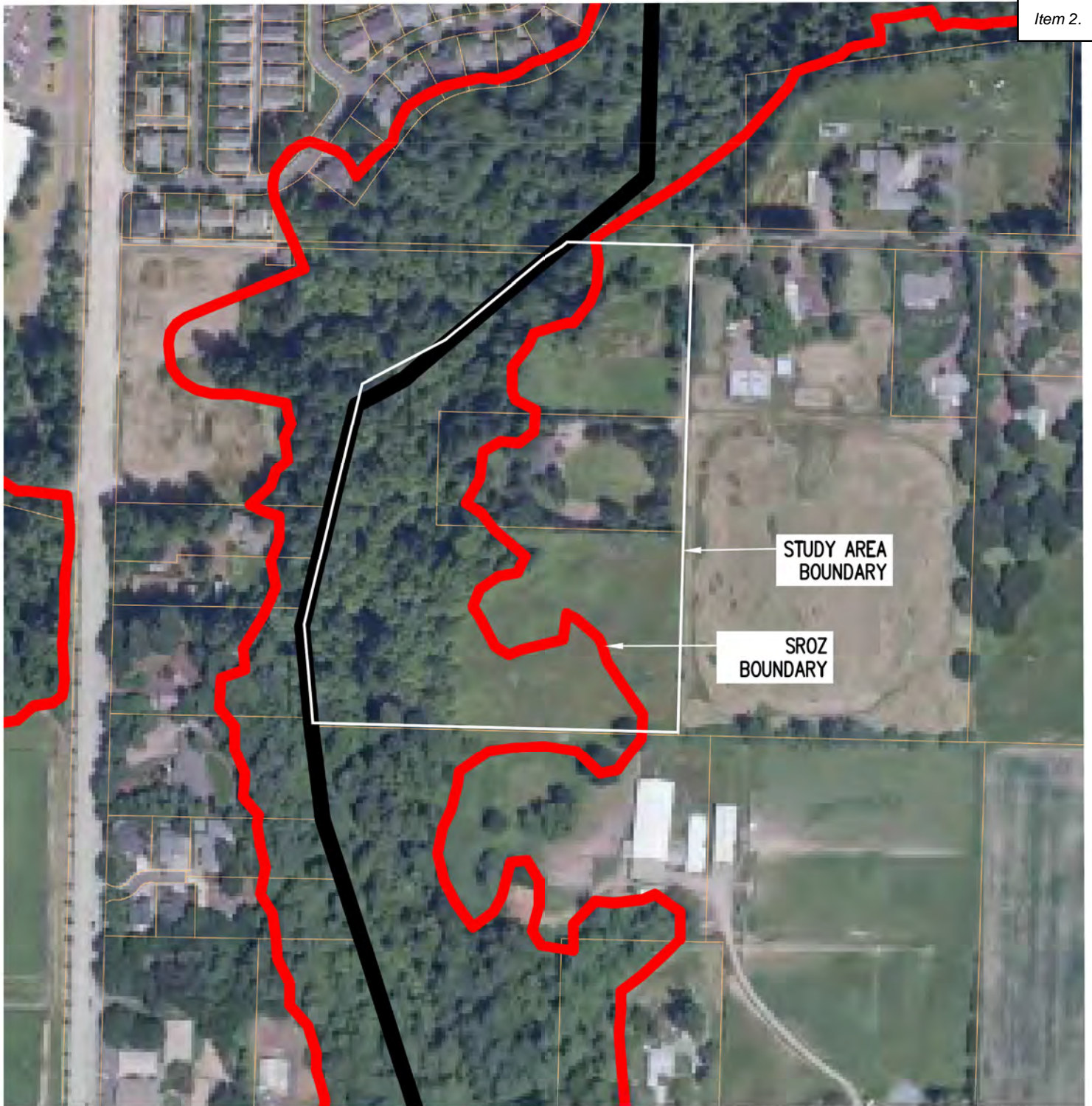
**LOCAL WETLAND INVENTORY MAP
FROG POND TERRACE SIGNIFICANT RESOURCE IMPACT REPORT**

**FIGURE
4**

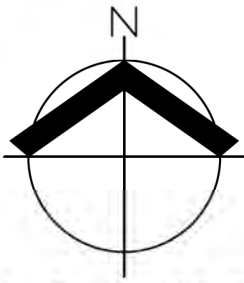
AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
503.563.6151 WWW.AKS-ENG.COM



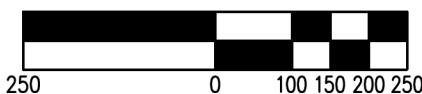
DRWN: RAS
CHKD: SKT
AKS 293



CITY OF WILSONVILLE SIGNIFICANT RESOURCE OVERLAY ZONE (2009)



SCALE: 1" = 250 FEET



DATE: 01/28/2022

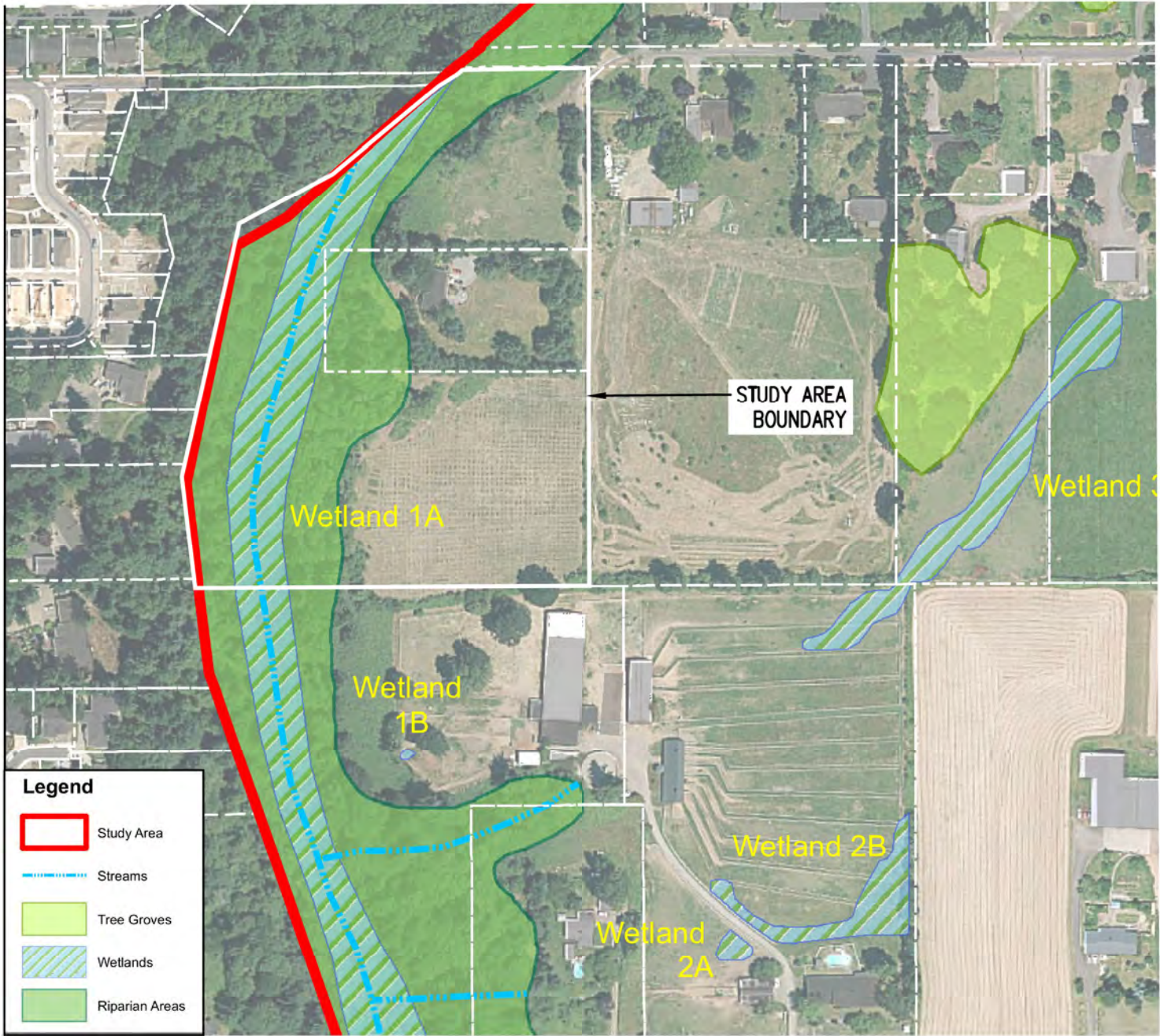
SIGNIFICANT RESOURCE OVERLAY ZONE MAP
FROG POND TERRACE SIGNIFICANT RESOURCE IMPACT REPORT

FIGURE 5





AKS ENGINEERING & FORESTRY, LLC
 12965 SW HERMAN RD, STE 100
 TUALATIN, OR 97062
 503.563.6151 WWW.AKS-ENG.COM



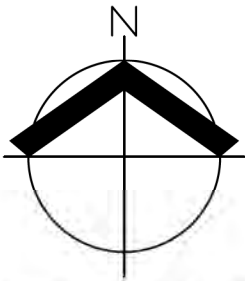
DRWN: RAS
 CHKD: SKT
 AKS 294



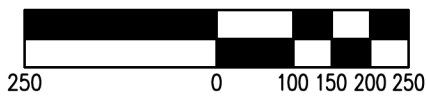
Legend

-  Study Area
-  Streams
-  Tree Groves
-  Wetlands
-  Riparian Areas

PACIFIC HABITAT SERVICES FROG POND NATURAL RESOURCE INVENTORY (2014)



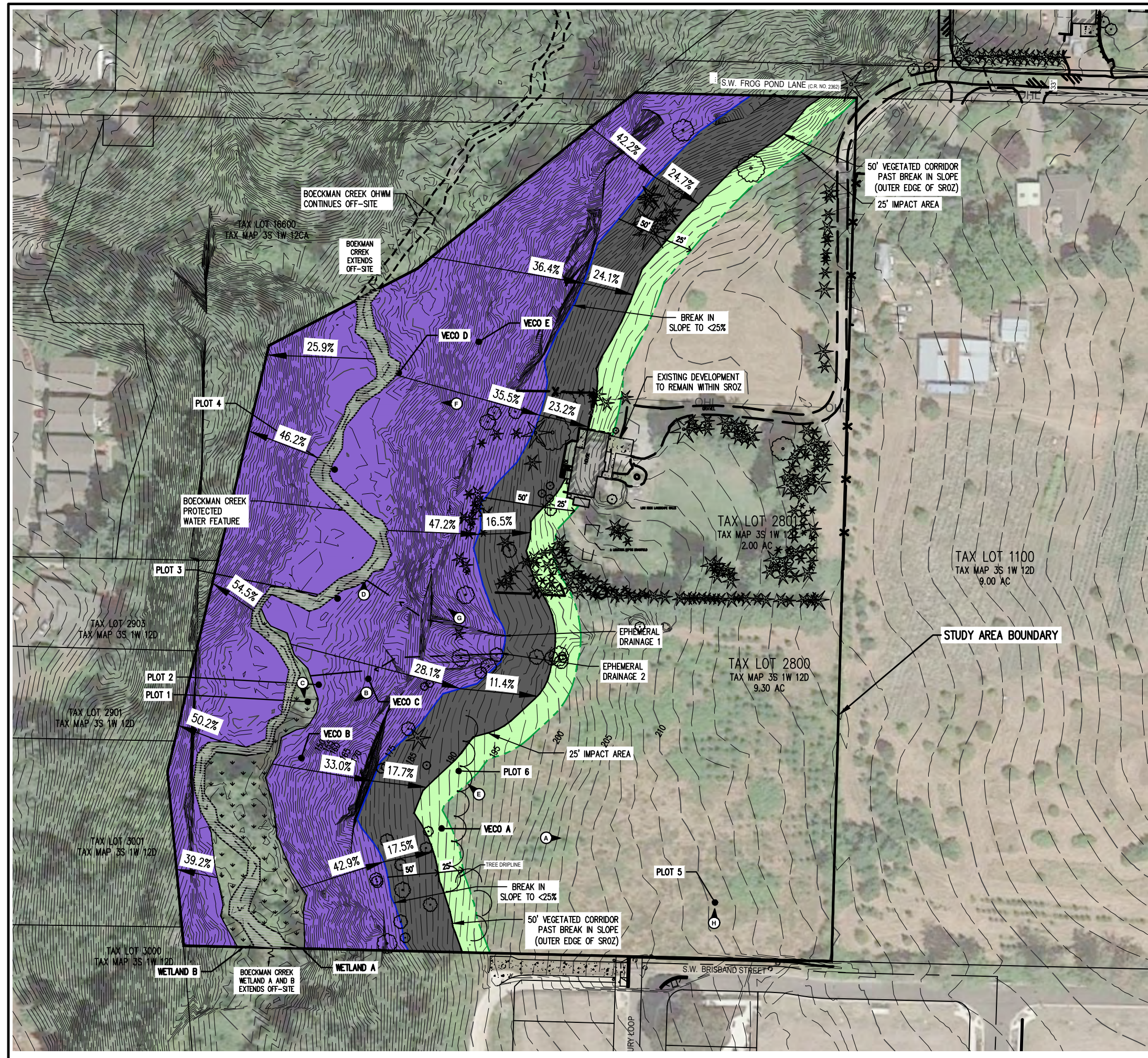
SCALE: 1" = 250 FEET



DATE: 01/28/2022

NATURAL RESOURCE INVENTORY MAP FROG POND TERRACE SIGNIFICANT RESOURCE IMPACT REPORT		FIGURE 6
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM		DRWN: RAS CHKP: SKT AKS 295





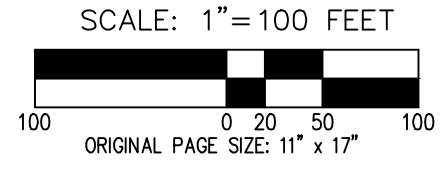
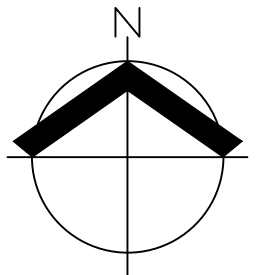
LEGEND

- ON-SITE WETLAND A AREA: 10,930 SF± (0.25 ACRES)
- ON-SITE WETLAND B AREA: 2,058 SF± (0.05 ACRES)
- ON-SITE BOECKMAN CREEK AREA: 11,565 SF± (0.27 ACRES)
- RIPARIAN CORRIDOR/ RIPARIAN IMPACT AREA: 164,597 SF± (3.78 ACRES±)
- AREA OF LIMITED CONFLICTING USE: 51,066 SF± (1.16 ACRES±)
- 25' SIGNIFICANT RESOURCE (SR) IMPACT AREA: 24,132 SF± (0.55 ACRES±)

PHOTO POINT ORIENTATION AND LOCATION

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON DECEMBER 2, 2021 AND LOCATED USING A TRIMBLE GEO 7X HANDHELD GPS RECEIVER WITH SUB-METER ACCURACY.

1-FOOT INTERVAL GROUND CONTOURS COMBINED WITH LIDAR, EXISTING CONDITIONS AND TREE SURVEY WAS CONDUCTED BY OTAK. A FULL TREE INVENTORY OF THE SITE WAS NOT COMPLETED.



DATE: 01/27/2022

NATURAL RESOURCE EXISTING CONDITIONS	FIGURE
FROG POND TERRACE SIGNIFICANT RESOURCE IMPACT REPORT	7
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 P: 503.563.6151 F: 503.563.6152 aks-eng.com	DRWN: RAS CHKD: SKT AKS 296

Appendix A: **Wetland Determination Data Forms**

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

Project/Site: Frog Pond Terrace City/County: Wilsonville/ Clackamas County Sampling Date: 12/2/2021
 Applicant/Owner: West Hills Land Development, LLC State: OR Sampling Point: 1
 Investigator(s): Lex Francis, Rebecca Schilling Section, Township, Range: Sec. 12, T.3S., R.1 W., W.M.
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 1-3%
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.32048899N Long: -122.75578082W Datum: _____
 Soil Map Unit Name: Xerochrepts and Haploxerolls (Unit 92F), very steep; Non-hydric NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____		

Precipitation:
 According to the NWS Portland weather station, 0.00 inches of rainfall was received on the day of the site visit and 1.57 inches within the two weeks prior.

Remarks:
 Plot located approximately 6 feet from stream in flood plain bench.

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
1. <u>Sambucus species</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
0% = Total Cover				
Sapling/Shrub Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
1. <u>Rubus armeniacus</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
40% = Total Cover				
Herb Stratum (Plot Size: 5' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation (Explain) ¹ ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Agrostis species</u>	<u>50%</u>	<u>Yes</u>	<u>FAC*</u>	
2. <u>Tolmiea menziesii</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Lysichiton americanus</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>	
4. <u>Athyrium cyclosorum</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
87% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
0% = Total Cover				
% Bare Ground in Herb Stratum <u>13%</u>				

Remarks:
 *Assumed FAC. Bare ground covered by leaf litter.

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

Project/Site: Frog Pond Terrace City/County: Wilsonville/ Clackamas County Sampling Date: 12/2/2021
 Applicant/Owner: West Hills Land Development, LLC State: OR Sampling Point: 2
 Investigator(s): Lex Francis, Rebecca Schilling Section, Township, Range: Sec. 12, T.3S., R.1 W., W.M.
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): ~10%
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.32046633N Long: -122.75575959W Datum: _____
 Soil Map Unit Name: Xerochrepts and Haploxerolls (Unit 92F), very steep; Non-hydric NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the NWS Portland weather station, 0.00 inches of rainfall was received on the day of the site visit and 1.57 inches within the two weeks prior.

Remarks:
 Plot located approximately 2 feet higher in elevation than Plot 1 at Wetland A.

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Acer macrophyllum</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)	
<u>20%</u> = Total Cover					
Sapling/Shrub Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. <u>Rubus armeniacus</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>		Total % Cover of: _____ Multiply by: _____
2. <u>Cirsium arvense</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	OBL species <u>0</u> x 1 = <u>0</u>	
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4. _____	_____	_____	_____	FAC species <u>31</u> x 3 = <u>93</u>	
5. _____	_____	_____	_____	FACU species <u>55</u> x 4 = <u>220</u>	
<u>25%</u> = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>	
				Column Totals: <u>86</u> (A) <u>313</u> (B)	
				Prevalence Index = B/A = <u>3.64</u>	
Herb Stratum (Plot Size: 5' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <u>Polystichum munitum</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>		1 - Rapid Test for Hydrophytic Vegetation
2. <u>Tellima grandiflora</u>	<u>15%</u>	<u>No</u>	<u>FACU</u>		2 - Dominance Test is >50%
3. <u>Agrostis species</u>	<u>5%</u>	<u>No</u>	<u>FAC*</u>		3 - Prevalence Index is ≤3.0 ¹
4. <u>Hydrophyllum tenuipes</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____		5 - Wetland Non-Vascular Plants ¹
6. _____	_____	_____	_____		Problematic Hydrophytic Vegetation (Explain) ¹
7. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present.
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
<u>51%</u> = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Rubus ursinus</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>		
2. _____	_____	_____	_____		
<u>10%</u> = Total Cover					
% Bare Ground in Herb Stratum <u>49%</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	

Remarks:
 *Assumed FAC. Bare ground covered by leaf litter.

SOIL Sampling Point: **2**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 3/2	100					SiCL	
7-14	10YR 3/2	80					SiC	
	7.5 YR 3/3	20					SiCL	

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

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
---	---	---

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u> X </u>
--	--

Remarks:
 1 inch duff layer.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)
--	---	--

Field Observations: Surface Water Present? Yes _____ No <u> X </u> Depth (inches): _____ Water Table Present? Yes _____ No <u> X </u> Depth (inches): <u> >16" </u> Saturation Present? Yes _____ No <u> X </u> Depth (inches): <u> >16" </u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u> X </u>
--	--

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

Remarks:

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

Project/Site: Frog Pond Terrace City/County: Wilsonville/ Clackamas County Sampling Date: 12/2/2021
 Applicant/Owner: West Hills Land Development, LLC State: OR Sampling Point: 3
 Investigator(s): Lex Francis, Rebecca Schilling Section, Township, Range: Sec. 12, T.3S., R.1 W., W.M.
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): None Slope (%): 1-3%
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.32080379N Long: -122.75561556W Datum: _____
 Soil Map Unit Name: Xerochrepts and Haploxerolls (Unit 92F), very steep; Non-hydric NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>		
Wetland Hydrology Present?	Yes _____	No <u>X</u>		

Precipitation:
 According to the NWS Portland weather station, 0.00 inches of rainfall was received on the day of the site visit and 1.57 inches within the two weeks prior.

Remarks:
 Plot located approximately 3 feet from stream. Approximately 3.5 feet above Ordinary High Water Mark.

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Alnus rubra</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. <u>Acer macrophyllum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)	
<u>35%</u> = Total Cover					
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				Prevalence Index worksheet:	
1. <u>Alnus rubra</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>		Total % Cover of: <u> </u> Multiply by: _____
2. <u>Ilex aquifolium</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	OBL species <u>0</u> x 1 = <u>0</u>	
3. <u>Sambucus species</u>	<u>5%</u>	<u>No</u>	<u>FAC*</u>	FACW species <u>0</u> x 2 = <u>0</u>	
4. _____	_____	_____	_____	FAC species <u>71</u> x 3 = <u>213</u>	
5. _____	_____	_____	_____	FACU species <u>35</u> x 4 = <u>140</u>	
<u>30%</u> = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>	
Herb Stratum (Plot Size: 5' r or _____)				Column Totals: <u>106</u> (A) <u>353</u> (B)	
1. <u>Polystichum munitum</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index = B/A = <u>3.33</u>	
2. <u>Agrostis species</u>	<u>10%</u>	<u>Yes</u>	<u>FAC*</u>	Hydrophytic Vegetation Indicators:	
3. <u>Carex species</u>	<u>5%</u>	<u>No</u>	<u>FAC*</u>		1 - Rapid Test for Hydrophytic Vegetation
4. <u>Hydrophyllum tenuipes</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>		<u>X</u> 2 - Dominance Test is >50%
5. _____	_____	_____	_____		3 - Prevalence Index is ≤3.0 ¹
6. _____	_____	_____	_____		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7. _____	_____	_____	_____		5 - Wetland Non-Vascular Plants ¹
8. _____	_____	_____	_____		Problematic Hydrophytic Vegetation (Explain) ¹
9. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present.
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
<u>36%</u> = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. <u>Hedera helix</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>		
2. _____	_____	_____	_____		
<u>5%</u> = Total Cover					
% Bare Ground in Herb Stratum	<u>64%</u>			Hydrophytic Vegetation Present? Yes <u>X</u> No _____	

Remarks:
 *Assumed FAC. Bare ground covered by leaf litter.

SOIL Sampling Point: **3**

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

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-14+	10YR 3/2	100				SiCL	

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

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
---	---

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u> X </u>
--	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)

Field Observations: Surface Water Present? Yes _____ No <u> X </u> Depth (inches): _____ Water Table Present? Yes _____ No <u> X </u> Depth (inches): <u> >14" </u> Saturation Present? Yes _____ No <u> X </u> Depth (inches): <u> >14" </u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u> X </u>
--	--

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

Remarks:

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

Project/Site: Frog Pond Terrace City/County: Wilsonville/ Clackamas County Sampling Date: 12/2/2021
 Applicant/Owner: West Hills Land Development, LLC State: OR Sampling Point: 4
 Investigator(s): Lex Francis, Rebecca Schilling Section, Township, Range: Sec. 12, T.3S., R.1 W., W.M.
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 0-5%
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.32114023N Long: -122.75568219W Datum: _____
 Soil Map Unit Name: Xerochrepts and Haploxerolls (Unit 92F), very steep; Non-hydric NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland?	Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>		

Precipitation:
 According to the NWS Portland weather station, 0.00 inches of rainfall was received on the day of the site visit and 1.57 inches within the two weeks prior.

Remarks:
 Plot located approximately 3 feet from stream. Approximately 3.5 feet above Ordinary High Water Mark.

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Alnus rubra</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)	
<u>40%</u> = Total Cover					
Sapling/Shrub Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. <u>Rubus armeniacus</u>	<u>60%</u>	<u>Yes</u>	<u>FAC</u>		Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4. _____	_____	_____	_____	FAC species <u>116</u> x 3 = <u>348</u>	
5. _____	_____	_____	_____	FACU species <u>40</u> x 4 = <u>160</u>	
<u>60%</u> = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>	
				Column Totals: <u>156</u> (A) <u>508</u> (B)	
				Prevalence Index = B/A = <u>3.26</u>	
Herb Stratum (Plot Size: 5' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <u>Tellima grandiflora</u>	<u>40%</u>	<u>Yes</u>	<u>FACU</u>		1 - Rapid Test for Hydrophytic Vegetation
2. <u>Agrostis species</u>	<u>10%</u>	<u>No</u>	<u>FAC*</u>		<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Carex species</u>	<u>5%</u>	<u>No</u>	<u>FAC*</u>		3 - Prevalence Index is ≤3.0 ¹
4. <u>Tolmiea menziesii</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____		5 - Wetland Non-Vascular Plants ¹
6. _____	_____	_____	_____		Problematic Hydrophytic Vegetation (Explain) ¹
7. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present.
8. _____	_____	_____	_____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
<u>56%</u> = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
<u>0%</u> = Total Cover					
% Bare Ground in Herb Stratum <u>44%</u>					

Remarks:
 *Assumed FAC. Bare ground covered by leaf litter.

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

Project/Site: Frog Pond Terrace City/County: Wilsonville/ Clackamas County Sampling Date: 12/2/2021
 Applicant/Owner: West Hills Land Development, LLC State: OR Sampling Point: 5
 Investigator(s): Lex Francis, Rebecca Schilling Section, Township, Range: Sec. 12, T.3S., R.1 W., W.M.
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 1%
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.31998180N Long: -122.75412486W Datum: _____
 Soil Map Unit Name: Woodburn silt loam (Unit 91C), 8 - 15 % slopes; Non- hydric NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland?
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	
Yes _____ No <input checked="" type="checkbox"/>			

Precipitation:
 According to the NWS Portland weather station, 0.00 inches of rainfall was received on the day of the site visit and 1.57 inches within the two weeks prior.

Remarks:
 Plot taken in small *Phalaris arundinacea* patch in upland area, adjacent to recent off-site development.

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u><i>Pseudotsuga menziesii</i></u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
5% = Total Cover				
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				
1. <u><i>Crataegus monogyna</i></u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	Prevalence Index worksheet:
2. <u><i>Rubus armeniacus</i></u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
3. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>
4. _____	_____	_____	_____	FACW species <u>55</u> x 2 = <u>110</u>
5. _____	_____	_____	_____	FAC species <u>41</u> x 3 = <u>123</u>
11% = Total Cover				FACU species <u>5</u> x 4 = <u>20</u>
Herb Stratum (Plot Size: 5' r or _____)				
1. <u><i>Juncus effusus</i></u>	<u>30%</u>	<u>Yes</u>	<u>FACW</u>	UPL species <u>5</u> x 5 = <u>25</u>
2. <u><i>Phalaris arundinacea</i></u>	<u>25%</u>	<u>Yes</u>	<u>FACW</u>	Column Totals: <u>106</u> (A) <u>278</u> (B)
3. <u><i>Agrostis species</i></u>	<u>10%</u>	<u>No</u>	<u>FAC*</u>	Prevalence Index = B/A = <u>2.62</u>
4. <u><i>Cirsium arvense</i></u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:
5. <u><i>Dactylis glomerata</i></u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
6. <u><i>Geranium molle</i></u>	<u>5%</u>	<u>No</u>	<u>NOL</u>	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
7. <u><i>Holcus lanatus</i></u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
8. <u><i>Elymus repens</i></u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
9. _____	_____	_____	_____	5 - Wetland Non-Vascular Plants ¹
10. _____	_____	_____	_____	Problematic Hydrophytic Vegetation (Explain) ¹
11. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present.
95% = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>5%</u>				

Remarks:
 *Assumed FAC.

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

Project/Site: Frog Pond Terrace City/County: Wilsonville/ Clackamas County Sampling Date: 12/2/2021
 Applicant/Owner: West Hills Land Development, LLC State: OR Sampling Point: 6
 Investigator(s): Lex Francis, Rebecca Schilling Section, Township, Range: Sec. 12, T.3S., R.1 W., W.M.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 3-5%
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.31998180N Long: -122.75412486W Datum: _____
 Soil Map Unit Name: Woodburn silt loam (Unit 91C), 8 - 15 % slopes; Non- hydric NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the NWS Portland weather station, 0.00 inches of rainfall was received on the day of the site visit and 1.57 inches within the two weeks prior.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>Pseudotsuga menziesii</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5% = Total Cover				
Sapling/Shrub Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation (Explain) ¹ ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Rubus laciniatus</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Rubus armeniacus</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
3. <u>Toxicodendron diversilobum</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Pseudotsuga menziesii</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>	
10% = Total Cover				
Herb Stratum (Plot Size: 5' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. <u>Holcus lanatus</u>	<u>50%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Agrostis species</u>	<u>40%</u>	<u>Yes</u>	<u>FAC*</u>	
3. <u>Phalaris arundinacea</u>	<u>3%</u>	<u>No</u>	<u>FACW</u>	
4. <u>Cirsium arvense</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Juncus effusus</u>	<u>2%</u>	<u>No</u>	<u>FACW</u>	
6. <u>Carex pachystachya</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
7. <u>Galium aparine</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>0%</u>				

Remarks:
 *Assumed FAC.

SOIL Sampling Point: **6**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/3	100%					SiL	
4-16	10YR 4/3	98%	7.5YR 3/4	2	C	M	SiL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</p> <p><input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
--	--

<p>Restrictive Layer (if present):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No <u> X </u></p>
---	---

Remarks:
Soils dry throughout.

HYDROLOGY

Wetland Hydrology Indicators:	
<p><u>Primary Indicators (minimum of one required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</p> <p><input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (2 or more required)</u></p> <p><input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input checked="" type="checkbox"/> Raised Ant Mounds (D6) (LRR A)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7)</p>

<p>Field Observations:</p> <p>Surface Water Present? Yes _____ No <u> X </u> Depth (inches): _____</p> <p>Water Table Present? Yes _____ No <u> X </u> Depth (inches): <u> >16" </u></p> <p>Saturation Present? Yes _____ No <u> X </u> Depth (inches): <u> >16" </u> (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes _____ No <u> X </u></p>
--	---

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

Remarks:

Appendix B: Representative Site Photographs



Photo A. General site conditions of upland field dominated by grasses and common, non-native, upland forbs. Oriented east.



Photo B. Upland forested community adjacent to Boeckman Creek. Oriented southwest.



Photo C. View south of Plot 1 and Wetland A.



Photo D. View north of Boeckman Creek.



Photo E. View northwest within the vicinity of Plot 6.



Photo F. Degraded vegetation community within the ALCU/Impact Area. Oriented West towards Boeckman Creek.



Photo G. Ephemeral Drainage 1 vegetated throughout with upland vegetation. Oriented Northwest.



Photo H. Upland Plot 5 with patchy FACW vegetation. Oriented North.

Appendix C: VECO Data Forms

Site:	<u>Stafford Meadows</u>		
Job Number:	<u>7005</u>		
Investigators:	<u>Lex Francis and Rebecca Schilling</u>		
Date:	<u>December 2, 2021</u>		
Community: Himalayan blackberry/ western lady fern			
Location: Upland east of Forested community			
Plot ID: VECO A			
Tree species, % Cover, Native, Invasive - 30 foot radius, >5% cover: 0%			
Shrub species, % Cover, Native, Invasive - 30 foot radius, >5% cover: 53%			
* <i>Rubus armeniacus</i>	Himalayan blackberry	<i>invasive</i>	50%
<i>Salix species</i>	willow	<i>native</i>	3%
Herb Species, % Cover, Native, Invasive - 10 foot radius, >5% cover: 100%			
* <i>Athyrium cyclosum</i>	western lady fern	<i>native</i>	35%
<i>Agrostis capillaris</i>	colonial bent	<i>non-native</i>	15%
<i>Lolium perenne</i>	perennial rye grass	<i>non-native</i>	
<i>Holcus lanatus</i>	common velvet grass	<i>non-native</i>	15%
<i>Geranium molle</i>	dovefoot geranium	<i>non-native</i>	9%
<i>Rubus laciniatus</i>	cut-leaf blackberry	<i>invasive</i>	5%
<i>Vicia species</i>	vetch	<i>non-native</i>	5%
<i>Carex species</i>	sedge	<i>native</i>	1%
* Dominant			
Total Cover			153%
Absolute areal cover			
% Tree canopy:	0%		
% Cover by natives:	4%		
% Invasive:	55%		
% Non-native:	94%		
	153%		
Corridor Condition:	Degraded		

Site:	<u>Stafford Meadows</u>		
Job Number:	<u>7005</u>		
Investigators:	<u>Lex Francis and Rebecca Schilling</u>		
Date:	<u>December 2, 2021</u>		
Community: Douglas-fir/ pineland sword fern			
Location: Approximately 30 feet from stream in upland Forest			
Plot ID: VECO B			
Tree species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			55%
* <i>Pseudotsuga menziesii</i>	Douglas-fir	<i>native</i>	40%
* <i>Alnus rubra</i>	red alder	<i>native</i>	10%
* <i>Acer macrophyllum</i>	big-leaf maple	<i>native</i>	5%
Shrub species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			25%
* <i>Ilex aquifolium</i>	English holly	<i>non-native</i>	15%
* <i>Cirsium arvense</i>	Canadian thistle	<i>invasive</i>	5%
* <i>Rubus armeniacus</i>	Himalayan blackberry	<i>invasive</i>	5%
Herb Species, % Cover, Native, Invasive - 10 foot radius, >5% cover:			78%
* <i>Polystichum munitum</i>	pineland sword fern	<i>native</i>	30%
* <i>Rubus ursinus</i>	California dewberry	<i>native</i>	30%
<i>Agrostis species</i>	bentgrass	<i>native</i>	14%
<i>Hydrophyllum tenuipes</i>	Pacific waterleaf	<i>native</i>	2%
<i>Galium aparine</i>	sticky-willy	<i>native</i>	2%
* Dominant			
Total Cover			158%
Absolute areal cover			
% Tree canopy:	55%		
% Cover by natives:	133%		
% Invasive:	10%		
% Non-native:	15%		
	<hr style="width: 20%; margin: auto;"/>		
	158%		
Corridor Condition:	Good		

Site:	<u>Stafford Meadows</u>		
Job Number:	<u>7005</u>		
Investigators:	<u>Lex Francis and Rebecca Schilling</u>		
Date:	<u>January 30, 2017</u>		
Community: big-leaf maple/ Himalayan blackberry			
Location: Approximately 30 feet from stream, north of VECO B			
Plot ID: VECO C			
Tree species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			40%
* <i>Acer macrophyllum</i>	big-leaf maple	<i>native</i>	20%
* <i>Pseudotsuga menziesii</i>	Douglas-fir	<i>native</i>	15%
* <i>Alnus rubra</i>	red alder	<i>native</i>	5%
Shrub species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			90%
* <i>Rubus armeniacus</i>	Himalayan blackberry	<i>invasive</i>	90%
Herb Species, % Cover, Native, Invasive - 10 foot radius, >5% cover:			36%
* <i>Tellima grandiflora</i>	fragrant fringecup	<i>native</i>	15%
* <i>Polystichum munitum</i>	pineland sword fern	<i>native</i>	10%
<i>Rubus laciniatus</i>	cut-leaf blackberry	<i>invasive</i>	5%
<i>Rubus armeniacus</i>	Himalayan blackberry	<i>invasive</i>	5%
<i>Carex species</i>	sedge	<i>native</i>	1%
* Dominant			
			Total Cover 166%
Absolute areal cover			
% Tree canopy:	40%		
% Cover by natives:	66%		
% Invasive:	100%		
% Non-native:	0%		
	166%		
Corridor Condition:	Marginal		

Site:	<u>Stafford Meadows</u>		
Job Number:	<u>7005</u>		
Investigators:	<u>Lex Francis and Rebecca Schilling</u>		
Date:	<u>December 2, 2021</u>		
Community: big-leaf maple/ pineland sword fern			
Location: Approximately 25 feet above stream edge southwest of VECO E			
Plot ID: VECO D			
Tree species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			80%
* <i>Acer macrophyllum</i>	big-leaf maple	<i>native</i>	60%
* <i>Alnus rubra</i>	red alder	<i>native</i>	20%
Shrub species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			30%
* <i>Alnus rubra</i>	red alder	<i>native</i>	15%
* <i>Rubus armeniacus</i>	Himalayan blackberry	<i>invasive</i>	15%
Herb Species, % Cover, Native, Invasive - 10 foot radius, >5% cover:			25%
* <i>Polystichum munitum</i>	pineland sword fern	<i>native</i>	15%
* <i>Tellima grandiflora</i>	fragrant fringecup	<i>native</i>	8%
<i>Galium aparine</i>	sticky-willy	<i>native</i>	2%
* Dominant			
			Total Cover 135%
Absolute areal cover			
% Tree canopy:	80%		
% Cover by natives:	120%		
% Invasive:	15%		
% Non-native:	0%		
	135%		
Corridor Condition:	Good		

Site:	<u>Stafford Meadows</u>																										
Job Number:	<u>7005</u>																										
Investigators:	<u>Lex Francis and Rebecca Schilling</u>																										
Date:	<u>December 2, 2021</u>																										
Community: big-leaf maple/ Himalayan blackberry																											
Location: Northern most plot with in SROZ buffer																											
Plot ID: VECO E																											
Tree species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			50%																								
* <i>Alnus rubra</i>	red alder	<i>native</i>	25%																								
* <i>Acer macrophyllum</i>	big-leaf maple	<i>native</i>	25%																								
Shrub species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			100%																								
* <i>Rubus armeniacus</i>	Himalayan blackberry	<i>invasive</i>	95%																								
<i>Ilex aquifolium</i>	English holly	<i>non-native</i>	5%																								
Herb Species, % Cover, Native, Invasive - 10 foot radius, >5% cover:			0%																								
<p>* Dominant</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 40%; text-align: center;">Absolute areal cover</td> <td style="width: 30%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td>% Tree canopy:</td> <td style="text-align: center;">50%</td> <td></td> <td></td> </tr> <tr> <td>% Cover by natives:</td> <td style="text-align: center;">50%</td> <td></td> <td></td> </tr> <tr> <td>% Invasive:</td> <td style="text-align: center;">95%</td> <td></td> <td></td> </tr> <tr> <td>% Non-native:</td> <td style="text-align: center;">5%</td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center; border-top: 1px solid black;">150%</td> <td></td> <td></td> </tr> </table> <p style="text-align: right; margin-top: 10px;">Total Cover 150%</p>					Absolute areal cover			% Tree canopy:	50%			% Cover by natives:	50%			% Invasive:	95%			% Non-native:	5%				150%		
	Absolute areal cover																										
% Tree canopy:	50%																										
% Cover by natives:	50%																										
% Invasive:	95%																										
% Non-native:	5%																										
	150%																										
Corridor Condition:		Degraded																									

Appendix D: Planting Specifications Table

Frog Pond Terrace – Enhancement Mitigation Planting Specifications

Planting specifications for ±19,539 square feet of enhancement.

Scientific Name	Common Name	Size*	Spacing/Seeding Rate	Quantity
Trees (total 196)**				
<i>Acer macrophyllum</i>	bigleaf maple	2 gallon	10 feet on center	80
<i>Quercus garryana</i>	Oregon white oak	2 gallon	10 feet on center	80
<i>Pseudotsuga menziesii</i>	Douglas-fir	2 gallon	10 feet on center	36
Shrubs (total 977)**				
<i>Symphoricarpus albus</i>	snowberry	1 gallon	4-5 feet on center	200
<i>Mahonia aquifolium</i>	tall Oregon grape	1 gallon	4-5 feet on center	200
<i>Corylus cornuta</i>	beaked hazelnut	1 gallon	4-5 feet on center	200
<i>Polystichum munitum</i>	pineland sword fern	1 gallon	4-5 feet on center	170
<i>Rosa gymnocarpa</i>	baldhip rose	1 gallon	4-5 feet on center	105
<i>Ribes sanguineum</i>	red flowering currant	1 gallon	4-5 feet on center	102
Seed Mix/Plug				
<i>Sunmark Seeds *** (Native E/C Mix)</i>	meadow barley California brome blue wildrye tufted hairgrass spike bentgrass	seed	2 LB/1,000 SF OR 88 LB/AC	As needed for bare soil areas >25 square feet
<i>Sunmark Seeds*** (Ecobiotics Plus Organic Amendment)</i>	N/A	Blend directly with Native E/C Mix	200 LB/AC	As needed for bare soil areas >25 square feet

*Bare root plants may be substituted for container plants based on availability. If bare root plants are used, they must be planted during the late winter/early spring dormancy period.

** Minimum plant quantities ordered.

*** Native E/C Mix and Ecobiotics Plus can be obtained from Sunmark Seeds International or other similar seed supplier.

Planting Notes (Per Section 4.139.06(.02)(E) of the City of Wilsonville’s SROZ Ordinance):

- 1) Container 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.
- 2) All non-native invasive or noxious vegetation shall be removed from planting areas prior to installing native enhancement plantings and shall be removed or controlled for 5 years following the date the enhancement plantings are completed. Invasive species control shall be consistent with The City of Wilsonville 2018 *Integrated Pest Management (IPM) Plan*.
- 3) Appropriate plant selection, along with adequate site preparation and maintenance, reduces the need for irrigation. However, unless site hydrology is currently adequate, a City approved irrigation system or equivalent (i.e., polymer, plus watering) shall be used during the two-year

plant establishment period. Watering shall be at a minimum rate of at least one inch per week from June 15 through October 15.

- 4) Trees, shrubs, and groundcovers planted shall be mulched at a minimum of three inches in depth and 18 inches in diameter, to retain moisture and discourage weed growth around newly installed plant material. Appropriate mulches are made from composted bark or leaves that have not been chemically treated. Browse protection shall be installed on trees and shrubs. Mulching and browse protection shall be maintained during the two-year plant establishment period.
- 5) Trees and shrubs that die shall be replaced in kind to the extent necessary to ensure that a minimum of 80 percent of the trees and shrubs initially planted shall remain alive on year 5 of the date the enhancement plantings were completed.

Appendix D

Traffic Impact Letter dated February 7, 2022
by DKS and Associates

TECHNICAL MEMORANDUM

DATE: February 7, 2022

TO: Amy Pepper | City of Wilsonville

FROM: Scott Mansur, P.E., PTOE | DKS Associates
 Jenna Bogert, P.E. | DKS Associates
 Travis Larson, E.I. | DKS Associates



SUBJECT: Frog Pond West Terrace Subdivision Transportation Evaluation P19006-023

INTRODUCTION

This memorandum evaluates the trip generation associated with the proposed Frog Pond West Terrace housing development to be located at 7500 Frog Pond Lane in Wilsonville, Oregon. The developer desires to construct 19 single-family homes as part of the Frog Pond West Master Plan.¹ The property is in unincorporated Clackamas County but within the City’s Urban Growth Boundary (UGB), and as part of the project will be annexed to the City of Wilsonville.

The purpose of this memorandum is to provide the estimated vehicle trip generation for the proposed development, to identify potential operational impacts to the one current gateway intersection to the property, and to evaluate the proposed site plan for potential safety issues and consistency with City planning documents. The study intersection, Boeckman Road/ Sherman Drive, is shown in Figure 1.

The Boeckman Road/Sherman Drive intersection was selected for analysis as it is the most impacted by the increase in vehicle trips from the development and is the only Frog Pond West access to the proposed development. Other study intersections, such as Stafford Road/65th Avenue and Canyon Creek Road/Boeckman Road, were not included in this analysis as the trips through those intersections would be insignificant (around 10 peak hour trips or less).



FIGURE 1: STUDY AREA

¹ Frog Pond West Master Plan, City of Wilsonville, July 17, 2017.

Additionally, the Stafford Road/65th Avenue intersection was not included in this analysis as it was found to already fail to meet County standards under existing 2021 conditions, as noted in the Frog Pond Crossing TIA² and Frog Pond Vista TIA³. As noted in both of those reports, an intersection improvement has already been identified in the County's Capital Improvement Project List⁴.

TRIP GENERATION

The Institute of Transportation Engineers (ITE) trip generation rates for Single-Family Detached Housing (210) were used to estimate the site's trip generation, which is based on the number of lots in the development.⁵ As one home will be removed from the site during construction, the trips from that home have been subtracted from the total trips. As shown in Table 1, the proposed development is expected to generate a net total 20 PM peak hour trips (12 in, 8 out).

TABLE 1: VEHICLE TRIP GENERATION

LAND USE	ITE DESCRIPTION (CODE)	UNITS	PM PEAK TRIP RATE ^A	PM PEAK TRIPS			WEEKDAY
				IN	OUT	TOTAL	
NEW HOMES	SINGLE-FAMILY DETACHED HOUSING (210)	19 Lots	1.11 trips/lot	13	8	21	219
EXISTING HOME REMOVED	SINGLE-FAMILY DETACHED HOUSING (210)	1 Lot	1.00 trips/lot	-1	-0	-1	-15
TOTAL NET NEW TRIPS				12	8	20	204

^A PM peak trip rate is back-calculated from the fitted curve equation

PROJECT TRIP DISTRIBUTION

The project trips were distributed based on data from the Wilsonville Travel Demand Model and previous Frog Pond traffic analyses.⁶ It is estimated that 50% of trips utilize Stafford Road to/from the north, 35% of trips utilize Boeckman Road to/from the west, 10% of trips utilize Wilsonville Road to/from the south, and 5% of trips utilize Advance Road to/from the east. The project trips and distribution are shown in Figure 2.

² Wilsonville Frog Pond West Crossing Subdivision, Transportation Impact Study, DKS Associates, August 2021.

³ Wilsonville Frog Pond West Vista Subdivision, Transportation Impact Study, DKS Associates, August 2021.

⁴ Clackamas County Comprehensive Plan, Table 5-3a, Amended January 18, 2017

⁵ Trip Generation Manual, 11th Edition, Institute of Transportation Engineers, 2021.

⁶ Wilsonville Frog Pond West Oaks Subdivision, Transportation Impact Analysis, DKS Associates, November 2021.

PROJECT TRIPS THROUGH CITY OF WILSONVILLE 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. Approximately 5% (1 PM trip) of the project trips are expected to travel through the I-5/Wilsonville Road interchange area and 5% (1 PM trip) are expected to travel through the I-5/Elligsen Road interchange area.

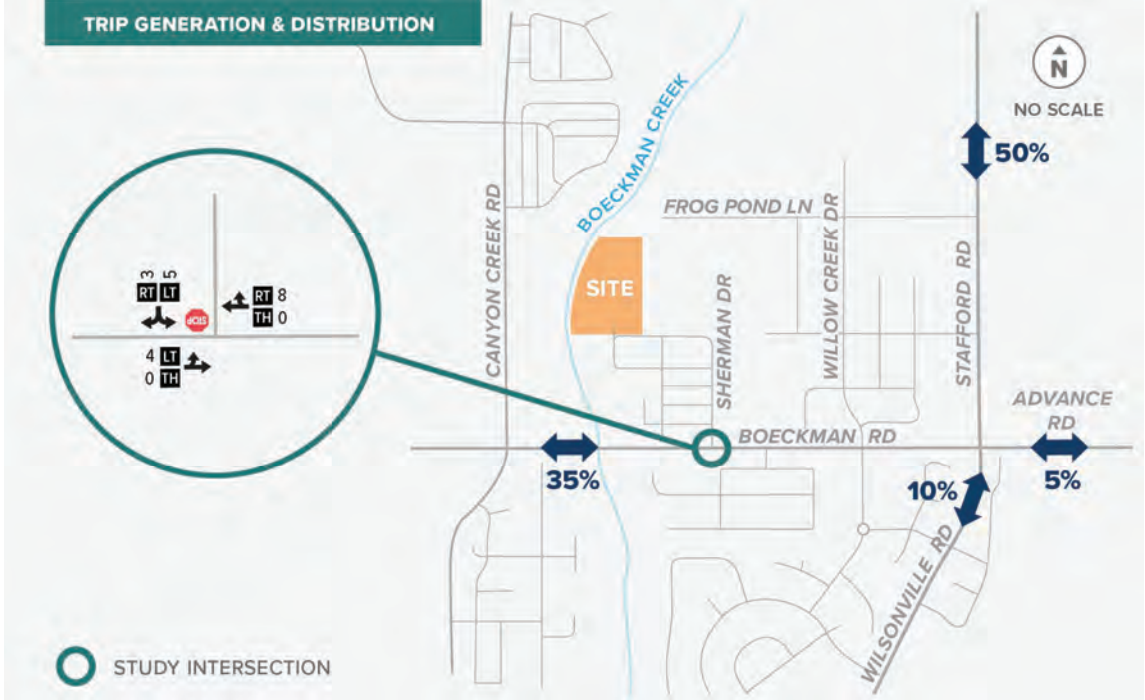


FIGURE 2: PROJECT TRIPS AND DISTRIBUTION

INTERSECTION ANALYSIS

This section contains the intersection analysis at the identified study intersection and includes a discussion of the volume development. Intersection operations were determined for the analysis scenario *Existing + Project + Stage II*.

EXISTING TRAFFIC VOLUMES

A combination of sources were used to estimate the turning movement volumes at the Boeckman Road/ Sherman Drive study intersection based on best practices. Recent turning movement count data from nearby intersections on September 30th, 2021, during the PM peak period (4:00-6:00 pm) were utilized to estimate the through movement volumes along Boeckman road. The Institute of Transportation Engineers (ITE) trip generation rates for Single-Family Detached Housing (210) were used to estimate the turning movement volumes at the intersection based on the number of

houses constructed and that Sherman Drive is the only access point for the development.⁷ A conservative estimate of 60 completed houses was used for the site. These intersection volumes were then evaluated for any necessary factoring to represent typical existing PM peak volumes.

In July 2021, ODOT released their final COVID Monitoring Traffic Report, which indicated that statewide traffic levels were approximately back to “pre-COVID” levels (plus or minus 5%). Other local agencies in the area (including City of Wilsonville) had anecdotally noted similar observations on the local street system. Due to this fact, and that the historical traffic counts were collected when West Linn-Wilsonville schools were back to full-time, in-person attendance, no COVID adjustment factor was applied to the traffic counts.

These intersections counts were then factored up to 2022 conditions by assuming a yearly growth rate of 2%. This yearly growth rate is a typical growth rate used in Wilsonville traffic impact analyses and has been calculated using the Wilsonville Travel Demand model.

STAGE II TRAFFIC VOLUMES

Stage II development trips were included in the intersection analysis. Stage II trips represent approved developments that have not yet been constructed. The list of these developments was provided by City staff and is included in the appendix.⁸ For this analysis, the Stage II trips also included the Frog Pond West Crossing, Vista, Oaks, Estates, and Overlook housing developments. A list of all these developments is also included in the appendix.

INTERSECTION OPERATIONS

Intersection operations were analyzed for the PM peak hour during the Existing + Project + Stage II scenario. The traffic volumes are shown in Figure 3. The operations were determined based on the Highway Capacity Manual (HCM) 6th Edition methodology.⁹ The volume to capacity (v/c) ratio, delay, and level of service (LOS) of the study intersection is listed in Table 2.

TABLE 2: EXISTING + PROJECT + STAGE II INTERSECTION OPERATIONS – PM PEAK

INTERSECTION	OPERATING STANDARD	PM PEAK HOUR		
		V/C	DELAY	LOS
TWO-WAY STOP CONTROLLED				
BOECKMAN RD/ SHERMAN DR	LOS D	0.12	18.6	A/C

TWO-WAY STOP CONTROLLED INTERSECTION:
 Delay = Critical Movement Delay (secs)
 v/c = Critical Movement Volume-to-Capacity Ratio
 LOS = Critical Levels of Service (Major/Minor Road)

⁷ Trip Generation Manual, 11th Edition, Institute of Transportation Engineers, 2021.

⁸ Email from Daniel Pauly, City of Wilsonville, January 7, 2022.

⁹ Highway Capacity Manual, 6th Edition, Transportation Research Board, 2017.

As shown, the study intersection meets the City of Wilsonville’s operating standard for the Existing + Project + Stage II PM peak hour condition.

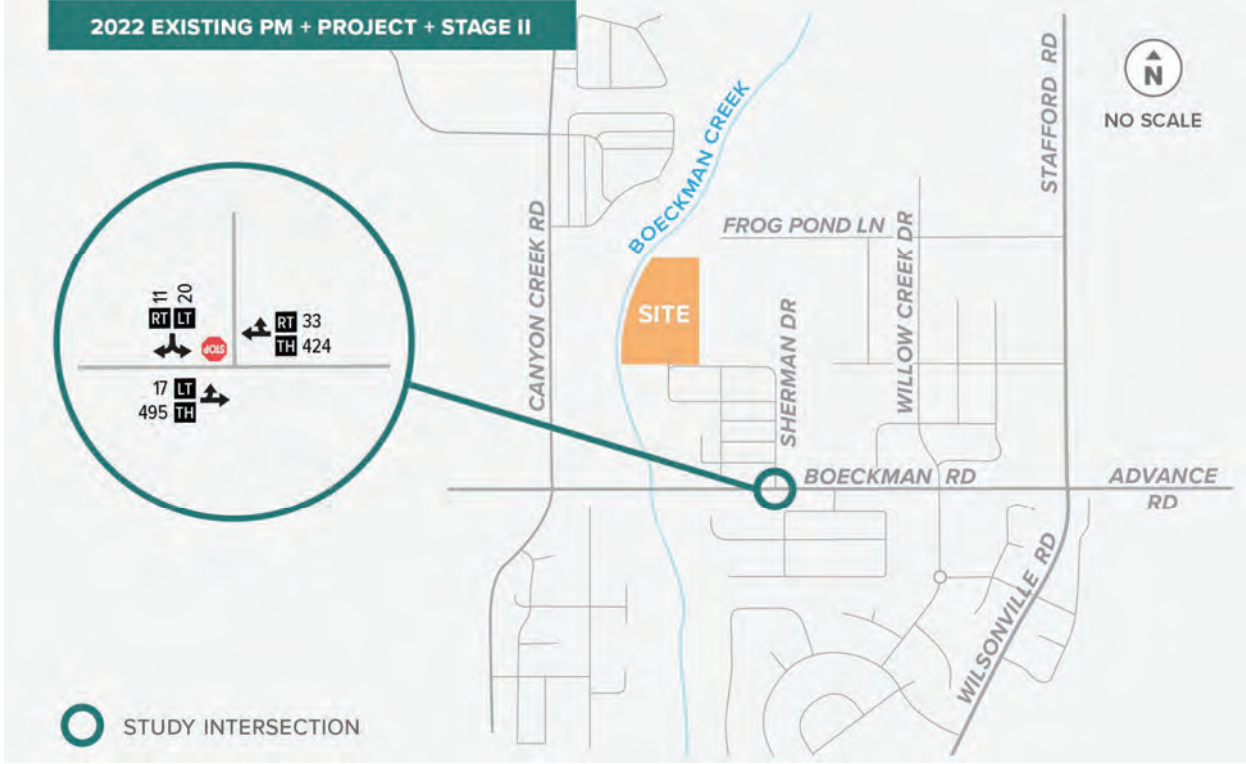


FIGURE 3: EXISTING + PROJECT + STAGE II PM PEAK HOUR TRAFFIC VOLUMES

SITE REVIEW

This section reviews the provided site plan to determine consistency with the Frog Pond West Master Plan and alignment with the Wilsonville Development Code and Construction Standards.

FROG PONG WEST MASTER PLAN CONSISTENCY

The proposed street layout generally matches the framework plan as laid out in the Frog Pond West Master Plan.¹⁰ The primary internal north-south street of the development is connected to Woodbury Loop but does not appear to facilitate a future connection to Frog Pond Lane as documented in the Master Plan. Figure 4 shows the desired street connection to Frog Pond Lane as identified in the Master Plan and the proposed site plan street network. This development should provide an extension of Woodbury Lane to the future connection to Frog Pond Lane as Frog Pond Lane is a key route within Frog Pond and provides access to/from Stafford Road.

¹⁰ Figure 19, Frog Pond West Master Plan, City of Wilsonville, July 17, 2017.

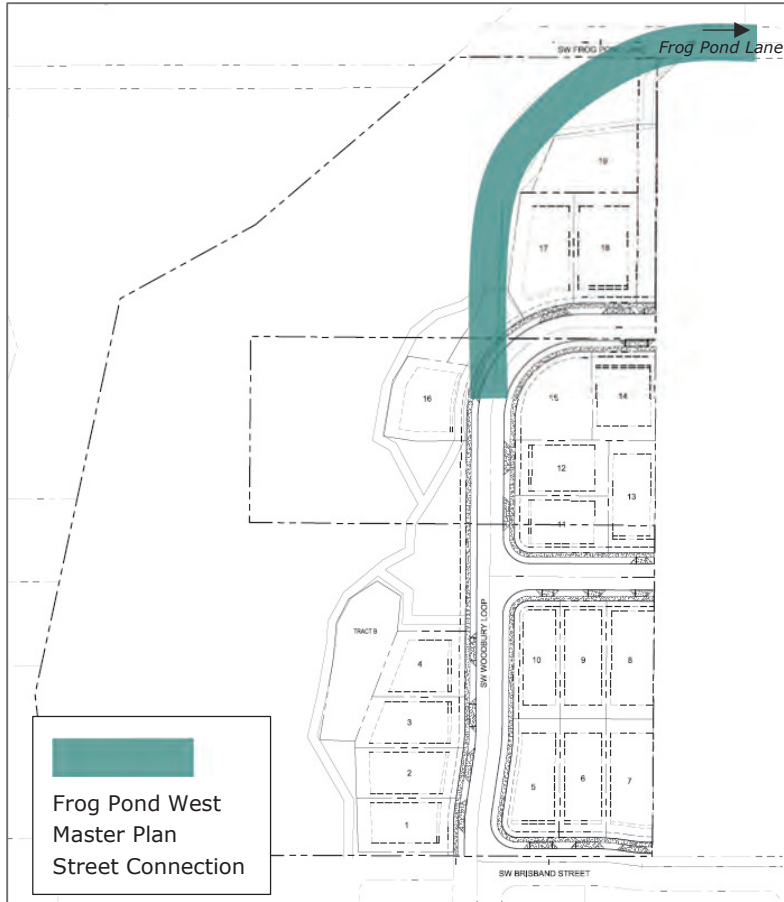


FIGURE 4: MASTER PLAN CONNECTION TO FROG POND LANE

ACCESS SPACING

The proposed project is required to comply with access spacing requirements as laid out in the City Transportation System Plan.¹¹ The access points for the new development are all on local streets, for which there is no spacing requirements prescribed by the City.

STREETS

The Frog Pond West Master Plan provides the street type plan and required cross sections for all streets in the Frog Pond West neighborhood.¹² All proposed streets within and fronting this development are classified as local streets and the developer will be responsible for building all streets up to standards. Local streets include on-street parking, sidewalks, planter strips, and a public utility easement. No dedicated bicycle facilities are required.

¹¹ Table 3-2, Wilsonville Transportation System Plan, Amended November 2020.

¹² Figures 19-28, Frog Pond West Master Plan, City of Wilsonville, July 17, 2017.

SIGHT DISTANCE

Adequate sight distance should be provided at the proposed alleys and internal streets. 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. Prior to occupancy, sight distance at any proposed access point or local street connection will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon to assure that buildings, signs, or landscaping does not restrict sight distance.

SUMMARY OF PROJECT IMPACTS

The key findings of the trip generation memo for the Frog Pond West Terrace development are summarized below.

- The project will consist of 19 single-family home lots as part of the Frog Pond West Master Plan. The parcel currently contains one single-family home on it.
- The proposed development is expected to generate a net total of 20 PM peak hour trips (12 in, 8 out).
- Approximately one (5%) trip is expected to travel through the I-5/Wilsonville Road interchange area and one (5%) trip is expected to travel through the I-5/Elligsen Road interchange area.
- The study intersection will meet the City's peak hour operating standard under Existing + Project + Stage II PM peak hour conditions.
- This development should provide an extension of Woodbury Lane to the future connection to Frog Pond Lane as Frog Pond Lane is a key route within Frog Pond and provides access Stafford Road.
- Prior to occupancy, sight distance at any proposed access point or local street connection will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon to assure that buildings, signs, or landscaping does not restrict sight distance.

Attachments:

- A. Traffic Count Data
- B. Stage II List
- C. HCM Reports – Existing + Project + Stage II
- D. Site Plan

A. TRAFFIC COUNT DATA



(303) 216-2439
www.alltrafficdata.net

Location: 2 SW Canyon Creek Rd & Boeckman Rd PM

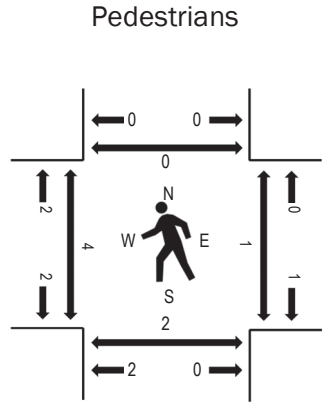
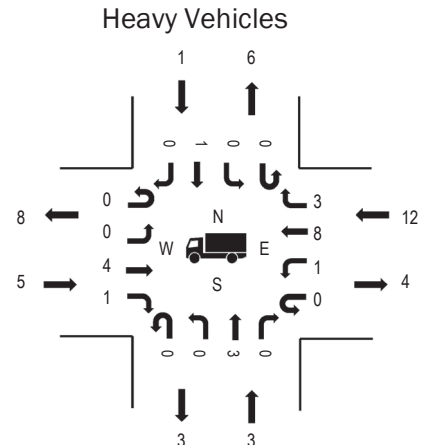
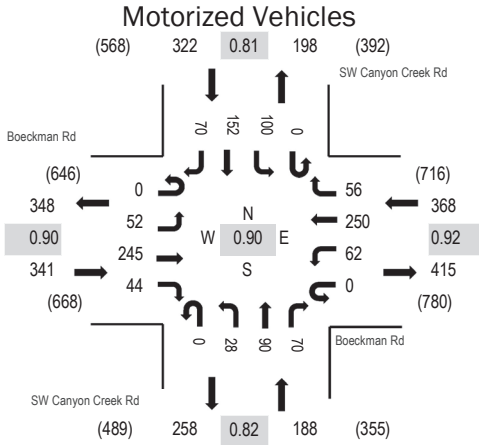
Date: Thursday, September 30, 2021

Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 04:50 PM - 05:05 PM

Item 2.

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.5%	0.90
WB	3.3%	0.92
NB	1.6%	0.82
SB	0.3%	0.81
All	1.7%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	Boeckman Rd Eastbound				Boeckman Rd Westbound				SW Canyon Creek Rd Northbound				SW Canyon Creek Rd 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	6	17	8	0	11	31	4	0	4	5	2	0	5	9	4	106	1,142
4:05 PM	0	4	22	2	0	4	18	7	0	0	8	6	0	2	9	1	83	1,148
4:10 PM	0	5	21	3	0	3	20	4	0	1	5	5	0	3	15	7	92	1,172
4:15 PM	0	5	14	3	0	2	15	5	0	2	15	6	0	8	7	3	85	1,184
4:20 PM	0	2	28	2	0	4	14	6	0	2	11	4	0	5	15	3	96	1,201
4:25 PM	0	3	19	7	0	7	22	4	0	3	7	4	0	7	9	2	94	1,201
4:30 PM	0	3	23	3	0	8	21	4	0	2	4	5	0	7	5	9	94	1,202
4:35 PM	0	4	22	5	0	2	19	5	0	3	10	1	0	3	13	3	90	1,214
4:40 PM	0	3	19	2	0	6	12	3	0	3	8	4	0	11	14	7	92	1,215
4:45 PM	0	3	18	4	0	1	20	3	0	3	5	3	0	9	9	7	85	1,219
4:50 PM	0	8	12	4	0	5	31	6	0	2	9	5	0	12	16	3	113	1,214
4:55 PM	0	7	25	2	0	6	19	3	0	3	7	8	0	9	13	10	112	1,190
5:00 PM	0	5	22	0	0	2	12	6	0	5	9	11	0	16	15	9	112	1,165
5:05 PM	0	2	27	7	0	8	24	6	0	1	7	3	0	9	10	3	107	
5:10 PM	0	3	21	6	0	8	20	5	0	1	11	4	0	6	12	7	104	
5:15 PM	0	7	19	3	0	4	20	6	0	3	10	7	0	6	14	3	102	
5:20 PM	0	5	14	5	0	7	23	7	0	3	4	5	0	6	11	6	96	
5:25 PM	0	4	19	6	0	7	18	5	0	2	3	3	0	7	16	5	95	
5:30 PM	0	2	25	5	0	3	20	3	0	1	10	7	0	10	11	9	106	
5:35 PM	0	3	21	1	0	6	17	5	0	3	8	5	0	4	17	1	91	
5:40 PM	0	3	22	1	0	5	26	1	0	1	7	9	0	6	8	7	96	
5:45 PM	0	1	21	3	0	7	20	2	0	2	8	6	0	6	2	2	80	
5:50 PM	0	2	16	4	0	5	20	6	0	0	11	2	0	10	10	3	89	
5:55 PM	0	4	19	2	0	6	16	5	0	0	5	3	0	9	14	4	87	
Count Total	0	94	486	88	0	127	478	111	0	50	187	118	0	176	274	118	2,307	
Peak Hour	0	52	245	44	0	62	250	56	0	28	90	70	0	100	152	70	1,219	

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	0	0	3	0	3	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	2	2	0	4	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	1	0	1	0	2	4:10 PM	0	0	0	0	0	4:10 PM	0	2	0	0	2
4:15 PM	1	1	0	1	3	4:15 PM	0	0	0	0	0	4:15 PM	1	2	2	0	5
4:20 PM	0	1	1	0	2	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	1	0	2	0	3	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	1	0	2	0	3	4:30 PM	0	0	0	0	0	4:30 PM	0	2	0	0	2
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	0	2	0	2
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	1	1	4:40 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	1	0	1	4:50 PM	0	0	0	1	1	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	1	0	0	0	1	5:00 PM	0	0	0	0	0	5:00 PM	0	1	0	0	1
5:05 PM	1	0	0	0	1	5:05 PM	0	0	0	0	0	5:05 PM	1	0	0	0	1
5:10 PM	1	0	1	0	2	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	1	1	2	5:15 PM	0	0	0	0	0	5:15 PM	1	0	0	0	1
5:20 PM	2	0	2	0	4	5:20 PM	0	0	0	0	0	5:20 PM	0	1	0	0	1
5:25 PM	0	0	1	0	1	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	1	2	0	3	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	2	3	0	5	5:35 PM	0	0	0	0	0	5:35 PM	0	0	1	0	1
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	2	0	0	0	2
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	2	0	0	0	2
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	1	0	0	1
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	9	7	23	2	41	Count Total	0	0	0	2	2	Count Total	7	9	5	0	21
Peak Hour	5	3	12	1	21	Peak Hour	0	0	0	1	1	Peak Hour	4	2	1	0	7



(303) 216-2439
www.alltrafficdata.net

Location: 3 Willow Creek Dr & Boeckman Rd PM

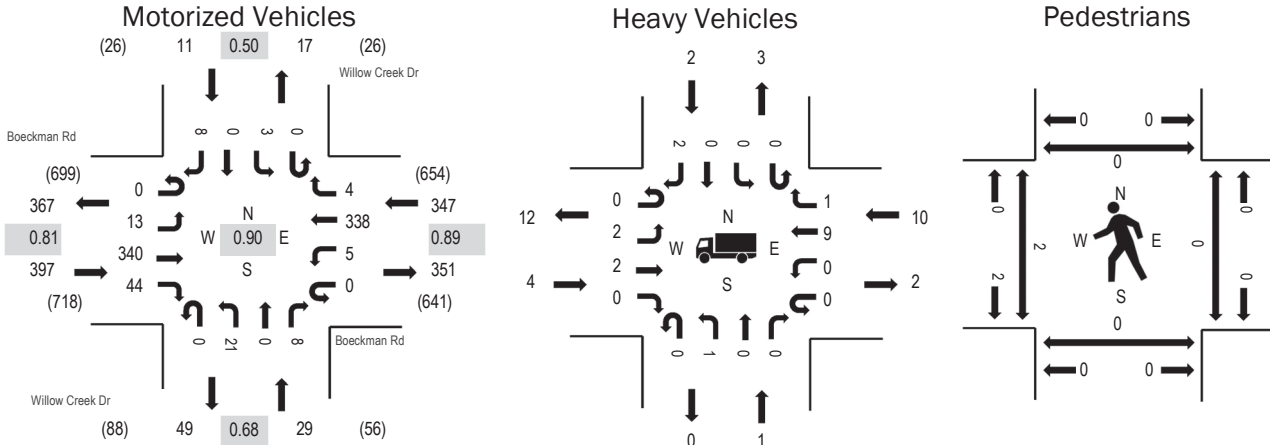
Date: Thursday, September 30, 2021

Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

Item 2.

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.0%	0.81
WB	2.9%	0.89
NB	3.4%	0.68
SB	18.2%	0.50
All	2.2%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	Boeckman Rd Eastbound				Boeckman Rd Westbound				Willow Creek Dr Northbound				Willow Creek Dr 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	2	19	2	0	0	45	0	0	3	0	0	0	1	0	0	72	700
4:05 PM	0	0	16	2	0	1	23	0	0	3	0	1	0	0	0	0	46	697
4:10 PM	0	0	28	4	0	0	23	0	0	2	0	1	0	0	0	1	59	723
4:15 PM	0	1	24	2	0	0	18	3	0	1	0	0	0	0	0	2	51	741
4:20 PM	0	1	30	2	0	0	18	0	0	2	0	1	0	1	0	2	57	749
4:25 PM	0	1	22	5	0	1	33	0	0	0	0	0	0	1	0	1	64	754
4:30 PM	0	0	23	2	0	0	30	0	0	1	0	0	0	1	0	2	59	736
4:35 PM	0	0	27	1	0	1	18	0	0	1	0	0	0	0	0	1	49	744
4:40 PM	0	0	23	3	0	1	16	0	0	2	0	0	0	0	0	0	45	756
4:45 PM	0	0	29	1	0	1	27	1	0	1	0	1	0	0	0	1	62	784
4:50 PM	0	1	22	3	0	1	33	0	0	3	0	2	0	0	0	2	67	773
4:55 PM	0	1	35	6	0	0	25	0	0	0	0	2	0	0	0	0	69	773
5:00 PM	0	2	36	9	0	0	20	0	0	2	0	0	0	0	0	0	69	754
5:05 PM	0	1	30	2	0	0	36	0	0	2	0	0	0	1	0	0	72	
5:10 PM	0	1	33	7	0	0	34	0	0	2	0	0	0	0	0	0	77	
5:15 PM	0	1	24	3	0	0	27	1	0	2	0	1	0	0	0	0	59	
5:20 PM	0	2	25	0	0	1	31	0	0	1	0	0	0	0	0	2	62	
5:25 PM	0	0	22	0	0	0	20	1	0	1	0	0	0	1	0	1	46	
5:30 PM	0	0	28	8	0	0	28	0	0	1	0	1	0	0	0	1	67	
5:35 PM	0	3	25	2	0	2	25	1	0	3	0	0	0	0	0	0	61	
5:40 PM	0	1	31	3	0	0	32	0	0	3	0	1	0	1	0	1	73	
5:45 PM	0	1	23	2	0	1	20	0	0	3	0	0	0	1	0	0	51	
5:50 PM	0	0	22	4	0	1	35	0	0	4	0	0	0	0	0	1	67	
5:55 PM	0	0	25	4	0	0	19	0	0	2	0	0	0	0	0	0	50	
Count Total	0	19	622	77	0	11	636	7	0	45	0	11	0	8	0	18	1,454	
Peak Hour	0	13	340	44	0	5	338	4	0	21	0	8	0	3	0	8	784	

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	0	0	1	0	1	4:00 PM	0	0	0	0	0	4:00 PM	0	9	0	0	9
4:05 PM	0	0	2	0	2	4:05 PM	0	0	0	0	0	4:05 PM	0	10	0	0	10
4:10 PM	0	0	1	0	1	4:10 PM	0	0	0	0	0	4:10 PM	0	1	0	0	1
4:15 PM	1	0	0	0	1	4:15 PM	0	0	0	0	0	4:15 PM	0	10	0	0	10
4:20 PM	0	0	2	0	2	4:20 PM	0	0	0	0	0	4:20 PM	0	1	0	0	1
4:25 PM	1	0	2	0	3	4:25 PM	0	0	0	0	0	4:25 PM	0	5	0	0	5
4:30 PM	0	0	1	0	1	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	3	0	0	3
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	1	1	2	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	1	0	0	0	1	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	1	0	1	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	2	1	1	0	4	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	1	0	1	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	1	0	1	0	2	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	1	1	2	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	3	0	3	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	2	0	0	0	2
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	2	0	0	0	2
5:50 PM	0	0	0	1	1	5:50 PM	0	0	0	0	0	5:50 PM	0	1	0	0	1
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	6	1	19	3	29	Count Total	0	0	0	0	0	Count Total	4	40	0	0	44
Peak Hour	4	1	10	2	17	Peak Hour	0	0	0	0	0	Peak Hour	2	0	0	0	2

B. STAGE II LIST

Updated by D. Pauly 01.07.22

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
Shredding Systems (SQFT does not including paint canopy and another canopy)	Industrial/Commercial	Under construction	66.8 KSF					20	46	66
Town Center Ph III and trip dedication to Miller Paint 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-Stafford Meadows (Phase 2 and 3a of 10/18 study)	Residential	Partially Built, 32 homes built and occupied	46 units					9	5	14
Frog Pond-Frog Pond Meadows (Phase 3B, 4A, 4B of 10/18 Study)	Residential	Partially Built, 14 homes built and occupied	74 units					37	23	60
Frog Pond Ridge	Residential	Under construction, no homes built or occupied	71 units					43	28	71
Frog Pond-Morgan Farm	Residential	Partially Built, 50 homes built and occupied	80 units					18	12	30
Fir Avenue Commons	Residential	Partially Built, 6 homes built and occupied	10 units					2	2	4
Magnolia Townhomes	Residential	Under construction	6 units					3	2	5
Aspen Meadows II	Residential	Under construction, 3 homes sold and occupied	5 units					1	1	2
Canyon Creek III	Residential	Approved	5 units (traffic study was for 11)					2	3	5
Coffee Creek Logistics	Industrial/Commercial	Under construction	115K					16	41	57
PW Complex on Boberg	Public	Approved	15,800 office, 17,900 warehouse					11	39	50
DAS North Valley Complex	Public/Industrial	Approved	174,700 sf					5	15	20

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, 364 homes sold and occupied	451									53	34	87
Central	Residential	Partially Built, 991 homes (102 single family, 319 condo/row homes, 365 apartments) occupied	102	391	510							60	30	90

Pending Projects for Which Traffic Analysis has been completed (except Villebois)										
Project	Land Use	Status	Size	Total PM Peak Trips	Trip Allocation Percentage			Net New (Primary) PM Peak Hour Trips		
					Internal	Pass-By	Diverted	In	Out	Total
Frog Pond Crossing								19	9	28
Frog Pond Vista								27	17	44
Frog Pond Estates								11	7	18
Boones Ferry Gas Station/Convenience Store	Commercial	under review	3,460 sf store, 12 gas pumps	240		134		53	53	106

C. HCM REPORTS – EXISTING + PROJECT + STAGE II

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	17	495	424	33	20	11
Future Vol, veh/h	17	495	424	33	20	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	3	1	1	1
Mvmt Flow	19	550	471	37	22	12

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	508	0	0 1078 490
Stage 1	-	-	- 490 -
Stage 2	-	-	- 588 -
Critical Hdwy	4.11	-	- 6.41 6.21
Critical Hdwy Stg 1	-	-	- 5.41 -
Critical Hdwy Stg 2	-	-	- 5.41 -
Follow-up Hdwy	2.209	-	- 3.509 3.309
Pot Cap-1 Maneuver	1062	-	- 243 580
Stage 1	-	-	- 618 -
Stage 2	-	-	- 557 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1062	-	- 237 580
Mov Cap-2 Maneuver	-	-	- 237 -
Stage 1	-	-	- 602 -
Stage 2	-	-	- 557 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	18.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1062	-	-	-	300
HCM Lane V/C Ratio	0.018	-	-	-	0.115
HCM Control Delay (s)	8.5	0	-	-	18.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

D. SITE PLAN



FROG POND TERRACE
XX DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

PRELIMINARY SITE PLAN

#	DATE	DESCRIPTION

REVISIONS

NAVD88
DATUM

OTAK CAD KJB
DRAWN BY CHECKED BY

LAND USE SUBMITTAL
STATUS

OCTOBER 15, 2021
DATE

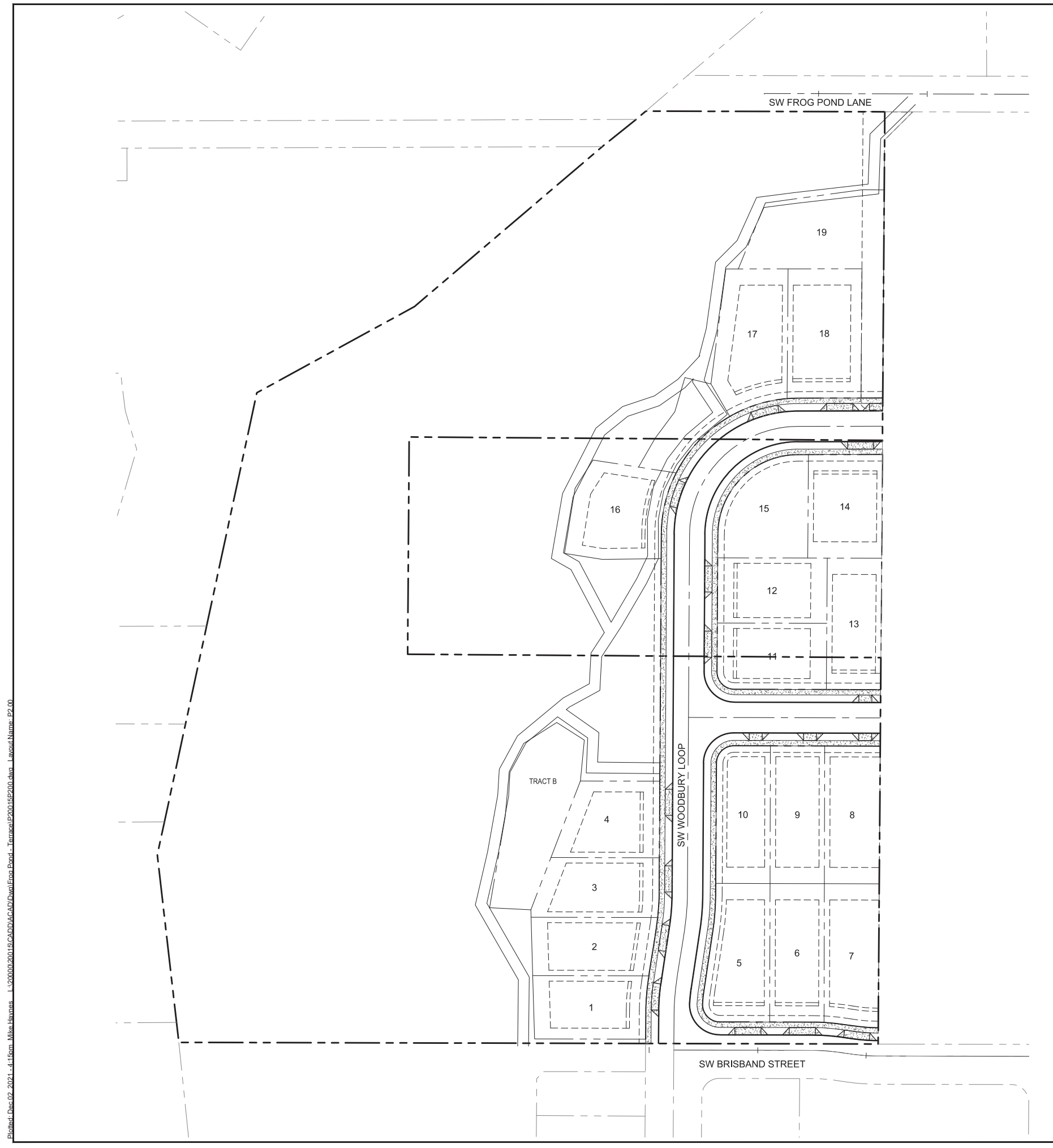
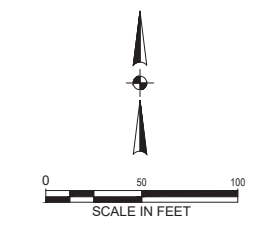
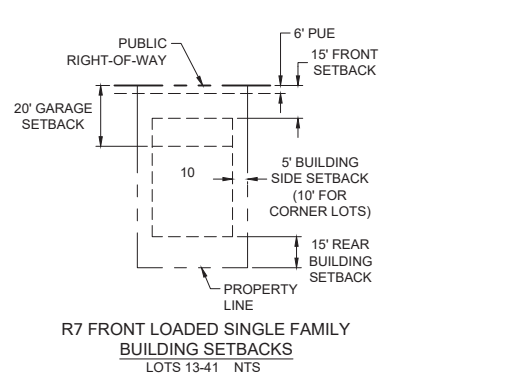
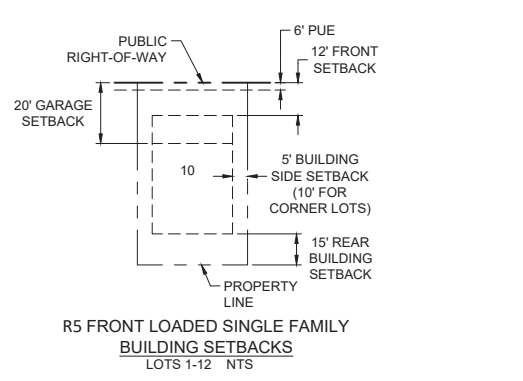
20141
PROJECT NUMBER

P2.00

© 2021 Otak, Inc.
341

LEGEND

- PROPERTY LINE
- CENTER LINE
- LOT LINE
- LOT SETBACK
- LOT NUMBER / NAME 16
- EASEMENT LINE
- STANDARD CURB
- SIDEWALK
- RETAINING WALL
- INTERSECTION SIGHT DISTANCE
- TYPICAL STREET CROSS SECTION (SEE SHEET P2.10)
- PUBLIC RAIN GARDEN
- DRIVEWAY
- CURB RAMP



Plotted: Dec. 02, 2021, 4:15pm, Mike Havens, L:\200000\200115\CADD\CADD\Frog Pond - Terrace\200115P200.dwg, Layout Name: P2.00

Appendix E
Arborist Report and Tree Plan dated January 27, 2022
by Portland Tree Consulting

Frog Pond Terrace Arborist Report

This Tree Plan is required by Section 4.610.40. Type C Permit as part of the site development application for the Frog Pond Terrace Subdivision in Wilsonville, Oregon. The attached Tree Table includes all trees that are 6 inches in diameter and larger on or close to the property. Species, crown diameters, and health and condition were inventoried by an ISA Certified Arborist. Trees were tied and diameters measured by licensed Otak surveyors. There are two hundred and fifty trees, and the Tree Table delineates those to be removed and those to be protected. Protected trees have metal identification tags that will remain until final inspection of the project. Root protection zones (RPZs) for protected trees are listed in the Tree Table.

The one hundred five trees being preserved during development will be cordoned off with fencing built at the edge of root protection zones before construction activity begins. Fencing will consist of 6-foot-high metal chain link secured with 8-foot metal posts. I recommend that the project arborist and the project supervisor walk through the project after the fences are up and before grading begins to see if any changes should be made

Without authorization, none of the following is allowed within a root protection zone:

1. New buildings.
2. Grade change or cut and fill, during or after construction.
3. New impervious surfaces.
4. Utility or drainage field placement.
5. Staging or storage of materials and equipment during construction.
6. Vehicle maneuvering during construction.

With supervision by an arborist, ground disturbance and construction may occur inside RPZs after authorization from the City. This ensures that development activities contemplated by the owner and put into effect by the construction team are done without endangering protected trees.

One hundred forty-five trees will be removed from the property. Section 4.620.00. requires that each removed tree be replaced with a 2-inch caliper tree within one year of removal. Replacement trees shall be 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. The species and locations of replacement trees will be determined by the landscape designer. I recommend that the project arborist reviews the species selection and tree placement for poorly compatible choices.

Replacement trees must be staked, fertilized, and mulched, and shall be guaranteed by the permit grantee for two years after the planting date. Alternatively, if some trees cannot be planted at the site due to spatial limitations, the owner may invoke Section 4.629.00.(06.) and pay the value of the replacement trees to the City Tree Fund.

Frog Pond Terrace (Martin and George Property)

1/27/2022

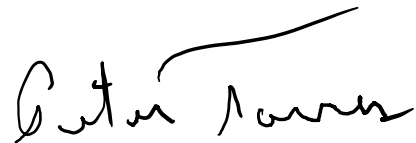
This Tree Plan meets the requirements of the tree preservation code, and the owner will observe all laws, rules, and regulations. Trees to be removed should be verified and marked and tree protection measures should be inspected and approved before any clearing or grading work begins. It is the owner's responsibility to implement this tree plan and to monitor the construction process to its conclusion. Deviations can result in tree damage, liability, and violations of the City Code.

Frog Pond Terrace (Martin and George Property)

1/27/2022

Portland Tree Consulting PO Box 19042 Portland, OR 97280
 503.421.3883 peter@torresusa.com CCB 230301

1. Client warrants any legal description provided to the Consultant is correct and titles and ownerships to property are good and marketable. Consultant shall not be responsible for incorrect information provided by Client.
2. Consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
3. The Consultant shall not be required to give testimony or attend court or hearings unless subsequent contractual arrangements are made, including additional fees.
4. The report and any values expressed therein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
5. Sketches, drawings and photographs in the report are intended as visual aids and may not be to scale. The reproduction of information generated by others will be for coordination and ease of reference. Inclusion of such information does not warrant the sufficiency or accuracy of the information by the Consultant.
6. Unless expressed otherwise, information in the report covers only items that were examined and reflects the condition at the time of inspection. The inspection is limited to visual examination of accessible items without laboratory analysis, dissection, excavation, probing, or coring, unless otherwise stated.
7. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.
8. The report is the completed work product. Any additional work, including production of a site plan, addenda and revisions, construction of tree protection measures, tree work, or inspection of tree protection measures, for example, must be contracted separately. Loss or alteration of any part of the report invalidates the entire report.
9. Any action or proceeding seeking to enforce any provision of this Agreement shall be brought against any of the parties in Multnomah County Circuit Court of the State of Oregon, or, when applicable, in the United States District Court for the District of Oregon. Each party consents to the jurisdiction of such courts (and of the appropriate appellate courts) and waives any objection to such venue.



Peter Torres

Master of Forestry ASCA RCA 372 ISA Certified Arborist PN-0650B TRAQ

Portland Tree Consulting

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30007	bigleaf maple	20"	18	2	in ravine	14	protect
30008	Oregon ash	10"	12	2	in ravine	8	protect
30009	Oregon ash	14"	15	2	in ravine	8	protect
30014	red alder	12"	10	2	in ravine	8	protect
30015	red alder	13"	10	2	in ravine	8	protect
30017	Oregon ash	16"	24	2	in ravine	12	protect
30019	Scouler willow	4X4"-14"	18	2	in ravine	10	protect
30027	bigleaf maple	4X8"-12"	15	2	in ravine	0	remove
30028	Oregon ash	12"	15	2	in ravine	8	protect
30029	bigleaf maple	2X12"-14"	18	2	in ravine	14	protect
30033	Scouler willow	3X8"-10"	18	2	in ravine	0	remove
30042	Oregon ash	2X6"-8"	15	2	in ravine	8	protect
30045	bigleaf maple	10"	12	2	in ravine	8	protect
30046	bigleaf maple	10"	12	2	in ravine	8	protect
30053	Douglas-fir	26"	24	2	in ravine	18	protect
30054	red alder	2X11"-14"	12	1	terminal decline	14	protect
30062	bigleaf maple	8"	12	2	in ravine	8	protect
30063	bigleaf maple	8"	18	2	in ravine	8	protect
30076	bigleaf maple	18"	18	2	in ravine	10	protect
30090	Douglas-fir	14"	12	2	in ravine	10	protect
30099	bigleaf maple	14"	15	2	in ravine	10	protect
30100	bigleaf maple	16"	18	2	in ravine	12	protect
30101	red alder	12"	10	2	dead in ravine	0	protect
30117	red alder	4X13"-18"	10	2	dead in ravine	0	protect

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30482	Douglas-fir	36"	36	2	in ravine	24	protect
30497	Alder	22"	24	2	in ravine	16	protect
30507	bigleaf maple	3X8"-28"	24	2	in ravine	24	protect
30513	Douglas-fir	24"	30	2	in ravine	16	protect
30514	bigleaf maple	2X14"-24"	12	2	the 24" stem is a Douglas-fir tree	20	protect
30516	Douglas-fir	24"	24	2	in ravine	16	protect
30517	Douglas-fir	20"	21	2	in ravine	14	protect
30518	Douglas-fir	20"	21	2	in ravine	14	protect
30519	Douglas-fir	28"	24	2	in ravine	18	protect
30520	Douglas-fir	24"	24	2	in ravine	16	protect
30534	bigleaf maple	16"	21	2	in ravine	12	protect
30535	Douglas-fir	34"	30	2	in ravine	24	protect
30536	Douglas-fir	20"	24	2	in ravine	14	protect
30537	Douglas-fir	40"	33	2	in ravine	24	protect
30599	Douglas-fir	12"	12	2	in ravine	8	protect
30600	Douglas-fir	18"	18	2	two tops	12	protect
30601	Douglas-fir	16"	18	2	at utility pole	12	protect
30602	Douglas-fir	16"	18	2	topped at 20 ft.	12	protect
30603	Japanese maple	6"	9	2	at house	8	protect
30709	Douglas-fir	9"	9	2	in ravine	8	protect
30710	Douglas-fir	9"	9	2	in ravine	8	protect
30711	bigleaf maple	28"	30	2	in ravine	24	protect
30712	Garry oak	36"	90	2	leans over house to remain and one-sided	24	protect
30713	Douglas-fir	32"	30	2	must preserve to protect 30712 Garry oak; two tops, one-sided	24	protect

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30714	red alder	14"	9	2	terminal decline	10	protect
30715	Douglas-fir	12"	9	2	in ravine	8	protect
30716	Douglas-fir	14"	0	2	in ravine	10	protect
30717	red alder	14"	0	2	in ravine	10	protect
30718	red alder	16"	12	2	in ravine	12	protect
30719	Douglas-fir	10"	9	2	in ravine	8	protect
30720	Douglas-fir	11"	12	2	in ravine	8	protect
30721	Douglas-fir	18"	12	2	in ravine	12	protect
30722	Douglas-fir	12"	12	2	in ravine	8	protect
30723	Douglas-fir	9"	9	2	native species	8	protect
30724	Douglas-fir	13"	12	2	in ravine	10	protect
30725	Douglas-fir	7"	12	2	in ravine	8	protect
30726	Douglas-fir	12"	12	2	in ravine	8	protect
30727	Douglas-fir	8"	9	2	in ravine	8	protect
30728	Douglas-fir	13"	12	2	in ravine	10	protect
30729	yellow pine	18"	18	2	in ravine	12	protect
30730	yellow pine	8"	9	2	in ravine	8	protect
30731	Douglas-fir	13"	12	2	in ravine	10	protect
30732	Douglas-fir	16"	15	2	in ravine	12	protect
30733	Douglas-fir	14"	12	2	in ravine	10	protect
30734	Douglas-fir	6"	9	2	in ravine	8	protect
30735	yellow pine	18"	18	2	in ravine	12	protect
30736	sweet cherry	14"	15	2	in ravine	10	protect
30737	yellow pine	12"	15	2	native species	8	protect

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30738	yellow pine	14"	12	2	one-sided	10	protect
30739	yellow pine	14"	12	2	one-sided	10	protect
30740	Douglas-fir	16"	15	2	asymmetrical crown	12	protect
30741	yellow pine	15"	15	2	asymmetrical crown	10	protect
30772	quaking aspen	8"	9	2	asymmetrical crown	8	protect
30773	Sato cherry	2X6"-8"	15	2	asymmetrical crown	8	protect
30774	quaking aspen	8"	12	2	asymmetrical crown	8	protect
30775	quaking aspen	12"	15	2	asymmetrical crown	8	protect
30776	Douglas-fir	18"	18	2	asymmetrical crown	12	protect
30777	Douglas-fir	15"	18	2	asymmetrical crown	10	protect
30778	Douglas-fir	10"	15	2	asymmetrical crown	8	protect
30779	Douglas-fir	16"	18	2	asymmetrical crown	12	protect
30780	Douglas-fir	12"	12	2	asymmetrical crown	8	protect
30781	Douglas-fir	12"	12	2	asymmetrical crown	8	protect
30782	yellow pine	18"	21	2	asymmetrical crown	12	protect
30783	yellow pine	12"	15	2	asymmetrical crown	8	protect
30784	yellow pine	14"	18	2	asymmetrical crown	10	protect
30785	Douglas-fir	13"	12	2	asymmetrical crown	10	protect
30786	Douglas-fir	14"	9	2	asymmetrical crown	10	protect
30787	Douglas-fir	10"	12	2	asymmetrical crown	8	protect
30788	Douglas-fir	16"	18	2	asymmetrical crown	0	remove
30789	yellow pine	16"	18	2	asymmetrical crown	12	protect
30790	Douglas-fir	10"	12	2	viable	8	protect
30791	Douglas-fir	13"	12	2	asymmetrical crown	8	protect

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30792	yellow pine	9"	9	2	asymmetrical crown	8	protect
30793	yellow pine	12"	12	2	asymmetrical crown	8	protect
30794	yellow pine	9"	9	2	asymmetrical crown	8	protect
30795	yellow pine	14"	12	2	asymmetrical crown	10	protect
30796	yellow pine	14"	12	2	asymmetrical crown	10	protect
30797	yellow pine	14"	12	2	asymmetrical crown	10	protect
30798	yellow pine	18"	15	2	asymmetrical crown	12	protect
30799	missing	0	0	2	missing from behind house	0	none
30822	quaking aspen	10"	12	2	viable	8	protect
31353	Douglas-fir	20"	15	2	on berm, shallow-rooted	0	remove
31354	Douglas-fir	14"	12	2	on berm, shallow-rooted	0	remove
31356	Douglas-fir	14"	12	2	on berm, shallow-rooted	0	remove
31357	Douglas-fir	18"	12	2	on berm, shallow-rooted	0	remove
31358	Douglas-fir	12"	12	2	on berm, shallow-rooted	0	remove
31359	Douglas-fir	2X10"-13"	12	2	poor structure	0	remove
31360	Douglas-fir	12"	12	2	on berm, shallow-rooted	0	remove
31361	Douglas-fir	8"	12	2	on berm, shallow-rooted	0	remove
31362	Douglas-fir	10"	12	2	on berm, shallow-rooted	0	remove
31363	Douglas-fir	13"	15	2	on berm, shallow-rooted	0	remove
31364	Douglas-fir	20"	21	2	on berm, shallow-rooted	0	remove
31367	Douglas-fir	20"	24	2	on berm, shallow-rooted	0	remove
31368	Douglas-fir	14"	15	2	on berm, shallow-rooted	0	remove
31369	yellow pine	31"	30	2	crowded	0	remove
31370	yellow pine	18"	15	2	crowded	0	remove

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31371	yellow pine	14"	24	2	crowded	0	remove
31372	yellow pine	13"	18	2	crowded	0	remove
31373	yellow pine	14"	18	2	crowded	0	remove
31374	yellow pine	14"	18	2	crowded	0	remove
31375	yellow pine	18"	24	2	asymmetrical crown	0	remove
31376	Douglas-fir	12"	12	2	asymmetrical crown	0	remove
31377	yellow pine	16"	15	2	asymmetrical crown	0	remove
31378	yellow pine	10"	12	2	asymmetrical crown	0	remove
31379	yellow pine	12"	12	2	asymmetrical crown	0	remove
31380	yellow pine	14"	12	2	asymmetrical crown	0	remove
31381	yellow pine	7"	9	2	asymmetrical crown	0	remove
31382	yellow pine	14"	15	2	asymmetrical crown	0	remove
31383	yellow pine	19"	24	2	asymmetrical crown	0	remove
31384	yellow pine	18"	18	2	asymmetrical crown	0	remove
31385	bigleaf maple	24"	24	2	native species	0	remove
31386	Douglas-fir	17"	24	2	one-sided	0	remove
31387	Douglas-fir	12"	18	2	asymmetrical crown	0	remove
31388	yellow pine	13"	15	2	asymmetrical crown	0	remove
31389	yellow pine	20"	21	2	asymmetrical crown	0	remove
31390	yellow pine	16"	18	2	asymmetrical crown	0	remove
31391	yellow pine	12"	12	2	asymmetrical crown	0	remove
31392	yellow pine	14"	12	2	asymmetrical crown	0	remove
31393	yellow pine	10"	12	2	asymmetrical crown	0	remove
31394	yellow pine	16"	18	2	asymmetrical crown	0	remove

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31395	yellow pine	11"	9	2	topped at 20 ft.	0	remove
31396	yellow pine	13"	21	2	asymmetrical crown	0	remove
31397	yellow pine	14"	15	2	asymmetrical crown	0	remove
31398	yellow pine	16"	15	2	asymmetrical crown	0	remove
31399	yellow pine	11"	15	2	asymmetrical crown	0	remove
31400	yellow pine	16"	12	2	asymmetrical crown	0	remove
31401	yellow pine	13"	15	2	asymmetrical crown	0	remove
31402	yellow pine	18"	12	2	asymmetrical crown	0	remove
31403	yellow pine	24"	18	2	asymmetrical crown	0	remove
31404	yellow pine	18"	15	2	asymmetrical crown	0	remove
31405	yellow pine	15"	12	2	asymmetrical crown	0	remove
31406	yellow pine	24"	24	2	asymmetrical crown	0	remove
31407	yellow pine	16"	18	2	asymmetrical crown	0	remove
31408	yellow pine	20"	9	2	codominant trunks	0	remove
31409	yellow pine	6"	9	2	suppressed	0	remove
31410	yellow pine	14"	12	2	asymmetrical crown	0	remove
31411	yellow pine	8"	9	2	asymmetrical crown	0	remove
31412	yellow pine	12"	12	2	asymmetrical crown	0	remove
31413	yellow pine	10"	12	2	asymmetrical crown	0	remove
31414	yellow pine	17"	18	2	asymmetrical crown	0	remove
31415	yellow pine	10"	12	2	asymmetrical crown	0	remove
31416	yellow pine	6"	9	2	asymmetrical crown	0	remove
31417	yellow pine	8"	9	2	asymmetrical crown	0	remove
31418	yellow pine	12"	12	2	asymmetrical crown	0	remove

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31419	Douglas-fir	12"	12	2	asymmetrical crown	0	remove
31420	Douglas-fir	14"	12	2	asymmetrical crown	0	remove
31421	yellow pine	12"	12	2	asymmetrical crown	0	remove
31422	yellow pine	16"	15	2	asymmetrical crown	0	remove
31423	yellow pine	8"	9	2	asymmetrical crown	0	remove
31424	yellow pine	12"	15	2	asymmetrical crown	0	remove
31425	yellow pine	7"	9	2	asymmetrical crown	0	remove
31426	yellow pine	14"	12	2	asymmetrical crown	0	remove
31427	Douglas-fir	8"	9	2	asymmetrical crown	0	remove
31428	Douglas-fir	18"	18	2	asymmetrical crown	0	remove
31429	Douglas-fir	14"	18	2	asymmetrical crown	0	remove
31430	yellow pine	16"	18	2	asymmetrical crown	0	remove
31431	yellow pine	17"	18	2	asymmetrical crown	0	remove
31432	yellow pine	22"	24	2	asymmetrical crown	0	remove
31433	yellow pine	14"	18	2	asymmetrical crown	0	remove
31434	Douglas-fir	18"	18	2	asymmetrical crown	0	remove
31435	yellow pine	16"	15	2	asymmetrical crown	0	remove
31436	yellow pine	22"	24	2	asymmetrical crown	0	remove
31437	Douglas-fir	13"	12	2	asymmetrical crown	0	remove
31438	Douglas-fir	17"	18	2	asymmetrical crown	0	remove
31439	Douglas-fir	16"	15	2	asymmetrical crown	0	remove
31440	yellow pine	13"	12	2	asymmetrical crown	0	remove
31441	Douglas-fir	16"	15	2	asymmetrical crown	0	remove
31442	yellow pine	17"	18	2	asymmetrical crown	0	remove

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31443	Douglas-fir	13"	12	2	asymmetrical crown	0	remove
31444	Douglas-fir	16"	24	2	asymmetrical crown	0	remove
31445	yellow pine	11"	12	2	asymmetrical crown	0	remove
31446	yellow pine	8"	12	2	asymmetrical crown	0	remove
31447	yellow pine	18"	18	2	asymmetrical crown	0	remove
31448	yellow pine	14"	15	2	asymmetrical crown	0	remove
31449	Douglas-fir	12"	12	2	asymmetrical crown	0	remove
31450	Douglas-fir	12"	12	2	asymmetrical crown	0	remove
31451	yellow pine	12"	12	2	asymmetrical crown	0	remove
31452	Douglas-fir	14"	15	2	asymmetrical crown	0	remove
31453	Douglas-fir	18"	18	2	asymmetrical crown	0	remove
31454	yellow pine	12"	12	2	asymmetrical crown	0	remove
31455	yellow pine	16"	18	2	asymmetrical crown	0	remove
31456	Douglas-fir	2X4"-6"	9	2	asymmetrical crown	0	remove
31457	yellow pine	14"	12	2	asymmetrical crown	0	remove
31458	yellow pine	16"	15	2	asymmetrical crown	0	remove
31459	yellow pine	10"	12	2	asymmetrical crown	0	remove
31460	yellow pine	16"	12	2	asymmetrical crown	0	remove
31461	yellow pine	21"	21	2	asymmetrical crown	0	remove
31463	yellow pine	12"	12	2	asymmetrical crown	0	remove
31464	Douglas-fir	14"	15	2	asymmetrical crown	0	remove
31465	yellow pine	15"	15	2	asymmetrical crown	0	remove
31466	yellow pine	2X10"-16"	18	2	asymmetrical crown	0	remove
31467	yellow pine	16"	18	2	asymmetrical crown	0	remove

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31468	yellow pine	16"	15	2	asymmetrical crown	0	remove
31469	yellow pine	8"	12	2	asymmetrical crown	0	remove
31470	yellow pine	13"	12	2	asymmetrical crown	0	remove
31471	yellow pine	14"	15	2	asymmetrical crown	0	remove
31472	cottonwood	10"	12	2	asymmetrical crown	0	remove
31473	yellow pine	16"	18	2	asymmetrical crown	0	remove
31474	yellow pine	9"	9	2	asymmetrical crown	0	remove
31475	yellow pine	8"	9	2	asymmetrical crown	0	remove
31476	yellow pine	14"	15	2	asymmetrical crown	0	remove
31477	yellow pine	16"	18	2	asymmetrical crown	0	remove
31478	yellow pine	9"	9	2	asymmetrical crown	0	remove
31479	yellow pine	11"	9	2	asymmetrical crown	0	remove
31480	Douglas-fir	12"	12	2	asymmetrical crown	0	remove
31481	Douglas-fir	14"	15	2	asymmetrical crown	0	remove
31482	yellow pine	12"	15	2	asymmetrical crown	0	remove
31483	yellow pine	12"	12	2	asymmetrical crown	0	remove
31484	Douglas-fir	9"	9	2	asymmetrical crown	0	remove
31485	yellow pine	16"	15	2	asymmetrical crown	0	remove
31486	Douglas-fir	12"	12	2	asymmetrical crown	0	remove
31487	yellow pine	14"	15	2	asymmetrical crown	0	remove
31488	Douglas-fir	9"	9	2	asymmetrical crown	0	remove
31489	Douglas-fir	10"	12	2	asymmetrical crown	0	remove
31490	Douglas-fir	10"	9	2	native species	8	protect
31491	Douglas-fir	18"	18	2	asymmetrical crown	14	protect

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31492	Douglas-fir	16"	18	2	asymmetrical crown	12	protect
31493	Douglas-fir	20"	24	2	asymmetrical crown	14	protect
31496	red alder	15"	15	0	dead	0	remove
31497	red alder	14"	12	1	terminal decline	0	remove
31498	bigleaf maple	2X14"	15	2	viable	0	remove
31499	red alder	8"	9	1	terminal decline	0	remove
31500	bigleaf maple	8"	9	1	terminal decline	0	remove
31501	red alder	20"	0	0	dead	0	remove
33453	cherry species	6"	6	2	viable	0	remove
33455	cherry species	6"	6	2	viable	0	remove
33456	cherry species	6"	6	2	viable	0	remove

Rating- 0/dead or hazardous, 1/decline, 2/average, 3/excellent health and structure

RPZ mean root protection zone. This is a radius from the trunk measured in feet.

Dripline is average Crown Diameter or Canopy Spread

Trees tied and DBHs measured by **Otak** licensed surveyors for at various times.

Many of the trees are crowded or have asymmetrical crowns because they have grown in hedgerows, functioning as hedges, wind breaks, and property line delineators.

Compiled for West Hills Development LLC

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
---	---------	-----	----------	--------	--------------------	-----	--------

Species

- apple- *Maus sylvestris*
- bigleaf maple- *Acer macrophyllum*
- black oak- *Quercus velutina*
- blue spruce- *Picea pungens*
- cherry species- *Prunus* sp.
- Cottonwood- *Populus tricarpa*
- Deodar cedar- *Cedrus deodara*
- Douglas fir- *Pseudotsuga menziesii*
- European birch- *Betula pendula*
- Garry oak- *Quercus garryana*
- giant sequoia- *Sequoia giganteum*
- ginkgo- *Ginkgo biloba*
- grand fir- *Abies grandis*
- incense-cedar- *Calocedrus decurrens*
- Japanese maple- *Acer japonica*
- limber pine- *Pinus flexilis*
- Lombardy poplar- *Populus nigra*
- Norway maple- *Acer platanoides*
- paperbark maple- *Acer griseum*
- Portuguese laurel- *Prunus lusitanica*
- red alder- *Alnus rubra*
- red spruce- *Picea rubens*
- Sato Cherry- *Prunus* sp.
- Scouler willow- *Salix scouleriana*
- Sitka spruce- *Picea sitchensis*
- sweet cherry- *Prunus avium*
- western redcedar- *Thuja plicata*
- yellow pine- *Pinus ponderosa* var. *scopulorum*

Appendix E
Arborist Report and Tree Plan dated January 27, 2022
by Portland Tree Consulting

Frog Pond Terrace Arborist Report

This Tree Plan is required by Section 4.610.40. Type C Permit as part of the site development application for the Frog Pond Terrace Subdivision in Wilsonville, Oregon. The attached Tree Table includes all trees that are 6 inches in diameter and larger on or close to the property. Species, crown diameters, and health and condition were inventoried by an ISA Certified Arborist. Trees were tied and diameters measured by licensed Otak surveyors. There are two hundred and fifty trees, and the Tree Table delineates those to be removed and those to be protected. Protected trees have metal identification tags that will remain until final inspection of the project. Root protection zones (RPZs) for protected trees are listed in the Tree Table.

The one hundred five trees being preserved during development will be cordoned off with fencing built at the edge of root protection zones before construction activity begins. Fencing will consist of 6-foot-high metal chain link secured with 8-foot metal posts. I recommend that the project arborist and the project supervisor walk through the project after the fences are up and before grading begins to see if any changes should be made

Without authorization, none of the following is allowed within a root protection zone:

1. New buildings.
2. Grade change or cut and fill, during or after construction.
3. New impervious surfaces.
4. Utility or drainage field placement.
5. Staging or storage of materials and equipment during construction.
6. Vehicle maneuvering during construction.

With supervision by an arborist, ground disturbance and construction may occur inside RPZs after authorization from the City. This ensures that development activities contemplated by the owner and put into effect by the construction team are done without endangering protected trees.

One hundred forty-five trees will be removed from the property. Section 4.620.00. requires that each removed tree be replaced with a 2-inch caliper tree within one year of removal. Replacement trees shall be 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. The species and locations of replacement trees will be determined by the landscape designer. I recommend that the project arborist reviews the species selection and tree placement for poorly compatible choices.

Replacement trees must be staked, fertilized, and mulched, and shall be guaranteed by the permit grantee for two years after the planting date. Alternatively, if some trees cannot be planted at the site due to spatial limitations, the owner may invoke Section 4.629.00.(06.) and pay the value of the replacement trees to the City Tree Fund.

Frog Pond Terrace (Martin and George Property)

1/27/2022

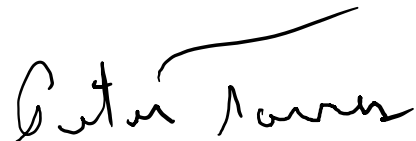
This Tree Plan meets the requirements of the tree preservation code, and the owner will observe all laws, rules, and regulations. Trees to be removed should be verified and marked and tree protection measures should be inspected and approved before any clearing or grading work begins. It is the owner's responsibility to implement this tree plan and to monitor the construction process to its conclusion. Deviations can result in tree damage, liability, and violations of the City Code.

Frog Pond Terrace (Martin and George Property)

1/27/2022

Portland Tree Consulting PO Box 19042 Portland, OR 97280
 503.421.3883 peter@torresusa.com CCB 230301

1. Client warrants any legal description provided to the Consultant is correct and titles and ownerships to property are good and marketable. Consultant shall not be responsible for incorrect information provided by Client.
2. Consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
3. The Consultant shall not be required to give testimony or attend court or hearings unless subsequent contractual arrangements are made, including additional fees.
4. The report and any values expressed therein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
5. Sketches, drawings and photographs in the report are intended as visual aids and may not be to scale. The reproduction of information generated by others will be for coordination and ease of reference. Inclusion of such information does not warrant the sufficiency or accuracy of the information by the Consultant.
6. Unless expressed otherwise, information in the report covers only items that were examined and reflects the condition at the time of inspection. The inspection is limited to visual examination of accessible items without laboratory analysis, dissection, excavation, probing, or coring, unless otherwise stated.
7. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.
8. The report is the completed work product. Any additional work, including production of a site plan, addenda and revisions, construction of tree protection measures, tree work, or inspection of tree protection measures, for example, must be contracted separately. Loss or alteration of any part of the report invalidates the entire report.
9. Any action or proceeding seeking to enforce any provision of this Agreement shall be brought against any of the parties in Multnomah County Circuit Court of the State of Oregon, or, when applicable, in the United States District Court for the District of Oregon. Each party consents to the jurisdiction of such courts (and of the appropriate appellate courts) and waives any objection to such venue.



Peter Torres

Master of Forestry ASCA RCA 372 ISA Certified Arborist PN-0650B TRAQ

Portland Tree Consulting

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30007	bigleaf maple	20"	18	2	in ravine	14	protect
30008	Oregon ash	10"	12	2	in ravine	8	protect
30009	Oregon ash	14"	15	2	in ravine	8	protect
30014	red alder	12"	10	2	in ravine	8	protect
30015	red alder	13"	10	2	in ravine	8	protect
30017	Oregon ash	16"	24	2	in ravine	12	protect
30019	Scouler willow	4X4"-14"	18	2	in ravine	10	protect
30027	bigleaf maple	4X8"-12"	15	2	in ravine	0	remove
30028	Oregon ash	12"	15	2	in ravine	8	protect
30029	bigleaf maple	2X12"-14"	18	2	in ravine	14	protect
30033	Scouler willow	3X8"-10"	18	2	in ravine	0	remove
30042	Oregon ash	2X6"-8"	15	2	in ravine	8	protect
30045	bigleaf maple	10"	12	2	in ravine	8	protect
30046	bigleaf maple	10"	12	2	in ravine	8	protect
30053	Douglas-fir	26"	24	2	in ravine	18	protect
30054	red alder	2X11"-14"	12	1	terminal decline	14	protect
30062	bigleaf maple	8"	12	2	in ravine	8	protect
30063	bigleaf maple	8"	18	2	in ravine	8	protect
30076	bigleaf maple	18"	18	2	in ravine	10	protect
30090	Douglas-fir	14"	12	2	in ravine	10	protect
30099	bigleaf maple	14"	15	2	in ravine	10	protect
30100	bigleaf maple	16"	18	2	in ravine	12	protect
30101	red alder	12"	10	2	dead in ravine	0	protect
30117	red alder	4X13"-18"	10	2	dead in ravine	0	protect

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30482	Douglas-fir	36"	36	2	in ravine	24	protect
30497	Alder	22"	24	2	in ravine	16	protect
30507	bigleaf maple	3X8"-28"	24	2	in ravine	24	protect
30513	Douglas-fir	24"	30	2	in ravine	16	protect
30514	bigleaf maple	2X14"-24"	12	2	the 24" stem is a Douglas-fir tree	20	protect
30516	Douglas-fir	24"	24	2	in ravine	16	protect
30517	Douglas-fir	20"	21	2	in ravine	14	protect
30518	Douglas-fir	20"	21	2	in ravine	14	protect
30519	Douglas-fir	28"	24	2	in ravine	18	protect
30520	Douglas-fir	24"	24	2	in ravine	16	protect
30534	bigleaf maple	16"	21	2	in ravine	12	protect
30535	Douglas-fir	34"	30	2	in ravine	24	protect
30536	Douglas-fir	20"	24	2	in ravine	14	protect
30537	Douglas-fir	40"	33	2	in ravine	24	protect
30599	Douglas-fir	12"	12	2	in ravine	8	protect
30600	Douglas-fir	18"	18	2	two tops	12	protect
30601	Douglas-fir	16"	18	2	at utility pole	12	protect
30602	Douglas-fir	16"	18	2	topped at 20 ft.	12	protect
30603	Japanese maple	6"	9	2	at house	8	protect
30709	Douglas-fir	9"	9	2	in ravine	8	protect
30710	Douglas-fir	9"	9	2	in ravine	8	protect
30711	bigleaf maple	28"	30	2	in ravine	24	protect
30712	Garry oak	36"	90	2	leans over house to remain and one-sided	24	protect
30713	Douglas-fir	32"	30	2	must preserve to protect 30712 Garry oak; two tops, one-sided	24	protect

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30714	red alder	14"	9	2	terminal decline	10	protect
30715	Douglas-fir	12"	9	2	in ravine	8	protect
30716	Douglas-fir	14"	0	2	in ravine	10	protect
30717	red alder	14"	0	2	in ravine	10	protect
30718	red alder	16"	12	2	in ravine	12	protect
30719	Douglas-fir	10"	9	2	in ravine	8	protect
30720	Douglas-fir	11"	12	2	in ravine	8	protect
30721	Douglas-fir	18"	12	2	in ravine	12	protect
30722	Douglas-fir	12"	12	2	in ravine	8	protect
30723	Douglas-fir	9"	9	2	native species	8	protect
30724	Douglas-fir	13"	12	2	in ravine	10	protect
30725	Douglas-fir	7"	12	2	in ravine	8	protect
30726	Douglas-fir	12"	12	2	in ravine	8	protect
30727	Douglas-fir	8"	9	2	in ravine	8	protect
30728	Douglas-fir	13"	12	2	in ravine	10	protect
30729	yellow pine	18"	18	2	in ravine	12	protect
30730	yellow pine	8"	9	2	in ravine	8	protect
30731	Douglas-fir	13"	12	2	in ravine	10	protect
30732	Douglas-fir	16"	15	2	in ravine	12	protect
30733	Douglas-fir	14"	12	2	in ravine	10	protect
30734	Douglas-fir	6"	9	2	in ravine	8	protect
30735	yellow pine	18"	18	2	in ravine	12	protect
30736	sweet cherry	14"	15	2	in ravine	10	protect
30737	yellow pine	12"	15	2	native species	8	protect

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30738	yellow pine	14"	12	2	one-sided	10	protect
30739	yellow pine	14"	12	2	one-sided	10	protect
30740	Douglas-fir	16"	15	2	asymmetrical crown	12	protect
30741	yellow pine	15"	15	2	asymmetrical crown	10	protect
30772	quaking aspen	8"	9	2	asymmetrical crown	8	protect
30773	Sato cherry	2X6"-8"	15	2	asymmetrical crown	8	protect
30774	quaking aspen	8"	12	2	asymmetrical crown	8	protect
30775	quaking aspen	12"	15	2	asymmetrical crown	8	protect
30776	Douglas-fir	18"	18	2	asymmetrical crown	12	protect
30777	Douglas-fir	15"	18	2	asymmetrical crown	10	protect
30778	Douglas-fir	10"	15	2	asymmetrical crown	8	protect
30779	Douglas-fir	16"	18	2	asymmetrical crown	12	protect
30780	Douglas-fir	12"	12	2	asymmetrical crown	8	protect
30781	Douglas-fir	12"	12	2	asymmetrical crown	8	protect
30782	yellow pine	18"	21	2	asymmetrical crown	12	protect
30783	yellow pine	12"	15	2	asymmetrical crown	8	protect
30784	yellow pine	14"	18	2	asymmetrical crown	10	protect
30785	Douglas-fir	13"	12	2	asymmetrical crown	10	protect
30786	Douglas-fir	14"	9	2	asymmetrical crown	10	protect
30787	Douglas-fir	10"	12	2	asymmetrical crown	8	protect
30788	Douglas-fir	16"	18	2	asymmetrical crown	0	remove
30789	yellow pine	16"	18	2	asymmetrical crown	12	protect
30790	Douglas-fir	10"	12	2	viable	8	protect
30791	Douglas-fir	13"	12	2	asymmetrical crown	8	protect

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30792	yellow pine	9"	9	2	asymmetrical crown	8	protect
30793	yellow pine	12"	12	2	asymmetrical crown	8	protect
30794	yellow pine	9"	9	2	asymmetrical crown	8	protect
30795	yellow pine	14"	12	2	asymmetrical crown	10	protect
30796	yellow pine	14"	12	2	asymmetrical crown	10	protect
30797	yellow pine	14"	12	2	asymmetrical crown	10	protect
30798	yellow pine	18"	15	2	asymmetrical crown	12	protect
30799	missing	0	0	2	missing from behind house	0	none
30822	quaking aspen	10"	12	2	viable	8	protect
31353	Douglas-fir	20"	15	2	on berm, shallow-rooted	0	remove
31354	Douglas-fir	14"	12	2	on berm, shallow-rooted	0	remove
31356	Douglas-fir	14"	12	2	on berm, shallow-rooted	0	remove
31357	Douglas-fir	18"	12	2	on berm, shallow-rooted	0	remove
31358	Douglas-fir	12"	12	2	on berm, shallow-rooted	0	remove
31359	Douglas-fir	2X10"-13"	12	2	poor structure	0	remove
31360	Douglas-fir	12"	12	2	on berm, shallow-rooted	0	remove
31361	Douglas-fir	8"	12	2	on berm, shallow-rooted	0	remove
31362	Douglas-fir	10"	12	2	on berm, shallow-rooted	0	remove
31363	Douglas-fir	13"	15	2	on berm, shallow-rooted	0	remove
31364	Douglas-fir	20"	21	2	on berm, shallow-rooted	0	remove
31367	Douglas-fir	20"	24	2	on berm, shallow-rooted	0	remove
31368	Douglas-fir	14"	15	2	on berm, shallow-rooted	0	remove
31369	yellow pine	31"	30	2	crowded	0	remove
31370	yellow pine	18"	15	2	crowded	0	remove

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31371	yellow pine	14"	24	2	crowded	0	remove
31372	yellow pine	13"	18	2	crowded	0	remove
31373	yellow pine	14"	18	2	crowded	0	remove
31374	yellow pine	14"	18	2	crowded	0	remove
31375	yellow pine	18"	24	2	asymmetrical crown	0	remove
31376	Douglas-fir	12"	12	2	asymmetrical crown	0	remove
31377	yellow pine	16"	15	2	asymmetrical crown	0	remove
31378	yellow pine	10"	12	2	asymmetrical crown	0	remove
31379	yellow pine	12"	12	2	asymmetrical crown	0	remove
31380	yellow pine	14"	12	2	asymmetrical crown	0	remove
31381	yellow pine	7"	9	2	asymmetrical crown	0	remove
31382	yellow pine	14"	15	2	asymmetrical crown	0	remove
31383	yellow pine	19"	24	2	asymmetrical crown	0	remove
31384	yellow pine	18"	18	2	asymmetrical crown	0	remove
31385	bigleaf maple	24"	24	2	native species	0	remove
31386	Douglas-fir	17"	24	2	one-sided	0	remove
31387	Douglas-fir	12"	18	2	asymmetrical crown	0	remove
31388	yellow pine	13"	15	2	asymmetrical crown	0	remove
31389	yellow pine	20"	21	2	asymmetrical crown	0	remove
31390	yellow pine	16"	18	2	asymmetrical crown	0	remove
31391	yellow pine	12"	12	2	asymmetrical crown	0	remove
31392	yellow pine	14"	12	2	asymmetrical crown	0	remove
31393	yellow pine	10"	12	2	asymmetrical crown	0	remove
31394	yellow pine	16"	18	2	asymmetrical crown	0	remove

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31395	yellow pine	11"	9	2	topped at 20 ft.	0	remove
31396	yellow pine	13"	21	2	asymmetrical crown	0	remove
31397	yellow pine	14"	15	2	asymmetrical crown	0	remove
31398	yellow pine	16"	15	2	asymmetrical crown	0	remove
31399	yellow pine	11"	15	2	asymmetrical crown	0	remove
31400	yellow pine	16"	12	2	asymmetrical crown	0	remove
31401	yellow pine	13"	15	2	asymmetrical crown	0	remove
31402	yellow pine	18"	12	2	asymmetrical crown	0	remove
31403	yellow pine	24"	18	2	asymmetrical crown	0	remove
31404	yellow pine	18"	15	2	asymmetrical crown	0	remove
31405	yellow pine	15"	12	2	asymmetrical crown	0	remove
31406	yellow pine	24"	24	2	asymmetrical crown	0	remove
31407	yellow pine	16"	18	2	asymmetrical crown	0	remove
31408	yellow pine	20"	9	2	codominant trunks	0	remove
31409	yellow pine	6"	9	2	suppressed	0	remove
31410	yellow pine	14"	12	2	asymmetrical crown	0	remove
31411	yellow pine	8"	9	2	asymmetrical crown	0	remove
31412	yellow pine	12"	12	2	asymmetrical crown	0	remove
31413	yellow pine	10"	12	2	asymmetrical crown	0	remove
31414	yellow pine	17"	18	2	asymmetrical crown	0	remove
31415	yellow pine	10"	12	2	asymmetrical crown	0	remove
31416	yellow pine	6"	9	2	asymmetrical crown	0	remove
31417	yellow pine	8"	9	2	asymmetrical crown	0	remove
31418	yellow pine	12"	12	2	asymmetrical crown	0	remove

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31419	Douglas-fir	12"	12	2	asymmetrical crown	0	remove
31420	Douglas-fir	14"	12	2	asymmetrical crown	0	remove
31421	yellow pine	12"	12	2	asymmetrical crown	0	remove
31422	yellow pine	16"	15	2	asymmetrical crown	0	remove
31423	yellow pine	8"	9	2	asymmetrical crown	0	remove
31424	yellow pine	12"	15	2	asymmetrical crown	0	remove
31425	yellow pine	7"	9	2	asymmetrical crown	0	remove
31426	yellow pine	14"	12	2	asymmetrical crown	0	remove
31427	Douglas-fir	8"	9	2	asymmetrical crown	0	remove
31428	Douglas-fir	18"	18	2	asymmetrical crown	0	remove
31429	Douglas-fir	14"	18	2	asymmetrical crown	0	remove
31430	yellow pine	16"	18	2	asymmetrical crown	0	remove
31431	yellow pine	17"	18	2	asymmetrical crown	0	remove
31432	yellow pine	22"	24	2	asymmetrical crown	0	remove
31433	yellow pine	14"	18	2	asymmetrical crown	0	remove
31434	Douglas-fir	18"	18	2	asymmetrical crown	0	remove
31435	yellow pine	16"	15	2	asymmetrical crown	0	remove
31436	yellow pine	22"	24	2	asymmetrical crown	0	remove
31437	Douglas-fir	13"	12	2	asymmetrical crown	0	remove
31438	Douglas-fir	17"	18	2	asymmetrical crown	0	remove
31439	Douglas-fir	16"	15	2	asymmetrical crown	0	remove
31440	yellow pine	13"	12	2	asymmetrical crown	0	remove
31441	Douglas-fir	16"	15	2	asymmetrical crown	0	remove
31442	yellow pine	17"	18	2	asymmetrical crown	0	remove

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31443	Douglas-fir	13"	12	2	asymmetrical crown	0	remove
31444	Douglas-fir	16"	24	2	asymmetrical crown	0	remove
31445	yellow pine	11"	12	2	asymmetrical crown	0	remove
31446	yellow pine	8"	12	2	asymmetrical crown	0	remove
31447	yellow pine	18"	18	2	asymmetrical crown	0	remove
31448	yellow pine	14"	15	2	asymmetrical crown	0	remove
31449	Douglas-fir	12"	12	2	asymmetrical crown	0	remove
31450	Douglas-fir	12"	12	2	asymmetrical crown	0	remove
31451	yellow pine	12"	12	2	asymmetrical crown	0	remove
31452	Douglas-fir	14"	15	2	asymmetrical crown	0	remove
31453	Douglas-fir	18"	18	2	asymmetrical crown	0	remove
31454	yellow pine	12"	12	2	asymmetrical crown	0	remove
31455	yellow pine	16"	18	2	asymmetrical crown	0	remove
31456	Douglas-fir	2X4"-6"	9	2	asymmetrical crown	0	remove
31457	yellow pine	14"	12	2	asymmetrical crown	0	remove
31458	yellow pine	16"	15	2	asymmetrical crown	0	remove
31459	yellow pine	10"	12	2	asymmetrical crown	0	remove
31460	yellow pine	16"	12	2	asymmetrical crown	0	remove
31461	yellow pine	21"	21	2	asymmetrical crown	0	remove
31463	yellow pine	12"	12	2	asymmetrical crown	0	remove
31464	Douglas-fir	14"	15	2	asymmetrical crown	0	remove
31465	yellow pine	15"	15	2	asymmetrical crown	0	remove
31466	yellow pine	2X10"-16"	18	2	asymmetrical crown	0	remove
31467	yellow pine	16"	18	2	asymmetrical crown	0	remove

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31468	yellow pine	16"	15	2	asymmetrical crown	0	remove
31469	yellow pine	8"	12	2	asymmetrical crown	0	remove
31470	yellow pine	13"	12	2	asymmetrical crown	0	remove
31471	yellow pine	14"	15	2	asymmetrical crown	0	remove
31472	cottonwood	10"	12	2	asymmetrical crown	0	remove
31473	yellow pine	16"	18	2	asymmetrical crown	0	remove
31474	yellow pine	9"	9	2	asymmetrical crown	0	remove
31475	yellow pine	8"	9	2	asymmetrical crown	0	remove
31476	yellow pine	14"	15	2	asymmetrical crown	0	remove
31477	yellow pine	16"	18	2	asymmetrical crown	0	remove
31478	yellow pine	9"	9	2	asymmetrical crown	0	remove
31479	yellow pine	11"	9	2	asymmetrical crown	0	remove
31480	Douglas-fir	12"	12	2	asymmetrical crown	0	remove
31481	Douglas-fir	14"	15	2	asymmetrical crown	0	remove
31482	yellow pine	12"	15	2	asymmetrical crown	0	remove
31483	yellow pine	12"	12	2	asymmetrical crown	0	remove
31484	Douglas-fir	9"	9	2	asymmetrical crown	0	remove
31485	yellow pine	16"	15	2	asymmetrical crown	0	remove
31486	Douglas-fir	12"	12	2	asymmetrical crown	0	remove
31487	yellow pine	14"	15	2	asymmetrical crown	0	remove
31488	Douglas-fir	9"	9	2	asymmetrical crown	0	remove
31489	Douglas-fir	10"	12	2	asymmetrical crown	0	remove
31490	Douglas-fir	10"	9	2	native species	8	protect
31491	Douglas-fir	18"	18	2	asymmetrical crown	14	protect

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31492	Douglas-fir	16"	18	2	asymmetrical crown	12	protect
31493	Douglas-fir	20"	24	2	asymmetrical crown	14	protect
31496	red alder	15"	15	0	dead	0	remove
31497	red alder	14"	12	1	terminal decline	0	remove
31498	bigleaf maple	2X14"	15	2	viable	0	remove
31499	red alder	8"	9	1	terminal decline	0	remove
31500	bigleaf maple	8"	9	1	terminal decline	0	remove
31501	red alder	20"	0	0	dead	0	remove
33453	cherry species	6"	6	2	viable	0	remove
33455	cherry species	6"	6	2	viable	0	remove
33456	cherry species	6"	6	2	viable	0	remove

Rating- 0/dead or hazardous, 1/decline, 2/average, 3/excellent health and structure

RPZ mean root protection zone. This is a radius from the trunk measured in feet.

Dripline is average Crown Diameter or Canopy Spread

Trees tied and DBHs measured by **Otak** licensed surveyors for at various times.

Many of the trees are crowded or have asymmetrical crowns because they have grown in hedgerows, functioning as hedges, wind breaks, and property line delineators.

Compiled for West Hills Development LLC

8	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
---	---------	-----	----------	--------	--------------------	-----	--------

Species

- apple- *Maus sylvestris*
- bigleaf maple- *Acer macrophyllum*
- black oak- *Quercus velutina*
- blue spruce- *Picea pungens*
- cherry species- *Prunus* sp.
- Cottonwood- *Populus tricarpa*
- Deodar cedar- *Cedrus deodara*
- Douglas fir- *Pseudotsuga menziesii*
- European birch- *Betula pendula*
- Garry oak- *Quercus garryana*
- giant sequoia- *Sequoia giganteum*
- ginkgo- *Ginkgo biloba*
- grand fir- *Abies grandis*
- incense-cedar- *Calocedrus decurrens*
- Japanese maple- *Acer japonica*
- limber pine- *Pinus flexilis*
- Lombardy poplar- *Populus nigra*
- Norway maple- *Acer platanoides*
- paperbark maple- *Acer griseum*
- Portuguese laurel- *Prunus lusitanica*
- red alder- *Alnus rubra*
- red spruce- *Picea rubens*
- Sato Cherry- *Prunus* sp.
- Scouler willow- *Salix scouleriana*
- Sitka spruce- *Picea sitchensis*
- sweet cherry- *Prunus avium*
- western redcedar- *Thuja plicata*
- yellow pine- *Pinus ponderosa* var. *scopulorum*

Appendix F

Geotechnical Report dated December 15, 2021
by Hardman Geotechnical Services, Inc.



HARDMAN GEOTECHNICAL SERVICES INC.

Practical, Cost-Effective
Engineering Solutions

December 15, 2021
HGSI Project No. 21-2824

Dan Grimberg / Kristi Hosea
West Hills Land Development
3330 NW Yeon Avenue, Suite 200
Portland, Oregon 97210

Via e-mail (pdf format); hard copies mailed upon request

**Subject: GEOTECHNICAL ENGINEERING AND INFILTRATION TESTING REPORT
FROG POND WEST-WEST
MARTIN, GEORGE AND ROSS PROPERTIES
WILSONVILLE, OREGON**

This report presents the results of a geotechnical engineering study conducted by Hardman Geotechnical Services Inc. (HGSI) for Frog Pond West-West (Martin, George and Ross Properties) in Wilsonville, Oregon (Figure 1). The purpose of this study was to evaluate subsurface conditions at the site and to provide geotechnical recommendations for site development.

SITE DESCRIPTION AND PROPOSED DEVELOPMENT

The project totals about 15.07 acres, as summarized below. Please note that the parcel addresses and acreages were taken from the Clackamas County GIS website and are only as accurate as the information provided.

Property	Tax Lot No.	Address	Acreage	House Constructed Date
Ross	31W12D 00700	7315 SW Frog Pond Ln	4.09	1964
George	31W12D 02801	7500 SW Frog Pond Ln	2.00	1972
Martin	31W12D 02800	No address	8.98	--

The Ross and George properties are currently occupied by residential homes, with several detached shops, garages and barns. Existing facilities are present only within the eastern, more flat-lying portion of the overall site. The areas surrounding the homes and other structures are landscaped with lawn, shrubbery and ornamental or fruit-bearing trees. No structures are present on the Martin property, which is overgrown with blackberries, etc. Along the western edge of the site is an area of steep slopes descending down to Boeckman Creek. The steep slope is vegetated with large deciduous and evergreen trees, and undergrowth.

Preliminary plans indicate the site will be developed into a 31-lot residential subdivision that will include two separate tracts with the intention of having one or both serve as water quality/detention facilities. The actual number of lots may vary as project design progresses. Site development will also include construction of on-site streets and underground utilities. All of the proposed development is within the eastern, flat to gently sloping portion of the site. The steep slopes in the western portion of the site are to remain open space.

In the northwest portion of the site, a temporary access easement extends near the top of the steep slope area. HGSI has studied potential landslide hazards and slope stability specific to this area, in a previous report (HGSI, 2021). The report concludes that the planned utility lines and temporary access way can be safely constructed, with a low-height soldier pile wall along the downslope (northwest) portion of the easement to protect against surficial soil sloughing/erosion.

REGIONAL GEOLOGY AND SEISMIC SETTING

The subject site lies within the heart of the Portland Basin, a broad structural depression situated between the Coast Range on the west and the Cascade Range on the east. The Portland Basin is a northwest-southwest trending structural basin produced by broad regional downwarping of the area. The Portland Basin is approximately 20 miles wide and 45 miles long and is filled with consolidated and unconsolidated sedimentary rocks of late Miocene, Pliocene and Pleistocene age.

Geologic maps indicate the subject site is underlain by Quaternary age (last 1.6 million years) Willamette Silt, fine flood deposits that mantles basalt bedrock (Madin, 1990). This generally consists of massive fine sand and silt deposited following repeated catastrophic flooding events in the Willamette Valley, the last of which occurred between 15,000 and 10,000 years ago. In localized areas, the light brown sandy silts include buried paleosols that developed between depositional events. Regionally, the total thickness of catastrophic flood deposits range from 5 feet to greater than 100 feet.

The Willamette Formation is underlain by residual soil formed by in place weathering of the underlying Columbia River Basalt Formation (Madin, 1990). The Miocene aged (about 14.5 to 16.5 million years ago) Columbia River Basalts are a thick sequence of lava flows which form the crystalline basement of the Tualatin Valley. The basalts are composed of dense, finely crystalline rock that is commonly fractured along blocky and columnar vertical joints. Individual basalt flow units typically range from 25 to 125 feet thick and interflow zones are typically vesicular, scoriaceous, brecciated, and sometimes include sedimentary rocks.

At least three major fault zones capable of generating damaging earthquakes are known to exist in the region. These include the Portland Hills Fault Zone, Gales Creek-Newberg-Mt. Angel Structural Zone, and the Cascadia Subduction Zone. These potential earthquake source zones are included in the determination of seismic design values for structures, as presented in the *Seismic Design* section. None of the known faults extend beneath the site.

FIELD EXPLORATION

Test Pits and Exploratory Hand Auger Borings

The site-specific exploration for this study was conducted on October 22, 2021 and December 3 and 9, 2021. On October 22, 2021 HGSI oversaw the excavation of two test pits using a medium-sized excavator in the area of the temporary easement (Figure 2). Test pits TP-3 through TP-11 were excavated on December 3, 2021, using a rubber-tired backhoe with extend-a-hoe attachment. Six hand auger borings (HA-1 through HA-6) were drilled on December 3 and 9, 2021 by HGSI staff using hand auger tools. Explorations were conducted at the approximate locations shown on the attached Site Plan, Figure 2.

Explorations were conducted under the full-time observation of HGSI personnel. Soil samples obtained from the borings were classified in the field and representative portions were placed in relatively air-tight plastic bags. These soil samples were then returned to the laboratory for further examination. Pertinent information including soil sample depths, stratigraphy, soil engineering characteristics, and groundwater occurrence was recorded. Soils were classified in general accordance with the Unified Soil Classification System.

Summary exploration logs are attached to this report. The stratigraphic contacts shown on the individual exploration logs represent the approximate boundaries between soil types. The actual transitions may be more gradual. The soil and groundwater conditions depicted are only for the specific dates and locations reported, and therefore, are not necessarily representative of other locations and times.

Infiltration Testing

On December 3, 2021, HGSI performed falling head infiltration tests using the open-hole method in hand auger borings HA-1, HA-2 and HA-3. The infiltration testing was performed by measuring the water level at one-minute intervals using HOBOTM data loggers, which measures water pressure corrected for temperature and barometric pressure. See attached HOBOTM water level data logger plot. The infiltration rate was determined based on the slope of the water depth line near the end of the test. Table 1 presents the results of the falling head infiltration tests.

Table 1. Summary of Infiltration Test Results

Boring	Depth (feet)	Soil Type	Infiltration Rate (in/hr)	Hydraulic Head Range during Testing (inches)
HA-1	5	Silt with Clay (ML)	0.6	7.8 – 6.6
HA-2	6	Fine Sandy Silt (ML)	1.1	15 - 14
HA-3	6	Fine Sandy Silt (ML)	1.2	14 – 13

The average of the three infiltration tests is 1.0 inches/hour. Reported values are ultimate and should be adjusted using an appropriate factor of safety for design purposes.

SUBSURFACE CONDITIONS

The following discussion is a summary of subsurface conditions encountered in our explorations. For more detailed information regarding subsurface conditions at specific exploration locations, refer to the attached hand auger logs. Also, please note that subsurface conditions can vary between exploration locations, as discussed in the *Uncertainty and Limitations* section below.

Soil

On-site soils are anticipated to consist of undocumented fill, topsoil, colluvium, and Willamette Formation soils as described below.

Undocumented Fill – In the northeast portion of the Ross Property, we encountered an area of undocumented fill. Test Pits TP-8, TP-9 and TP-10; and hand auger boring HA-3 encountered undocumented fill extending to 4.5 to 5 feet bgs. Between the fill and native soils a zone of old

topsoil was encountered in all three of the test pits. Undocumented fill consisted generally of soft silt with trace organics, and trace amounts of crushed rock and other erratic material.

Topsoil – Beginning at the surface level, all explorations encountered a zone of topsoil about 6 to 12 inches thick. The topsoil was generally comprised of soft, wet to moist dark brown organic silt. The upper roughly 6 inches of the topsoil appeared highly organic.

Colluvium – In TP-1 we encountered a zone of colluvium, comprised of stiff clayey silt with black and orange mottling. This material had a weathered, slightly disturbed appearance and extended to a depth of about 2.5 feet bgs. Colluvium, a zone of down-slope creep occurring due to weathering of surficial soils on natural slopes, was not encountered in the other test pits and hand auger borings.

Willamette Silt – Beneath the undocumented fill, topsoil and/or colluvium, all explorations encountered stiff to very stiff, moist to very moist, brown silt, clayey silt and silt with fine sand interpreted as Willamette Formation. The upper several feet of this unit exhibited orange and gray mottling. All explorations were terminated in the Willamette Silt unit, at depths ranging from 5 to 13 feet bgs.

Groundwater

Seepage was encountered in two of the deeper test pits, TP-4 and TP-7, at depths of about 13 and 10 feet respectively. During the field exploration, no seepage or static groundwater table was encountered in the other explorations. Based on nearby water well data, depth to static groundwater is at least 20 feet below the ground surface. Perched groundwater conditions often occur over fine-grained native deposits such as those beneath the site, particularly during the wet season. It is anticipated that groundwater conditions will vary depending on the season, local subsurface conditions, changes in site utilization, and other factors. The perched groundwater conditions reported above are for the specific date and locations indicated, and therefore may not necessarily be indicative of other times and/or locations.

CONCLUSIONS AND RECOMMENDATIONS

Results of this study indicate that the proposed development is geotechnically feasible, provided that the recommendations of this report are incorporated into the design and construction phases of the project. The proposed development avoids the steep slope area to the west; slope stability impacts are considered minimal as discussed in the *Slope Stability and Landslide Hazards* section. Recommendations are presented below regarding site preparation and undocumented fill removal, engineered fill, fill slope keying and benching, wet weather earthwork, spread footing foundations, below grade structural retaining walls, concrete slabs-on-grade, perimeter footing drains, seismic design, excavating conditions and utility trench backfill, stormwater infiltration systems, and erosion control considerations.

Slope Stability and Landslide Hazards

For the purpose of evaluating slope stability, we reviewed published geologic and hazard mapping, reviewed regional site topography and LIDAR images, performed a field reconnaissance, and evaluated subsurface soil conditions in exploratory test pits and hand auger borings.

Reconnaissance observations indicate that slope geomorphology at the site is generally smooth and uniform, consistent with stable slope conditions. No geomorphic evidence of prior slope instability (such as hummocky topography, benches or old scarps) was observed. No seeps or springs were observed on site.

Regional geologic mapping and the Oregon Department of Geology and Mineral Industries online landslide database (SLIDO, 2017) shows a small mapped landslide in the western portion of the Martin/George

property (Figure 3). This feature is mapped with low (<10%) confidence level, and historical (<150 years) in age. In our opinion this mapped ancient slide is not indicative of a significant slope stability hazard to the site, and is located far enough away from the proposed development that slope stability impacts are not anticipated.

In the northwest portion of the site between the Ross and Martin Properties (Figures 2 and 3), a temporary access easement extends near the top of the steep slope area. HGSI has studied potential landslide hazards and slope stability specific to this area, in a previous report (HGSI, 2021). The report concludes that the planned utility lines and temporary access way can be safely constructed, with a low-height soldier pile wall along the downslope (northwest) portion of the easement to protect against surficial soil sloughing/erosion.

The planned development does not extend onto the steep slope areas in the western portion of the site. Based on our observations and results of the slope stability evaluation, it is our opinion that no special design or construction provisions are needed to address slope issues on the site, with the exception of the soldier pile wall planned in conjunction with the temporary access easement (HGSI, 2021). The project will be designed and constructed per current building codes, City of Wilsonville requirements, and the current standard-of-practice in geotechnical engineering. As such, it is our opinion that adequate slope stability factors of safety will be maintained for both temporary construction, and long-term conditions.

We understand that the proposed storm water management plan may consist of flow through planters, stormwater ponds or swales, with overflow to an approved outlet. Significant infiltration of stormwater via stormwater chambers or dry wells is not proposed for this site based on soil conditions and infiltration test results. The planned storm water facilities are not anticipated to impact slope stability on site, or to create any unstable conditions. Storm water management systems should be designed such that potential overflow is discharged in a controlled manner away from structures and slopes, and all systems should include an adequate factor of safety.

Site Preparation and Undocumented Fill Removal

The areas of the site to be graded should first be cleared of vegetation and any loose debris; and debris from clearing should be removed from the site. Organic-rich topsoil should then be removed to competent native soils. We anticipate that the average depth of topsoil stripping will be 6 to 12 inches over most of the site. Deeper stripping / root picking may be needed in areas that are or were formerly treed. The final depth of stripping removal may vary depending on local subsurface conditions and the contractor's methods, and should be determined on the basis of site observations after the initial stripping has been performed. Stripped organic soil should be stockpiled only in designated areas or removed from the site and stripping operations should be observed and documented by HGSI. Existing subsurface structures (tile drains, old utility lines, septic leach fields, etc.) beneath areas of proposed structures and pavement should be removed and the excavations backfilled with engineered fill.

Undocumented fill was encountered in the northeast portion of the Ross Property, in TP-8, TP-9 and TP-10; and HA-3, at depths of about 4.5 to 5 feet bgs. There is potential for old fills to be present on site in areas beyond our explorations. Where encountered beneath proposed structures, pavements, or other settlement-sensitive improvements, undocumented fill should be removed down to firm inorganic native soils and the removal area backfilled with engineered fill (see below). HGSI should observe removal excavations (if any) prior to fill placement to verify that overexcavations are adequate and an appropriate bearing stratum is exposed.

In construction areas, once stripping has been verified, the area should be ripped or tilled to a depth of 12 inches, moisture conditioned, and compacted in-place prior to the placement of engineered fill. Exposed subgrade soils should be evaluated by HGSI. For large areas, this evaluation is normally performed by

proof-rolling the exposed subgrade with a fully loaded scraper or dump truck. For smaller areas where access is restricted, the subgrade should be evaluated by probing the soil with a steel probe. Soft/loose soils identified during subgrade preparation should be compacted to a firm and unyielding condition or over-excavated and replaced with engineered fill, as described below. The depth of overexcavation, if required, should be evaluated by HGSI at the time of construction.

Engineered Fill

In general, we anticipate that on-site soils will be suitable for use as engineered fill in dry weather conditions, provided they are relatively free of organics and are properly moisture conditioned for compaction. Imported fill material must be approved by the geotechnical engineer prior to being imported to the site. Oversize material greater than 6 inches in size should not be used within 3 feet of foundation footings, and material greater than 12 inches in diameter should not be used in engineered fill.

Engineered fill should be compacted in horizontal lifts not exceeding 8 inches using standard compaction equipment. We recommend that engineered fill be compacted to at least 90 percent of the maximum dry density determined by ASTM D1557 (Modified Proctor) or equivalent. On-site soils may be wet or dry of optimum; therefore, we anticipate that moisture conditioning of native soil will be necessary for compaction operations.

Proper test frequency and earthwork documentation usually requires daily observation and testing during stripping, rough grading, and placement of engineered fill. Field density testing should conform to ASTM D2922 and D3017, or D1556. Engineered fill should be periodically observed and tested by the project geotechnical engineer or his representative. Typically, one density test is performed for at least every 2 vertical feet of fill placed or every 500 yd³, whichever requires more testing.

Fill Slope Keying and Benching

Engineered fill placed on slopes requires keying and benching. We recommend that cut and fill slopes for the project be planned no steeper than 2H:1V. Fill slopes constructed over sloping ground should be constructed in accordance with the Fill Slope Detail, Figure 4. For fill slopes constructed at 2H:1V or flatter, and comprised of engineered fill placed and compacted as recommended herein, we anticipate that adequate factors of safety against global failure will be maintained.

Prior to placing compacted fill against the existing natural slopes, all loose undocumented fill, topsoil, and soft soils must first be removed. Adequate benching must be maintained. Fill slope keyways should be constructed with a minimum depth of 2 feet and minimum width of H/3 (10 feet minimum), where H equals the vertical height between the base and top of the fill slope. Both benches and keyways should be roughly horizontal in the down slope direction. A subdrain should be incorporated in the fill slope keyway, and HGSI should observe the keyway excavations prior to the placement of fill.

Measures should be taken to prevent surficial instability and/or erosion of embankment material. This can be accomplished by conscientious compaction of the embankment fills all the way out to the slope face, by maintaining adequate drainage, and planting the slope face as soon as possible after construction. To achieve the specified relative compaction at the slope face, it may be necessary to overbuild the slopes several feet, and then trim back to design finish grade. In our experience, compaction of slope faces by “track-walking” is generally ineffective and is therefore not recommended.

Wet Weather Earthwork

The on-site soils are moisture sensitive and may be difficult to handle or traverse with construction equipment during periods of wet weather. Earthwork is typically most economical when performed under dry weather conditions. Earthwork performed during the wet-weather season will probably require

expensive measures such as cement treatment or imported granular material to compact fill to the recommended engineering specifications. If earthwork is to be performed or fill is to be placed in wet weather or under wet conditions when soil moisture content is difficult to control, the following recommendations should be incorporated into the contract specifications.

- Earthwork should be performed in small areas to minimize exposure to wet weather. Excavation or the removal of unsuitable soils should be followed promptly by the placement and compaction of clean engineered fill. The size and type of construction equipment used may have to be limited to prevent soil disturbance. Under some circumstances, it may be necessary to excavate soils with a backhoe to minimize subgrade disturbance caused by equipment traffic;
- The ground surface within the construction area should be graded to promote run-off of surface water and to prevent the ponding of water;
- Material used as engineered fill should consist of clean, granular soil containing less than about 7 percent fines. The fines should be non-plastic. Alternatively, cement treatment of on-site soils may be performed to facilitate wet weather placement;
- The ground surface within the construction area should be sealed by a smooth drum vibratory roller, or equivalent, and under no circumstances should be left uncompacted and exposed to moisture. Soils which become too wet for compaction should be removed and replaced with clean granular materials;
- Excavation and placement of fill should be observed by the geotechnical engineer to verify that all unsuitable materials are removed and suitable compaction and site drainage is achieved; and
- Bales of straw and/or geotextile silt fences should be strategically located to control erosion.

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

Spread Footing Foundations

Shallow, conventional isolated or continuous spread footings may be used to support the proposed structures, provided they are founded on competent native soils, or compacted engineered fill placed directly upon the competent native soils. We recommend a maximum allowable bearing pressure of 2,000 pounds per square foot (psf) for designing spread footings bearing on undisturbed native soils or engineered fill. The recommended maximum allowable bearing pressure may be increased by a factor of 1.33 for short term transient conditions such as wind and seismic loading. Exterior footings should be founded at least 18 inches below the lowest adjacent finished grade. Minimum footing widths should be determined by the project engineer/architect in accordance with applicable design codes.

Assuming construction is accomplished as recommended herein, and for the foundation loads anticipated, we estimate total settlement of spread foundations of less than about 1 inch and differential settlement between two adjacent load-bearing components supported on competent soil of less than about ½ inch. We anticipate that the majority of the estimated settlement will occur during construction, as loads are applied.

Wind, earthquakes, and unbalanced earth loads will subject the proposed structure to lateral forces. Lateral forces on a structure will be resisted by a combination of sliding resistance of its base or footing on the underlying soil and passive earth pressure against the buried portions of the structure. For use in design, a coefficient of friction of 0.5 may be assumed along the interface between the base of the footing and subgrade soils. Passive earth pressure for buried portions of structures may be calculated using an equivalent fluid weight of 390 pounds per cubic foot (pcf), assuming footings are cast against dense, natural soils or engineered fill. The recommended coefficient of friction and passive earth pressure values do not include a

safety factor. The upper 12 inches of soil should be neglected in passive pressure computations unless it is protected by pavement or slabs on grade.

Footing excavations should be trimmed neat and the bottom of the excavation should be carefully prepared. Loose, wet or otherwise softened soil should be removed from the footing excavation prior to placing reinforcing steel bars. HGSI should observe foundation excavations prior to placing crushed rock, to verify that adequate bearing soils have been reached. Due to the high moisture sensitivity of on-site soils, construction during wet weather may require overexcavation of footings and backfill with compacted, crushed aggregate.

Below-Grade Cantilever Concrete Retaining Walls

Recommendations are provided below for design of concrete retaining walls. Footings for below-grade cantilever concrete walls should be designed using the 2,000 psf allowable soil bearing pressure recommended in the *Spread Footing Foundations* section. Lateral earth pressures against below-grade retaining walls will depend upon the inclination of any adjacent slopes, type of backfill, degree of wall restraint, method of backfill placement, degree of backfill compaction, drainage provisions, and magnitude and location of any adjacent surcharge loads. At-rest soil pressure is exerted on a retaining wall when it is restrained against rotation. In contrast, active soil pressure will be exerted on a wall if its top is allowed to rotate or yield a distance of roughly 0.001 times its height or greater.

Table 2 below provides recommended lateral earth pressure values for unrestrained and restrained walls, for both level backfill conditions and 2H:1V (Horizontal:Vertical) sloping ground conditions at the top of the wall. These values assume that the recommended drainage provisions are incorporated, and hydrostatic pressures are not allowed to develop against the wall.

Table 2. Recommended Lateral Earth Pressures for Below-Grade Structural Walls

Earth Pressure Condition	Level at Top of Wall	2H:1V Slope at Top of Wall
Active (unrestrained wall)	35	54
At-rest (restrained wall)	55	74

During a seismic event, lateral earth pressures acting on below-grade structural walls will increase by an incremental amount that corresponds to the earthquake loading. Based on the Mononobe-Okabe equation and peak horizontal accelerations appropriate for the site location, seismic loading should be modeled using the active or at-rest earth pressures recommended above, plus an incremental rectangular-shaped seismic load of magnitude 5H, where H is the total height of the wall.

We assume relatively level ground surface below the base of the walls. As such, we recommend passive earth pressure of 390 pcf for use in design, assuming wall footings are cast against competent native soils or engineered fill. If the ground surface slopes down and away from the base of any of the walls, a lower passive earth pressure should be used and HGSI should be contacted for additional recommendations.

A coefficient of friction of 0.5 may be assumed along the interface between the base of the wall footing and subgrade soils. The recommended coefficient of friction and passive earth pressure values do not include a safety factor, and an appropriate safety factor should be included in design. The upper 12 inches of soil should be neglected in passive pressure computations unless it is protected by pavement or slabs on grade.

The above recommendations for lateral earth pressures assume that the backfill behind the subsurface walls will consist of properly compacted structural fill, and no adjacent surcharge loading. If the walls will be subjected to the influence of surcharge loading within a horizontal distance equal to or less than the height of the wall, the walls should be designed for the additional horizontal pressure. For uniform surcharge pressures, a uniformly distributed lateral pressure of 0.3 times the surcharge pressure should be added.

The recommended equivalent fluid densities assume a free-draining condition behind the walls so that hydrostatic pressures do not build up. This can be accomplished by placing a 12-inch wide zone of crushed drain rock containing less than 5 percent fines against the walls. A 3-inch minimum diameter perforated, plastic drain pipe should be installed at the base of the walls and connected to a sump to remove water from the crushed drain rock zone. The drain pipe should be wrapped in filter fabric (Mirafi 140N or other as approved by the geotechnical engineer) to minimize clogging. The above drainage measures are intended to remove water from behind the wall to prevent hydrostatic pressures from building up. Additional drainage measures may be specified by the project architect or structural engineer, for damp-proofing or other reasons.

HGSI should be contacted during construction to verify subgrade strength in wall keyway excavations, to verify that backslope soils are in accordance with our assumptions, and to take density tests on the wall backfill materials.

Concrete Slabs-on-Grade

Preparation of areas beneath concrete slab-on-grade floors should be performed as recommended in the *Site Preparation* section. Care should be taken during excavation for foundations and floor slabs, to avoid disturbing subgrade soils. If subgrade soils have been adversely impacted by wet weather or otherwise disturbed, the surficial soils should be scarified to a minimum depth of 8 inches, moisture conditioned to within about 3 percent of optimum moisture content, and compacted to engineered fill specifications. Alternatively, disturbed soils may be removed and the removal zone backfilled with additional crushed rock. For evaluation of the concrete slab-on-grade floors using the beam on elastic foundation method, a modulus of subgrade reaction of 200 kcf (115 pci) should be assumed for the soils anticipated at subgrade depth. This value assumes the concrete slab system is designed and constructed as recommended herein, with a minimum thickness of crushed rock of 8 inches beneath the slab.

Interior slab-on-grade floors should be provided with an adequate moisture break. The capillary break material should consist of ODOT open graded aggregate per ODOT Standard Specifications 02630-2. The minimum recommended thickness of capillary break materials on re-compacted soil subgrade is 8 inches. The total thickness of crushed aggregate will be dependent on the subgrade conditions at the time of construction, and should be verified visually by proof-rolling. Under-slab aggregate should be compacted to at least 90% of its maximum dry density as determined by ASTM D1557 or equivalent.

In areas where moisture will be detrimental to floor coverings or equipment inside the proposed structure, appropriate vapor barrier and damp-proofing measures should be implemented. A commonly applied vapor barrier system consists of a 10-mil polyethylene vapor barrier placed directly over the capillary break material. Other damp/vapor barrier systems may also be feasible. Appropriate design professionals should be consulted regarding vapor barrier and damp proofing systems, ventilation, building material selection, radon and mold prevention issues, which are outside HGSI's area of expertise.

Perimeter Footing Drains

Due to the potential for perched surface water above fine grained deposits such as those encountered at the site, we recommend the outside edge of perimeter footings be provided with a drainage system consisting of 3-inch minimum diameter perforated PVC pipe embedded in a minimum of 1 ft³ per lineal foot of clean, free-draining sand and gravel or 1"- 1/4" drain rock. The drain pipe and surrounding drain rock should be

wrapped in non-woven geotextile (Mirafi 140N, or approved equivalent) to minimize the potential for clogging and/or ground loss due to piping. Water collected from the footing drains should be directed into the local storm drain system or other suitable outlet. A minimum 0.5 percent fall should be maintained throughout the drain and non-perforated pipe outlet. The footing drains should include clean-outs to allow periodic maintenance and inspection.

Down spouts and roof drains should collect roof water in a system separate from the footing drains in order to reduce the potential for clogging. Roof drain water should be directed to an appropriate discharge point well away from structural foundations. Grades should be sloped downward and away from buildings to reduce the potential for ponded water near structures.

Seismic Design

Structures should be designed to resist earthquake loading in accordance with the methodology described in the current Oregon Residential Specialty Code (ORSC). We recommend Site Class D (Stiff Soils) be used for design per the ORSC. Design values determined for the site using the ASCE 7-16 Hazard Tool are summarized on Table 3, for Risk Category II.

Table 3. Recommended Earthquake Ground Motion Parameters (ASCE 7-16)

Parameter	Value
Location (Lat, Long), degrees	45.3211, -122.7494
Mapped Spectral Acceleration Values (MCE, Site Class B):	
Short Period, S_s	0.82 g
1.0 Sec Period, S_1	0.381 g
Design Values for Site Class D (Stiff Soils):	
Peak Ground Acceleration PGA_M	0.458
F_a	1.172
$SD_s = 2/3 \times F_a \times S_s$	0.641 g
Seismic Design Category (2021 ORSC)	D_0

Soil liquefaction is a phenomenon wherein saturated soil deposits temporarily lose strength and behave as a liquid in response to earthquake shaking. Soil liquefaction is generally limited to loose, granular soils located below the water table. Following development, on-site soils will consist predominantly of stiff to very stiff silt which are not considered susceptible to liquefaction. Therefore, it is our opinion that special design or construction measures are not required to mitigate the effects of liquefaction.

Excavating Conditions and Utility Trench Backfill

We anticipate that on-site soils can be excavated using conventional heavy equipment such as scrapers and trackhoes to depths of 13 feet and likely greater. Maintenance of safe working conditions, including temporary excavation stability, is the responsibility of the contractor. Actual slope inclinations at the time of construction should be determined based on safety requirements and actual soil and groundwater conditions. All temporary cuts in excess of 4 feet in height should be sloped in accordance with U.S. Occupational Safety and Health Administration (OSHA) regulations (29 CFR Part 1926), or be shored. The existing native soils classify as Type B Soil and temporary excavation side slope inclinations as steep as 1H:1V may be assumed for planning purposes. This cut slope inclination is applicable to excavations above the water table only.

Perched groundwater conditions often occur over fine-grained native deposits such as those beneath the site, particularly during the wet season. If encountered, the contractor should be prepared to implement an appropriate dewatering system for installation of the utilities. At this time, we anticipate that dewatering systems consisting of ditches, sumps and pumps would be adequate for control of groundwater where encountered during construction conducted during the dry season. Regardless of the dewatering system used, it should be installed and operated such that in-place soils are prevented from being removed along with the groundwater.

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

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

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

Stormwater Infiltration Facilities

Based on results of the soil infiltration testing, soils on site exhibit low infiltration rates especially in the presence of perched water or static groundwater. Infiltration rates ranged from 0.6 to 1.2 inches/hour as summarized on Table 1. We recommend shallow systems in the range of 2 to 5 feet bgs be designed using an infiltration rate of **0.6 inches/hour**. This is slightly less than the average test value of 1.0 inches/hour, but we feel 0.3 inches/hour is more representative of overall site conditions. Also, please note that the potential for infiltration of stormwater will be reduced during the wet season due to saturated soils / perched water conditions over much of the site. We do not believe the site is well suited for use of deeper infiltration facilities such as dry wells due to the very low-permeability site soils, and perched water conditions.

The designer should select an appropriate infiltration value based on our test results and the location of the proposed infiltration facility. The recommended infiltration rates do not incorporate a factor of safety. For the design infiltration rate, we recommend a factor of safety of at least 2.0. Greater factors of safety may be required by the governing agency.

Infiltration test methods and procedures attempt to simulate the as-built conditions of the planned disposal system. However, due to natural variations in soil properties, actual infiltration rates may vary from the measured and/or recommended design rates. All systems should be constructed such that potential overflow is discharged in a controlled manner away from structures, and all systems should include an adequate factor of safety. Infiltration rates presented in this report should not be applied to inappropriate or complex hydrological models such as a closed basin without extensive further studies.

Erosion Control Considerations

During our field exploration program, we did not observe soil types that would be considered highly susceptible to erosion. Erosion at the site during construction can be minimized by implementing the project erosion control plan, which should include judicious use of straw, bio-bags, silt fences, or other appropriate technology. Where used, erosion control devices should be in place and remain in place throughout site preparation and construction. Areas of exposed soil requiring immediate and/or temporary protection against exposure should be covered with either mulch or erosion control netting/blankets.

UNCERTAINTIES AND LIMITATIONS

We have prepared this report for the owner and his/her consultants for use in design of this project only. This report should not be construed as a warranty of the subsurface conditions. Experience has shown that soil and groundwater conditions can vary significantly over small distances. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, HGSI should be notified for review of the recommendations of this report, and revision of such if necessary.

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

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



We appreciate this opportunity to be of service.

Sincerely,

HARDMAN GEOTECHNICAL SERVICES INC.

Scott L. Hardman, P.E., G.E.
Geotechnical Engineer



EXPIRES: 06-30-2023

- Attachments: References
- Figure 1 – Vicinity Map
- Figure 2 – Site Plan
- Figure 3 – DOGAMI LiDAR Mapping
- Figure 4 – Fill Slope Detail
- Logs of Test Pits TP-1 through TP-11
- Logs of Hand Auger Borings HA-1 through HA-6
- Infiltration Test Data Plots (3 Pages)
- ASCE Seismic Design Hazards Report (3 Pages)



REFERENCES

Hardman Geotechnical Services Inc., 2021, *Geotechnical Evaluation of Landslide Hazards and Slope Stability; Proposed Underground Utility Easement; Frog Pond West-West; Martin, George and Ross Properties; Wilsonville, Oregon*; consultant report dated October 28.

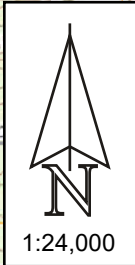
Madin, I.P., 1990, Earthquake hazard geology maps of the Portland metropolitan area, Oregon: Oregon Department of Geology and Mineral Industries Open-File Report 0-90-2, scale 1:24,000, 22 p.

Schlicker, H.G. and Finlayson, C.T., 1979, Geology and geologic hazards of northwest Clackamas County, Oregon Department of Geology and Mineral Industries, Bulletin 99, 1:24,000

Yeats, R.S., Graven, E.P., Werner, K.S., Goldfinger, C., and Popowski, T., 1996, Tectonics of the Willamette Valley, Oregon: in *Assessing earthquake hazards and reducing risk in the Pacific Northwest*, Vol. 1: U.S. Geological Survey Professional Paper 1560, P. 183-222, 5 plates, scale 1:100,000.



VICINITY MAP





**HARDMAN
GEOTECHNICAL
SERVICES INC.**

Practical, Cost-Effective Geotechnical Solutions

Item 2.

SITE PLAN AND EXPLORATION LOCATIONS



Legend

TP-X Backhoe Test Pit Designation and
Approximate Location

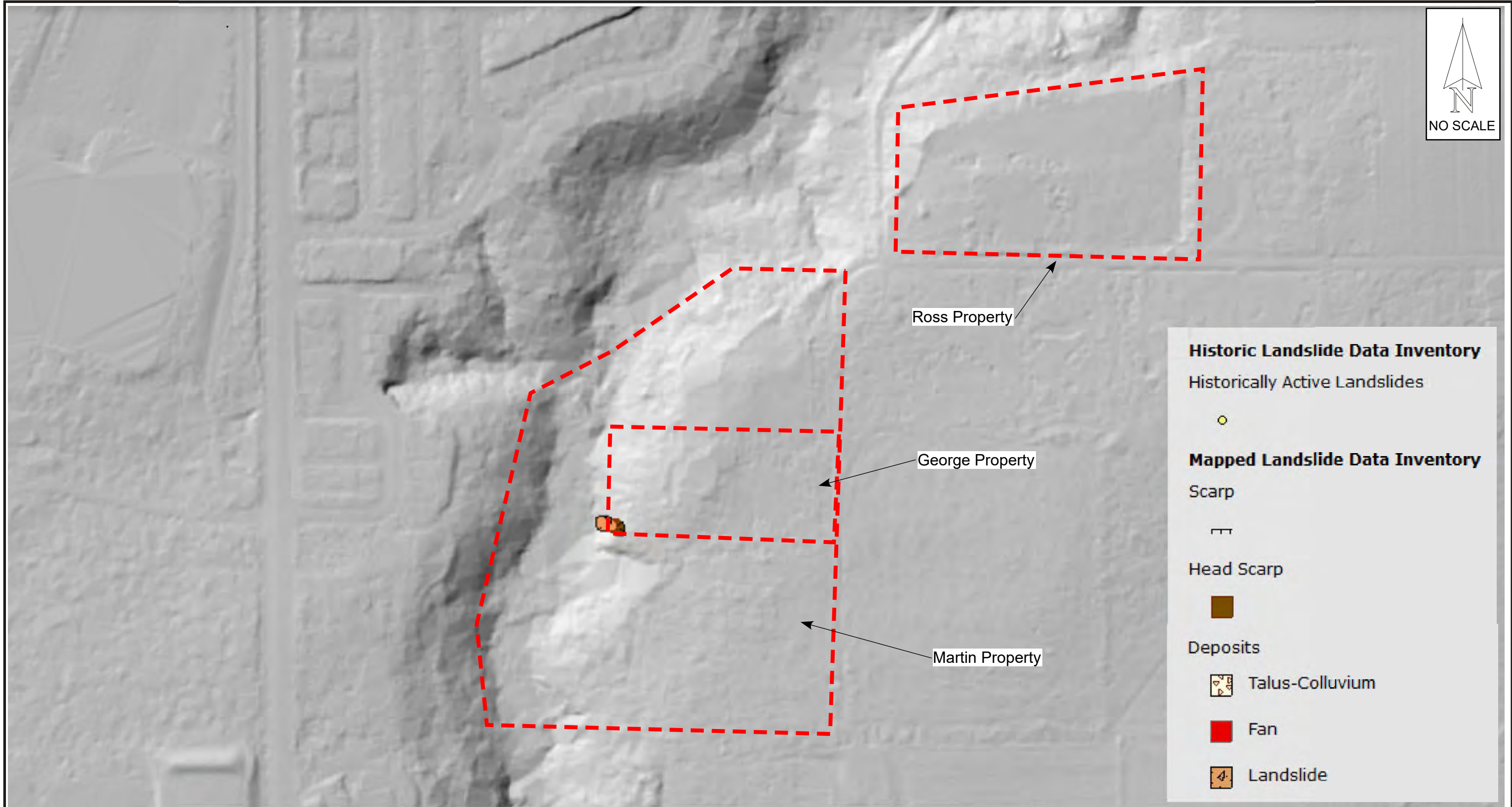
Base Map by Portland Maps

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 20-2642

FIGURE 2

DOGAMI LiDAR MAPPING



LEGEND



Approximate Site Boundary

Base Map from DOGAMI SLIDO Website

Project No. 21-2824

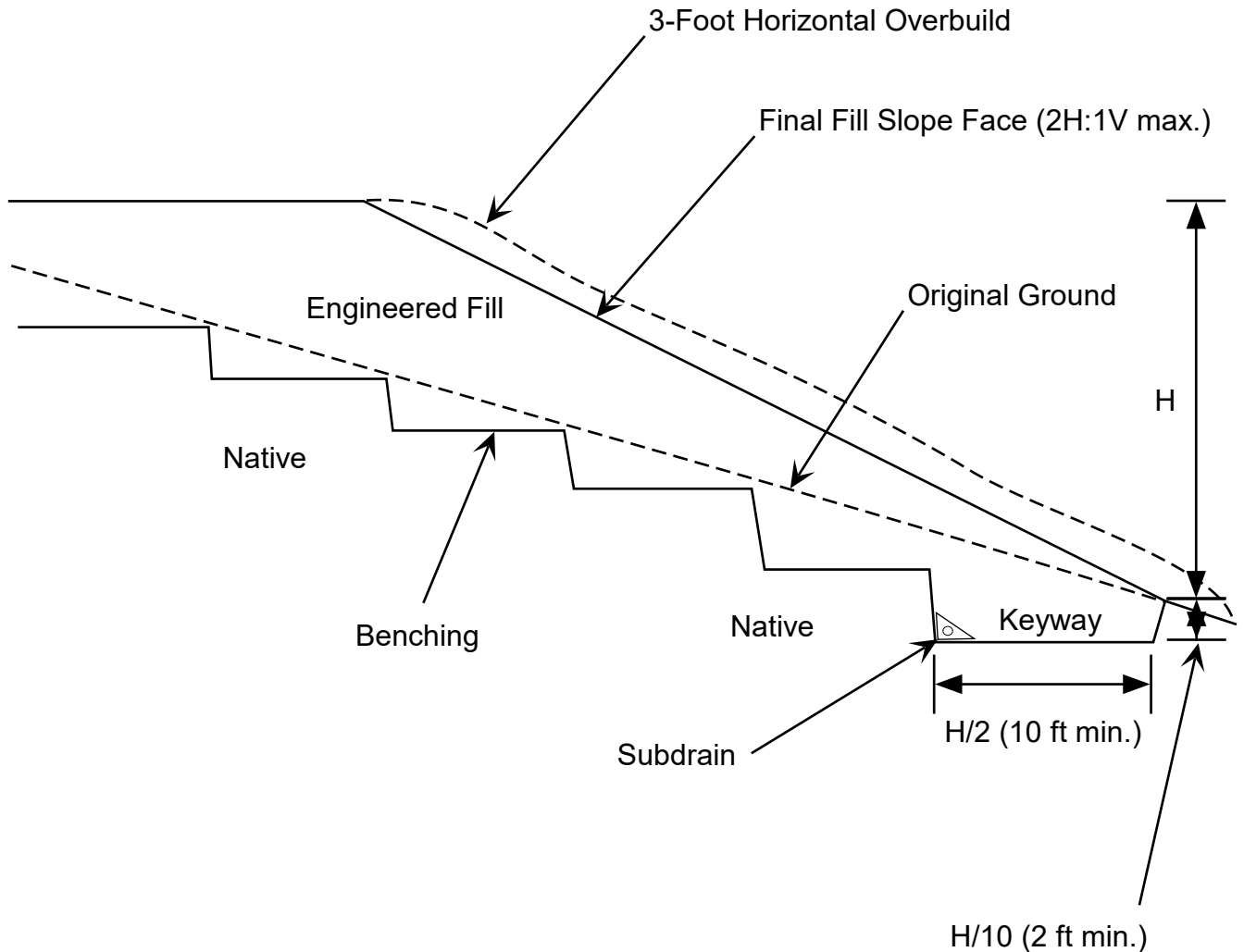
Frog Pond West-West
Wilsonville, Oregon

FIGURE 3



FILL SLOPE DETAIL

TYPICAL KEYWAY, BENCHING & FILL SLOPE DESIGN



Recommended subdrain is minimum 3-inch-diameter ADS Heavy Duty grade (or equivalent), perforated plastic pipe enveloped in a minimum of 3 cubic feet per lineal foot of 2" to 1/2" open-graded gravel drain rock wrapped with geotextile filter fabric (Mirafi 140N or equivalent).

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 1**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Soft, Organic SILT, dark brown, moist, many roots throughout (topsoil)
2	3.0					Stiff, Clayey SILT, light yellowish brown with black and orange mottling, moist, weathered (Colluvium)
3	3.5					Very stiff to hard, Clayey SILT, yellowish brown with trace mottling in upper portion of unit only, slightly moist, unweathered and intact
4	>4.5					
5	>>4.5					
6						
7						
8						Very difficult excavating at 8 feet due to hard materials.
9						Test pit terminated at 8 feet No caving of pit side walls No groundwater or seepage encountered
10						
11						
12						
13						
14						
15						
16						

HCSI HARDMAN
GEOTECHNICAL
SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Excavated: 10/22/2021

Logged By: SLH

Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 2**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Soft, Organic SILT, dark brown, moist, abundant grass roots (topsoil) ----- Dense, silty angular gravel, gray, moist (old driveway or pull-out area) -----
2						Very stiff to hard, Clayey SILT, yellowish brown with trace mottling in upper portion of unit only, slightly moist, unweathered and intact
3						
4						
5						
6						
7						
8						Grades to Clayey Silt with some fine sand at 8 feet
9						
10						
11						Test pit terminated at 10 feet No caving of pit sidewalls No groundwater or seepage encountered
12						
13						
14						
15						
16						

HCSI | **HARDMAN GEOTECHNICAL SERVICES INC.**
Practical. Cost-Effective Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Excavated: 10/22/2021

Logged By: SLH


Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon



Project No. 21-2824

Test Pit No. **TP - 3**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, medium stiff, brown and light grey, clayey SILT (ML), orange and dark brown mottling. [Willamette Formation]
3						
4	4.2					Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling, heavily micaceous. [Willamette Formation]
5						
6						
7						
8			S-1			
9						
10						<i>Test Pit terminated at 10 feet</i> <i>No groundwater or seepage encountered</i> <i>No caving</i>
11						
12						
13						
14						
15						
16						

HCSI **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND

 S-# 
 Soil Sample Depth Interval and Designation Water Level at Time of Excavation

Date Excavated: 12/3/2021
 Logged By: CSH
 Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 4**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling, micaceous. [Willamette Formation]
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						Saturated, medium stiff, brown, sandy SILT (ML) with clay, heavily micaceous. [Willamette Formation]
13					▽	
14						<i>Test Pit terminated at 13 feet Seepage observed in the bottom of the test pit No caving</i>
15						
16						

HCSI HARDMAN
GEOTECHNICAL
SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Excavated: 12/3/2021
Logged By: CSH
Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 5**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics [Topsoil]
2	3.0					Moist, medium stiff, brown and light grey, silty CLAY (CL), orange and dark brown mottling. [Willamette Formation]
3						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling. [Willamette Formation]
4						
5						
6						
7						
8						
9						
10						
11						<i>Test Pit terminated at 10 feet No groundwater or seepage encountered No caving</i>
12						
13						
14						
15						
16						

HCSI | **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Excavated: 12/3/2021
 Logged By: CSH
 Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 6**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics [Topsoil]
2						Moist, stiff, brown, clayey SILT (ML) with sand, orange and dark brown mottling. [Willamette Formation] Sandiness increasing with depth
3						
4						
5						
6						
7						Moist, stiff, brown, sandy SILT (ML), orange and dark brown mottling, slightly micaceous. [Willamette Formation]
8						
9						
10						<i>Test Pit terminated at 10 feet</i> <i>No groundwater or seepage encountered</i> <i>No caving</i>
11						
12						
13						
14						
15						
16						

HCSI **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Excavated: 12/3/2021
 Logged By: CSH
 Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 7**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics [Topsoil]
2						Moist, medium stiff, brown and light grey, silty CLAY (CL), orange and dark brown mottling. [Willamette Formation]
3						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling. [Willamette Formation]
4						
5						
6						
7						
8						
9						Very moist to saturated, medium stiff, brown, silty fine grained SAND (SM), heavily micaceous. [Willamette Formation]
10					▽	
11						
12						<i>Test Pit terminated at 12 feet Seepage observed around 10 feet bgs No caving</i>
13						
14						
15						
16						

HCSI HARDMAN
GEOTECHNICAL
SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Excavated: 12/3/2021
Logged By: CSH
Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 8**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, soft, brown silt interbedded with dark brown silt and organics. Strata matrix is disturbed and there are some crushed rock fragments. [Undocumented Fill]
3						
4						Decomposing grass layer and buried topsoil
5						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling, micaceous. [Willamette Formation]
6						
7						
8						
9						
10						
11						<i>Test Pit terminated at 10 feet No groundwater or seepage encountered No caving</i>
12						
13						
14						
15						
16						

HCSI HARDMAN
GEOTECHNICAL
SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Excavated: 12/3/2021
Logged By: CSH
Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 9**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, soft, brown silt interbedded with dark brown silt and organics. Strata matrix is disturbed and there are some crushed rock fragments. [Undocumented Fill]
3						
4	1.8					Decomposing grass layer and buried topsoil
5						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling, micaceous. [Willamette Formation]
6						
7						
8						
9						
10						
11						<i>Test Pit terminated at 10 feet No groundwater or seepage encountered No caving</i>
12						
13						
14						
15						
16						

HCSI **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Excavated: 12/3/2021
 Logged By: CSH
 Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 10**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, soft, dark brown silt with organics and fractured rock. [Undocumented Fill]
3						
4						
5						
6						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling, micaceous. [Willamette Formation]
7						
8						
9						
10						
11						<i>Test Pit terminated at 10 feet No groundwater or seepage encountered No caving</i>
12						
13						
14						
15						
16						

HCSI HARDMAN
GEOTECHNICAL
SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Excavated: 12/3/2021
Logged By: CSH
Surface Elevation: Unknown

LOG OF BACKHOE TEST PIT

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Test Pit No. **TP - 11**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics [Topsoil]
2						Moist, stiff, brown, clayey SILT (ML) with sand, orange and dark brown mottling. [Willamette Formation]
3						
4						
5						
6						
7						Sandiness increasing with depth
8						Moist, stiff, brown, sandy SILT (ML), orange and dark brown mottling, slightly micaceous. [Willamette Formation]
9						
10						<i>Test Pit terminated at 10 feet</i>
11						<i>No groundwater or seepage encountered</i>
12						<i>No caving</i>
13						
14						
15						
16						

HCSI HARDMAN GEOTECHNICAL SERVICES INC.
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Excavated: 12/3/2021
 Logged By: CSH
 Surface Elevation: Unknown

LOG OF HAND AUGER BORING

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Boring No. **HA - 1**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, medium stiff, brown and light grey, clayey SILT (ML), orange and dark brown mottling. [Willamette Formation]
3						
4						
5						Moist, stiff to very stiff, brown, sandy SILT (ML) with clay, orange and dark brown mottling, heavily micaceous. [Willamette Formation]
6						<p><i>Boring terminated at 5 feet</i> <i>No groundwater or seepage encountered</i> <i>No caving</i></p>
7						
8						
9						
10						

HCSI HARDMAN
GEOTECHNICAL
SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Bored: 12/9/2021

Logged By: CSH

Surface Elevation:

LOG OF HAND AUGER BORING

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Boring No. **HA - 2**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
0						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
1						Moist, medium stiff, brown and light grey, clayey SILT (ML), orange and dark brown mottling. [Willamette Formation]
2						
3						Moist, stiff to very stiff, brown, sandy SILT (ML), micaceous. [Willamette Formation]
4						
5						
6						
7						<i>Boring terminated at 6 feet No groundwater or seepage encountered No caving</i>
8						
9						
10						

HCSI HARDMAN GEOTECHNICAL SERVICES INC.
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Bored: 12/9/2021

Logged By: CSH

Surface Elevation:

LOG OF HAND AUGER BORING

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Boring No. **HA - 3**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics with grass and roots in the top 6 inches. [Topsoil]
2						Moist, soft, dark brown silt with organics and fractured rock. [Undocumented Fill]
3						
4						
5						Moist, stiff to very stiff, brown, sandy SILT (ML) [Willamette Formation]
6						<i>Boring terminated at 5 feet No groundwater or seepage encountered No caving</i>
7						
8						
9						
10						

HCSI HARDMAN
GEOTECHNICAL
SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Bored: 12/9/2021

Logged By: CSH

Surface Elevation:

LOG OF HAND AUGER BORING

Project: Frog Pond West West
Wilsonville, Oregon

Project No. 21-2824

Boring No. **HA - 4**

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics [Topsoil]
2						Moist, medium stiff, brown, clayey SILT (ML) with sand, orange and dark brown mottling. [Willamette Formation]
3						Dry, very stiff, light brown, sandy SILT (ML), orange and dark brown mottling. [Willamette Formation]
4						
5						
6						
7						<i>Test Pit terminated at 6 feet No groundwater or seepage encountered No caving</i>
8						
9						
10						

HCSI HARDMAN
GEOTECHNICAL
SERVICES INC.
Practical. Cost-Effective Geotechnical Solutions
10110 SW Nimbus Ave., Suite B-5
Portland, OR 97223
(503) 530-8076

LEGEND



S-#



Soil Sample Depth
Interval and Designation

Water Level at
Time of Excavation

Date Bored: 12/9/2021

Logged By: CSH

Surface Elevation:

LOG OF HAND AUGER BORING

Project: Frog Pond West West Wilsonville, Oregon	Project No. 21-2824	Boring No. HA - 5
---	---------------------	--------------------------

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Moist, soft, dark brown, SILT (OL), heavy organics [Topsoil]
2						Moist, medium stiff, brown, clayey SILT (ML) with sand, orange and dark brown mottling. [Willamette Formation]
3						
4						
5						
6						<i>Test Pit terminated at 5 feet No groundwater or seepage encountered No caving</i>
7						
8						
9						
10						

HCSI **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

Date Bored: 12/9/2021

Logged By: CSH

Surface Elevation:

LOG OF HAND AUGER BORING

Project: Frog Pond West West Wilsonville, Oregon	Project No. 21-2824	Boring No. HA - 6
---	---------------------	--------------------------

Depth (ft)	Pocket Penetrometer (tons/ft ²)	Sample Interval	Sample Designation	Moisture Content (%)	Groundwater	Material Description
1						Slightly Moist, Medium Dense, Poorly Graded, Subangular, 1"-0" GRAVEL (GP) in Dark Brown Silty Matrix, Top 3" Highly Organic with Grass Roots <i>[Undocumented Fill]</i>
2						Boring refusal on gravel at 1.1 feet (13 inches) No groundwater or seepage encountered No caving
3						
4						
5						
6						
7						
8						
9						
10						

HCSI **HARDMAN GEOTECHNICAL SERVICES INC.**
 Practical. Cost-Effective. Geotechnical Solutions
 10110 SW Nimbus Ave., Suite B-5
 Portland, OR 97223
 (503) 530-8076

LEGEND



S-#



Soil Sample Depth Interval and Designation

Water Level at Time of Excavation

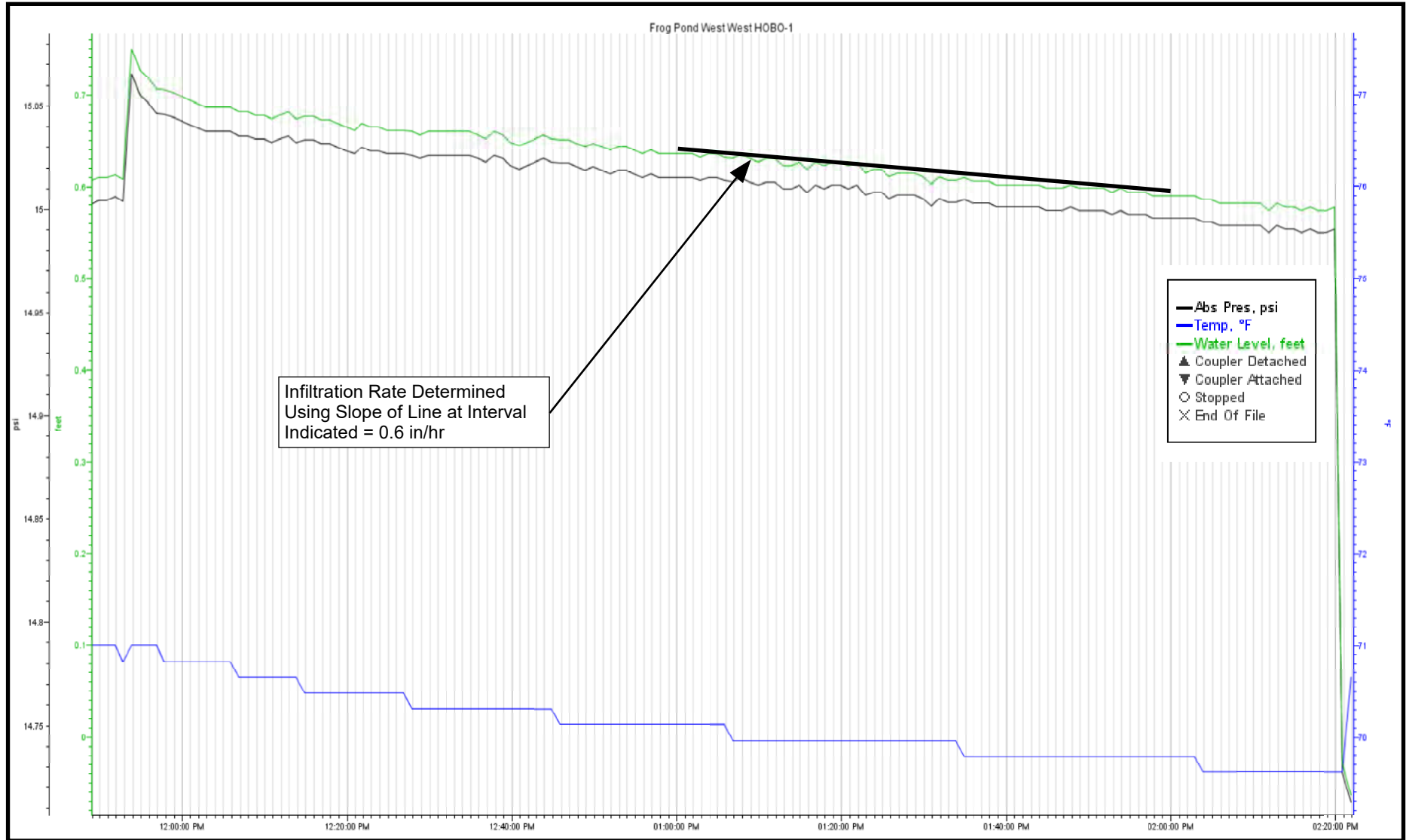
Date Bored: ~~10/09/2021~~ 10/09/2021

Logged By: CSH

Surface Elevation:



INFILTRATION TEST DATA



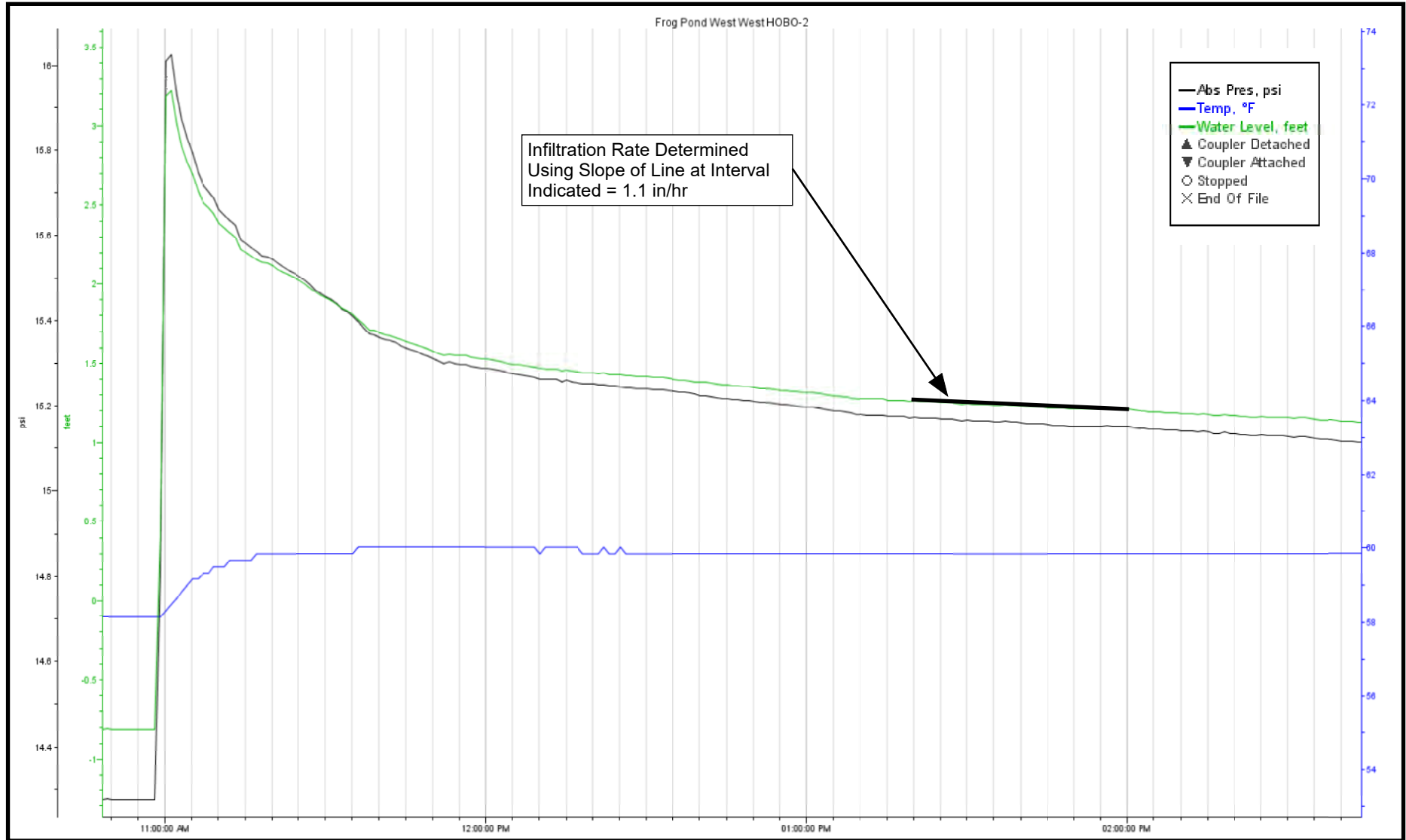
Project: Frog Pond West West
Wilsonville, Oregon

Date Tested: 12/7/2021
Tested By: CSH
Project No: 21-2824

Boring: HA-1
Depth: 5 Feet



INFILTRATION TEST DATA



Project: Frog Pond West West
Wilsonville, Oregon

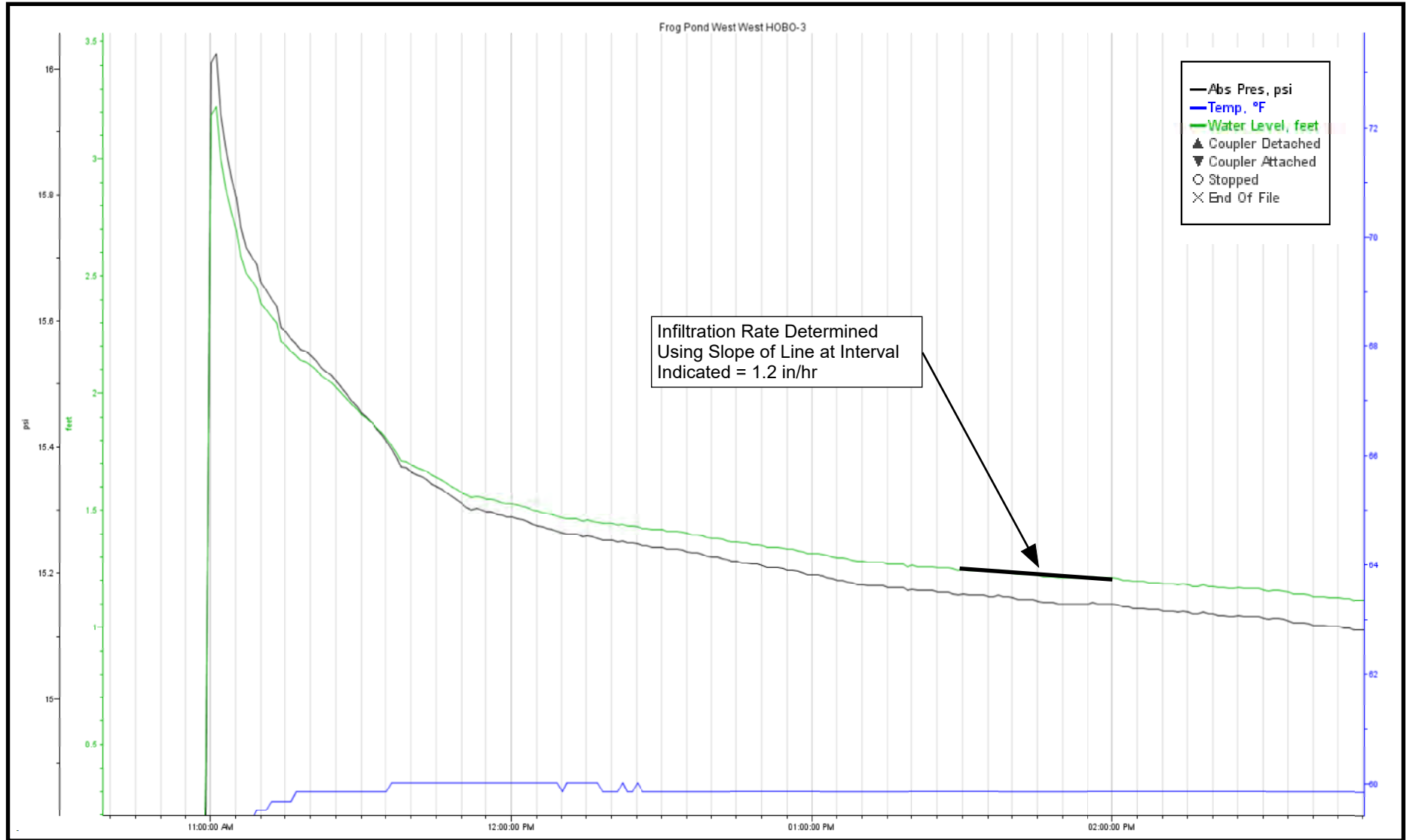
Date Tested: 12/7/2021
Tested By: CSH
Project No: 21-2824

Boring: HA-2
Depth: 6 Feet



INFILTRATION TEST DATA

Item 2.



Project: Frog Pond West West
Wilsonville, Oregon

Date Tested: 12/7/2021
Tested By: CSH
Project No: 21-2824

Boring: HA-3
Depth: 6 Feet

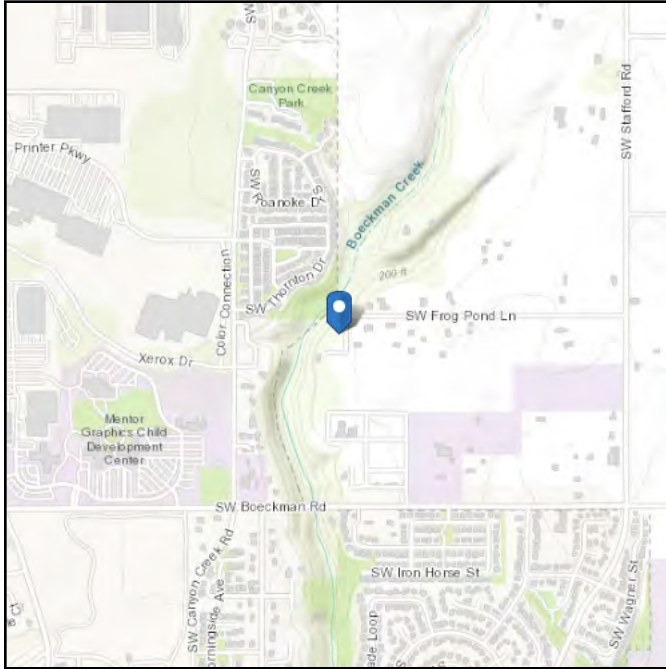


ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 216.52 ft (NAVD 88)
Latitude: 45.3218
Longitude: -122.754





Site Soil Class: D - Stiff Soil

Results:

S_s :	0.82	S_{D1} :	N/A
S_1 :	0.381	T_L :	16
F_a :	1.172	PGA :	0.373
F_v :	N/A	PGA _M :	0.458
S_{MS} :	0.961	F_{PGA} :	1.227
S_{M1} :	N/A	I_e :	1
S_{DS} :	0.641	C_v :	1.21

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.

Data Accessed: Tue Dec 14 2021

Date Source: [USGS Seismic Design Maps](#)

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

Appendix G
Stafford Meadows PUD recorded CC&Rs and Bylaws

AFTER RECORDING, RETURN TO:

52p

Michelle D. Da Rosa LLC
Attorney at Law
205 SE Spokane Street, Suite 300
Portland, OR 97202

Clackamas County Official Records
Sherry Hall, County Clerk

2019-002161



\$358.00

02201725201900021610520524

01/15/2019 09:08:53 AM

PD-COV Cnt=3 Stn=2 COUNTER3
\$260.00 \$10.00 \$16.00 \$62.00 \$10.00

**DECLARATION OF PROTECTIVE COVENANTS, CONDITIONS,
RESTRICTIONS AND EASEMENTS
FOR STAFFORD MEADOWS**

WEST HILLS LAND DEVELOPMENT LLC

Declarant

TABLE OF CONTENTS

	Page
ARTICLE 1 DEFINITIONS	1
1.1 “Additional Property”	1
1.2 “Architectural Review Committee” or “the Committee”	1
1.3 “Assessments”	1
1.4 “Association”	1
1.5 “Board of Directors” or “the Board”	2
1.6 “Bylaws”	2
1.7 “City of Wilsonville Development Agreements”	2
1.8 “Common Areas”	2
1.9 “Common Easement Areas”	2
1.10 “Common Maintenance Areas”	2
1.11 “Declarant”	2
1.12 “Design Guidelines”	3
1.13 “Emergency Assessments”	3
1.14 “Front Yard”	3
1.15 “General Assessments”	3
1.16 “General Plan of Development”	3
1.17 “Home”	3
1.18 “Improvement”	3
1.19 “Individual Assessments”	3
1.20 “Initial Property”	3
1.21 “Limited Common Areas”	3
1.22 “Limited Common Area Assessments”	3
1.23 “Limited Common Easement Areas”	3
1.24 “Lot”	3
1.25 “Mortgage”	3
1.26 “Occupant”	4
1.27 “Operations Fund”	4

1.28 "Owner" 4

1.29 "Person" 4

1.30 "Plat" 4

1.31 "Public Areas" 4

1.32 "Reserve Fund" 4

1.33 "Rules and Regulations" 4

1.34 "Sold" 4

1.35 "Special Assessments" 4

1.36 "Stafford Meadows" 4

1.37 "The Property" 4

1.38 "This Declaration" 4

1.39 "Turnover Meeting" 5

1.40 "Working Fund Assessments" 5

ARTICLE 2 PROPERTY SUBJECT TO THIS DECLARATION 5

2.1 Initial Property. 5

2.2 Annexation of Additional Property. 5

2.3 Improvements. 6

2.4 Withdrawal of Property. 6

2.5 Dedications. 6

2.6 Conversion of Lots to Common Areas. 6

2.7 Subdivisions. 7

2.8 Consolidations. 7

ARTICLE 3 LAND CLASSIFICATIONS 7

3.1 Land Classifications Within Initial Property. 7

3.2 Conversion of Lots to Common Areas. 8

3.3 Subdivisions. 8

3.4 Consolidations. 8

ARTICLE 4 PROPERTY RIGHTS IN COMMON AREAS 8

4.1 Owners' Easements of Enjoyment. 8

4.2 Title to Common Areas. 9

4.3 Extent of Owners' Rights. 9

(a) Association Easements. 9

(b) Public and Utility Easements..... 9

(c) Use of the Common Areas..... 10

(d) Alienation of the Common Areas..... 10

(e) Leases, Easements, Rights-of-Way, Licenses and Similar
Interests and Vacations of Roadways..... 10

(f) Limitations on Use..... 10

4.4 Delegation of Use..... 11

4.5 Easements Reserved by Declarant. 11

4.6 Easement to Serve Other Property. 12

4.7 Limited Common Areas. 12

ARTICLE 5 PROPERTY RIGHTS IN LOTS 12

5.1 Use and Occupancy..... 12

5.2 Easements Reserved..... 12

(a) Adjacent Common Maintenance Area. 12

(b) Utility Easements..... 13

(c) Construction on Adjoining Lot. 13

(d) Utility Inspection and Repairs..... 13

(e) Easements for Encroachments. 13

(f) Easements for Maintenance, Emergency and Enforcement..... 13

(g) Future Easements. 14

ARTICLE 6 GENERAL USE RESTRICTIONS 14

6.1 Structures Permitted. 14

6.2 Residential Use. 14

6.3 Offensive or Unlawful Activities. 14

6.4 Animals. 15

6.5 Maintenance of Structures..... 15

6.6 Landscape Installation. 15

6.7 Maintenance of Landscaping..... 15

6.8 Boundary Fences..... 16

6.9 Fences, Hedges and Walls. 16

6.10 Pest and Weed Control. 16

6.11 Parking..... 16

6.12 Vehicles in Disrepair..... 16

6.13 Signs..... 16

6.14 Rubbish, Trash and Outside Storage. 17

6.15 Construction. 17

6.16 Temporary Structures. 17

6.17 Recreational Equipment..... 17

6.18 Service Facilities..... 18

6.19 Antennas and Satellite Dishes..... 18

6.20 Exterior Lighting or Noisemaking Devices..... 18

6.21 Subdividing or Partitioning Lots. 18

6.22 Grades, Slopes and Drainage. 18

6.23 Garages. 18

6.24 Windows, Decks, Porches and Outside Walls..... 19

6.25 Air Conditioning Units. 19

6.26 Firearms and Fireworks..... 19

6.27 Nonbiodegradable Substances. 19

6.28 Leasing and Rental of Homes..... 19

6.29 Rules and Regulations..... 19

ARTICLE 7 ARCHITECTURAL REVIEW COMMITTEE 19

7.1 Architectural Review..... 19

7.2 Committee Decision. 20

7.3 Committee Discretion..... 20

7.4 Design Guidelines..... 20

 (a) Adoption of Design Guidelines..... 20

 (b) Publication of Design Guidelines. 21

 (c) Amendment of Design Guidelines..... 21

7.5 Membership: Appointment and Removal..... 21

7.6 Majority Action..... 22

7.7 Liability..... 22

7.8 Nonwaiver..... 22

7.9 Appeal. 22

7.10 Effective Period of Consent..... 22

7.11 Estoppel Certificate. 22

7.12 Enforcement. 22

ARTICLE 8 ASSOCIATION 23

8.1 Organization..... 23

8.2 Membership..... 23

8.3 Voting Rights. 23

8.4 General Powers and Obligations. 24

8.5 Specific Powers and Duties. 24

 (a) Maintenance and Services..... 24

 (b) Insurance. 24

 (c) Rulemaking. 24

 (d) Assessments..... 24

 (e) Enforcement. 24

 (f) Employment of Agents, Advisers and Contractors. 25

 (g) Borrow Money..... 25

 (h) Acquire and Hold Title to Property..... 25

 (i) Transfers, Dedications, Encumbrances and Easements..... 25

 (j) Create Classes of Service and Make Appropriate Charges. 25

 (k) Restoring Damaged Improvements. 25

 (l) Security..... 26

 (m) Services. 26

 (n) Implied Rights and Obligations. 26

8.6 Liability..... 26

8.7 Interim Board; Turnover Meeting. 26

8.8 Contracts Entered into by Declarant or Before Turnover Meeting. 27

8.9 Bylaws. 27

ARTICLE 9 MAINTENANCE..... 27

9.1 Common Maintenance Areas..... 27

9.2 Maintenance and Lighting of Common Maintenance Areas. 27

9.3 Maintenance of Utilities. 28

9.4 Owner’s Responsibility..... 28

9.5 Damage Liability..... 28

9.6 Maintenance Plan 29

ARTICLE 10 ASSESSMENTS 29

10.1 Purpose of Assessments. 29

10.2 When Lots Become Subject to Assessment. 29

10.3 Allocation of Assessments. 29

10.4 Type of Assessments..... 30

 (a) General Assessments. 30

 (b) Special Assessments..... 30

 (c) Emergency Assessments. 30

 (d) Limited Common Area Assessments..... 30

 (e) Individual Assessments. 31

 (f) Working Fund Assessments..... 31

10.5 Assessment of Additional Property..... 31

10.6 Operations Fund. 31

10.7 Reserve Fund..... 32

 (a) Establishment of Account. 32

 (b) Funding of Reserve Fund. 32

 (c) Reserve Studies. 32

 (d) Use of Reserve Fund..... 33

10.8 Declarant's Subsidy..... 33

10.9 Commencement of Assessment Obligation; Time of Payment. 33

10.10 Payment of Assessments. 33

10.11 Creation of Lien and Personal Obligation of Assessments. 33

10.12 Voluntary Conveyance. 33

10.13 No Waiver..... 34

10.14 No Option to Exempt..... 34

10.15 Certificate..... 34

ARTICLE 11 ENFORCEMENT 34

11.1 Violation of General Protective Covenants. 34

11.2 Default in Payment of Assessments; Enforcement of Lien. 35

11.3 Interest, Late Charges and Expenses..... 35

11.4 Costs and Attorneys' Fees. 36

11.5 Assignment of Rents..... 36

11.6 Nonexclusiveness and Accumulation of Remedies..... 36

11.7 Enforcement by Clackamas County..... 36

ARTICLE 12 DISPUTE RESOLUTION 37

12.1 Mediation..... 37

12.2 Arbitration..... 37

12.3 Selection of Arbitrator..... 38

12.4 Consolidated Arbitration..... 38

12.5 Discovery..... 38

12.6 Evidence..... 38

12.7 Excluded Matters..... 38

12.8 Costs and Attorneys' Fees..... 38

12.9 Survival..... 39

ARTICLE 13 MORTGAGEES..... 39

13.1 Subordination of Lien to Mortgages..... 39

13.2 Reimbursement of First Mortgagees..... 39

13.3 Notification of First Mortgagee..... 39

13.4 Notice to Association..... 39

ARTICLE 14 AMENDMENT AND REPEAL 40

14.1 How Proposed..... 40

14.2 Approval Required..... 40

14.3 Recordation..... 40

14.4 Regulatory Amendments..... 40

ARTICLE 15 MISCELLANEOUS PROVISIONS 41

15.1 No Implied Obligations..... 41

15.2 Right to Approve Additional Covenants..... 41

15.3 Notice of Sale or Transfer of Title..... 41

15.4 Exclusive Rights to Use Name of Development..... 41

15.5 Lessees and Other Invitees..... 41

15.6 Nonwaiver..... 41

15.7 Construction and Severability..... 41

15.8 Terminology and Captions..... 42

15.9 Notices..... 42
15.10 Private Agreement..... 42

**DECLARATION OF PROTECTIVE COVENANTS,
CONDITIONS, RESTRICTIONS AND EASEMENTS
FOR STAFFORD MEADOWS**

THIS DECLARATION is made this 15 day of January, 2019 by **WEST HILLS LAND DEVELOPMENT LLC**, an Oregon limited liability company ("**Declarant**").

RECITALS

A. Declarant has recorded the plat of "**Stafford Meadows**" in the plat records of Clackamas County, Oregon as Plat No. 4558. Declarant is the only owner of the land so platted.

B. Declarant desires to subject the Lots and Tracts described in Section 2.1 to the conditions, restrictions and charges set forth in this instrument for the benefit of such property, and its present and subsequent owners, and to establish such property under the Oregon Planned Community Act, ORS 94.550 to 94.783, as the first phase of a Class I planned development to be known as Stafford Meadows.

NOW, THEREFORE, Declarant hereby declares that the property described in Section 2.1 will be held, sold and conveyed subject to the following easements, covenants, restrictions and charges, which run with such property and are binding on all parties having or acquiring any right, title, or interest in such property or any part thereof, unless otherwise provided herein, and inure to the benefit of all such persons.

Article 1

DEFINITIONS

As used in this Declaration, the terms set forth below have the following meanings:

1.1 "**Additional Property**" means any land, whether or not owned by Declarant, that is made subject to this Declaration as provided in Section 2.2.

1.2 "**Architectural Review Committee**" or "**the Committee**" means the committee appointed pursuant to Article 7.

1.3 "**Assessments**" means all assessments and other charges, fines and fees imposed by the Association on an Owner in accordance with this Declaration, the Bylaws of the Association, or the provisions of the Oregon Planned Community Act, including, without limitation, General Assessments, Special Assessments, Emergency Assessments, Limited Common Area Assessments, Working Fund Assessments and Individual Assessments as described in Article 10.

1.4 "**Association**" means the nonprofit corporation formed to serve as the Owners association as provided in Article 8, and its successors and assigns.

1.5 **“Board of Directors” or “the Board”** means the duly appointed or elected board of directors of the Association, which is invested with the authority to operate the Association and to appoint the officers of the Association. Prior to the Turnover Meeting, Declarant will appoint the Board of Directors. After the Turnover Meeting, the Board will be elected by the Owners.

1.6 **“Bylaws”** means the duly adopted bylaws of the Association as the same may hereafter be amended or replaced.

1.7 **“City of Wilsonville Development Agreements”** mean the following agreements between Declarant and the City of Wilsonville dated effective the same date as this Declaration and recorded in the Records of Clackamas County, Oregon:

-Sanitary Sewer Pipeline Easement Agreement (Tracts “B” and “C”, Plat of “Stafford Meadows”);

-Stormwater Pipeline Easement Agreement (Tracts “B”, “C”, and “D”, Portions of Tracts “F” and “G”, Portion of Lot 11, Plat of “Stafford Meadows”);

-Conservation Easement, which affects a portion of Tract F as legally described in the exhibits in the Conservation Easement);

-Storm Drainage Easement Agreement (Tract “G”, Plat of “Stafford Meadows”);

-Water Pipeline Easement Agreement (Tract “I”, Portion of Tract “H”, Plat of “Stafford Meadows”);

-Public Access Easement Agreement (Tracts “A”, “B”, “C”, “D”, “E”, “H”, “I”, AND “J”, Portions of Lots 1-6, Plat of “Stafford Meadows”).

1.8 **“Common Areas”** means those lots or tracts designated as such on any plat of the Property, or in this Declaration or any declaration annexing Additional Property to Stafford Meadows, including any Improvements thereon, and also includes Limited Common Areas, Common Easement Areas, Limited Common Easement Areas, and any Lots converted to Common Areas as provided in Section 3.2.

1.9 **“Common Easement Areas”** means the easements established for the benefit of all property within Stafford Meadows pursuant to this Declaration or any plat or declaration annexing Additional Property to Stafford Meadows.

1.10 **“Common Maintenance Areas”** means the Common Areas and any other areas designated as such in Section 9.1 of this Declaration or in any declaration annexing Additional Property to Stafford Meadows as being maintained by the Association.

1.11 **“Declarant”** means West Hills Land Development LLC, and its successors and assigns if such successor or assignee should acquire Declarant’s interest in the remainder of the Property, or less than all of such property if a recorded instrument executed by Declarant assigns to the transferee all of Declarant’s rights under this Declaration, and any member or affiliate of West Hills Land Development LLC. Any such successor declarant will succeed to all of the rights and

obligations of the Declarant under this Declaration, including, without limitation, the obligation to complete any Improvements required by City of Wilsonville as part of its subdivision approval.

1.12 "Design Guidelines" means the guidelines adopted from time to time by the Architectural Review Committee pursuant to Article 7.

1.13 "Emergency Assessments" means the Assessments described in Section 10.4(c).

1.14 "Front Yard" means the front yards and side yards of Lots, which are not enclosed by a fence and street frontage planter strips for all Lots, street trees and entry monuments, if any.

1.15 "General Assessments" means the Assessments described in Section 10.4(a).

1.16 "General Plan of Development" means Declarant's general plan of development of the Property as approved by Clackamas County, as the same may be amended from time to time.

1.17 "Home" means a building or a portion of a building located upon a Lot within the Property and designated for separate residential occupancy together with any permitted accessory dwelling unit.

1.18 "Improvement" means every structure or improvement of any kind, including, but not limited to, a fence, wall, driveway, swimming pool, storage shelter, mailbox and newspaper receptacle, landscaping and any other product of construction efforts on or in respect to the Property.

1.19 "Individual Assessments" means the Assessments described in Section 10.4(d).

1.20 "Initial Property" means the real property referred to in Section 2.1.

1.21 "Limited Common Areas" means those Common Areas established for the exclusive use or enjoyment of certain Lots as designated in this Declaration or in any declaration annexing property to Stafford Meadows including Limited Common Easement Areas.

1.22 "Limited Common Area Assessments" means the Assessments described in Section 10.4(d).

1.23 "Limited Common Easement Areas" means those Limited Common Area easements established for the exclusive use or enjoyment of certain Lots as designated in this Declaration or in the Plat or any declaration annexing property to Stafford Meadows.

1.24 "Lot" means a platted or partitioned lot within the Property, with the exception of any lot marked on the Plat as being common or open space or so designated in this Declaration or the declaration annexing such property to Stafford Meadows. Lots do not include Common Areas or Public Areas.

1.25 "Mortgage" means a mortgage or a trust deed, "Mortgagee" means a mortgagee or a beneficiary of a trust deed, and "Mortgagor" means a mortgagor or a grantor of a trust deed.

1.26 “**Occupant**” means the occupant of a Home who is the Owner, lessee or any other Person authorized by the Owner to occupy the premises.

1.27 “**Operations Fund**” means the fund described in Section 10.6.

1.28 “**Owner**” means the Person or Persons, including Declarant, owning any Lot in the Property, but does not include a tenant or holder of a leasehold interest or a contract vendor or other Person holding only a security interest in a Lot. If a Lot is Sold under a recorded real estate installment sale contract, the purchaser (rather than the seller) will be considered the Owner unless the contract specifically provides to the contrary. If a Lot is subject to a written lease with a term in excess of one year and the lease specifically so provides, then upon filing a copy of the lease with the Board of Directors, the lessee (rather than the fee owner) will be considered the Owner during the term of the lease for the purpose of exercising any rights related to such Lot under this Declaration. The rights, obligations and other status of being an Owner commence upon acquisition of the ownership of a Lot and terminate upon disposition of such ownership, but termination of ownership does not discharge an Owner from obligations incurred prior to termination.

1.29 “**Person**” means a human being, a corporation, partnership, limited liability company, trustee or other legal entity.

1.30 “**Plat**” means the plat of Stafford Meadows recorded in the plat records of Clackamas County, Oregon as Document No. _____ and any annexation plat, as the same may be amended.

1.31 “**Public Areas**” means areas or easement areas dedicated to the public or established for public use in any plat of the Property, or so designated in this Declaration or the declaration annexing such property to Stafford Meadows.

1.32 “**Reserve Fund**” means the fund described in Section 10.7.

1.33 “**Rules and Regulations**” means those policies, procedures, rules and regulations adopted by the Association pursuant to the authority granted in this Declaration, as the same may be amended from time to time.

1.34 “**Sold**” means that legal title has been conveyed or that a contract of sale has been executed and recorded under which the purchaser has obtained the right to possession.

1.35 “**Special Assessments**” means the Assessments described in Section 10.4(b)

1.36 “**Stafford Meadows**” means the Initial Property and any Additional Property annexed to this Declaration.

1.37 “**The Property**” means Stafford Meadows.

1.38 “**This Declaration**” means all of the easements, covenants, restrictions and charges set forth in this instrument, together with any rules or regulations promulgated hereunder, as the same may be amended or supplemented from time to time in accordance with the provisions hereof, including the provisions of any supplemental declaration annexing property to Stafford Meadows.

1.39 “**Turnover Meeting**” means the meeting called by Declarant pursuant to Section 8.7, at which Declarant will turn over administrative responsibility for the Property to the Association.

1.40 “**Working Fund Assessments**” means the Assessments described in Section 10.4(f).

Article 2

PROPERTY SUBJECT TO THIS DECLARATION

2.1 **Initial Property.** Declarant hereby declares that all of the real property located in the City of Wilsonville described below is owned and will be owned, conveyed, hypothecated, encumbered, used, occupied and improved subject to this Declaration:

All real property within that certain plat entitled “**Stafford Meadows,**” filed in the plat records of Clackamas County, Oregon, as Document No. 2019-002153, except Lot 24 and Tracts A, K and L.

2.2 **Annexation of Additional Property.** Declarant may from time to time and in its sole discretion annex to Stafford Meadows as “Additional Property” any real property now or hereafter acquired by it and may also from time to time and in its sole discretion permit other holders of real property to annex the real property owned by them to Stafford Meadows. The annexation of such Additional Property is accomplished as follows:

(a) The Owner or Owners of such real property will record a declaration that is executed by or bear the approval of Declarant and will, among other things, describe the real property to be annexed; establish land classifications for the Additional Property; establish any additional limitations, uses, restrictions, covenants and conditions that are intended to be applicable to such Additional Property; and declare that such property is held and will be held, conveyed, hypothecated, encumbered, used, occupied and improved subject to this Declaration.

(b) The Additional Property described in any such annexation thereby becomes a part of Stafford Meadows and subject to this Declaration, and the Declarant and the Association will have and accept and exercise administration of this Declaration with respect to such Additional Property.

(c) Notwithstanding any provision apparently to the contrary, a declaration with respect to any Additional Property may:

(1) modify or exclude any then-existing restrictions and establish such new land classifications and such limitations, uses, restrictions, covenants and conditions with respect to such Additional Property as Declarant may deem to be appropriate for the development of the Additional Property; and

(2) with respect to existing land classifications, modify or exclude any then-existing restrictions and establish additional or different limitations, uses, restrictions, covenants and conditions with respect to such property as Declarant may deem to be appropriate for the development of such Additional Property.

(d) There is no limitation on the number of Lots or Homes that Declarant may create or annex to Stafford Meadows except as may be established by applicable ordinances of Clackamas County. Similarly, there is no limitation on the right of Declarant to annex common property, except as may be established by Clackamas County.

(e) Declarant does not agree to build any specific future Improvement but does not choose to limit Declarant's right to add additional Improvements.

(f) Nothing in this Declaration establishes any duty or obligation on Declarant to annex any property to this Declaration, and no owner of property excluded from this Declaration has any right to have such property annexed to this Declaration or Stafford Meadows.

(g) Upon annexation to Stafford Meadows, additional Lots so annexed will be entitled to voting rights as set forth in Section 8.3.

(h) The formula to be used for reallocating the common expenses if additional Lots are annexed and the manner of reapportioning the common expenses if additional Lots are annexed during a fiscal year are set forth in Section 10.5.

2.3 **Improvements.** Declarant does not agree to build any Improvements on the Property other than as required by City of Wilsonville, but may elect, at Declarant's option, to build additional Improvements.

2.4 **Withdrawal of Property.** Property may be withdrawn from Stafford Meadows only by duly adopted amendment to this Declaration, except that Declarant may withdraw all or a portion of the Initial Property or any Additional Property annexed pursuant to a declaration described in Section 2.2 at any time prior to the sale of the first Lot in the plat of the Initial Property or, in the case of Additional Property, prior to the sale of the first Lot in the property annexed by the supplemental declaration, subject to the prior approval of City of Wilsonville. Such withdrawal will be by a declaration executed by Declarant and recorded in the deed records of Clackamas County, Oregon. If a portion of the Property is withdrawn, all voting rights otherwise allocated to Lots being withdrawn will be eliminated, and the common expenses will be reallocated among the remaining Lots.

2.5 **Dedications.** Declarant reserves the right to dedicate any portions of the Property then owned by Declarant to any governmental authority, quasi-governmental entity or entity qualifying under Section 501(c)(3) of the Internal Revenue Code or similar provisions, from time to time, for such purposes as Declarant may deem to be appropriate, including, without limitation, for utility stations, equipment, fixtures and lines; streets and roads; sidewalks; trails; open space; recreational facilities; schools; fire, police, security, medical and similar services; and such other purposes as Declarant and such governmental authority or quasi-governmental entity determine to be appropriate from time to time. Any consideration received by Declarant as a result of such dedication or by reason of any condemnation or any conveyance in lieu of condemnation will belong solely to Declarant.

2.6 **Conversion of Lots to Common Areas.** Declarant may elect to build common facilities on one or more Lots and designate such Lots, or any portion thereof, as Common Areas by a supplemental declaration recorded in the deed records of Clackamas County, Oregon. The supplemental declaration must be executed by Declarant. Additionally, Declarant reserves the right over the Common Areas (excluding the Common Easement Areas) to make boundary line

adjustments between any Lot (before the Lot has been sold to someone other than the Declarant or a successor declarant) and an adjacent Common Area by a supplemental declaration and plat recorded in the deed records of Clackamas County, Oregon, notwithstanding that such an adjustment may convert a Lot or a portion thereof to Common Area, or a Common Area, or portion thereof, into a Lot or portion of a Lot. This reserved conversion right will expire upon turnover of the Association to the members by the Declarant as provided for in the Bylaws.

2.7 **Subdivisions.** Declarant reserves the right to subdivide any Lots in the Additional Property then owned by it upon receiving all required approvals from the applicable governing authority. If any two or more Lots are so subdivided or subject to condominium ownership, they will be deemed separate Lots for the purposes of allocating assessments under the Declaration. No other Owner of any Lot in the Additional Property may subdivide any Lot without the prior written approval of Declarant prior to the Turnover Meeting and thereafter by the Architectural Review Committee, which consent may be granted or denied at the sole discretion of Declarant or the Committee, as applicable.

2.8 **Consolidations.** Declarant has the right to consolidate any two or more Lots in the Additional Property then owned by it upon receipt of any required approvals from the applicable governing authority. No other Owner may consolidate any Lots without the prior written approval of Declarant before the Turnover Meeting and thereafter by the Architectural Review Committee, which may be granted or denied at the sole discretion of Declarant or the Committee, as applicable. An approved consolidation will be effected by the recording of a supplemental declaration stating that the affected Lots are consolidated, which declaration must be executed by the Owner(s) of the affected Lots and by the chairperson of the Association. Once so consolidated, the consolidated Lot may not thereafter be partitioned, nor may the consolidation be revoked except as provided in Section 2.7 above. Any Lots consolidated pursuant to this section will be considered one Lot thereafter for the purposes of the Declaration, including voting rights and allocation of Assessments.

Article 3

LAND CLASSIFICATIONS

3.1 **Land Classifications Within Initial Property.** All land within the Initial Property is included in one or another of the following classifications:

(a) Lots, which consist of Lots 1 through 23 and Lots 25 through 44, inclusive, of the plat of the Initial Property.

(b) Common Areas, including the areas marked as Tracts D, E, F, G, H, I, and J, on the plat of the Initial Property, plus the Limited Common Areas, Common Easement Areas, and Limited Common Easement Areas, all of which are to be owned and maintained by the Association pursuant to the terms and conditions of this Declaration. Tract D is a pedestrian, bicycle, and emergency vehicular access area; Tract F is a natural resource area; Tract G is a stormwater treatment area subject to an easement in favor of the City of Wilsonville; Tracts E, H, I and J are open space areas that are subject to public pedestrian and bicycle access easements, with E and H being landscape buffers along S.W. Boeckman Road.

(c) Common Easement Areas, inclusive, public pedestrian access easements, public utility easements, storm drainage easements, clean water service and storm facility easement areas, sight distance easements, wall maintenance easements in favor of the Association, and any other easements established on the plat of the Initial Property or in any recorded document for entrance signage, monuments, or landscaping over Lots.

(d) Tract B is a Limited Common Area for ingress and egress over a shared driveway to and from Lots 1 and 6, which is subject to a wall maintenance; Tract C is a Limited Common Area for ingress and egress over a shared driveway to and from Lots 2, 3, 4, and 5.

(e) There are no Limited Common Easement Areas in the Initial Property.

3.2 **Conversion of Lots to Common Areas.** Declarant may elect to build common facilities on one or more Lots and designate such Lots as Common Areas by a declaration recorded in the deed records of Clackamas County, Oregon. Such declaration must be executed by Declarant as Owner of the Lots.

3.3 **Subdivisions.** Declarant reserves the right to subdivide any Lots then owned by it upon receiving all required approvals from City of Wilsonville. If a Lot or Lots are so subdivided, the new lots will be deemed separate Lots for the purposes of allocating Assessments under this Declaration. No other Owner of any Lot in the Property may subdivide any Lot without the prior written approval of the Declarant prior to the Turnover Meeting, and thereafter, by the Architectural Review Committee, which consent may be granted or denied at the sole discretion of the Declarant or the Committee, as applicable.

3.4 **Consolidations.** Declarant has the right to consolidate any two or more Lots then owned by it upon receipt of any required approvals from City of Wilsonville. No other Owner may consolidate any Lots without the prior written approval of the Declarant prior to the Turnover Meeting and thereafter by the Architectural Review Committee, which may be granted or denied at the sole discretion of the Declarant or Committee, as applicable. An approved consolidation will be effected by the recording of a supplemental declaration stating that the affected Lots are consolidated, which declaration must be executed by the Owner(s) of the affected Lots and by the president of the Association. Once so consolidated, the consolidated Lot may not thereafter be partitioned, nor may the consolidation be revoked except as provided in Section 3.3. Any Lots consolidated pursuant to this section will be considered one Lot thereafter for the purposes of this Declaration, including voting rights and allocation of Assessments.

Article 4

PROPERTY RIGHTS IN COMMON AREAS

4.1 **Owners' Easements of Enjoyment.** Subject to the provisions of this Article 4, every Owner and his or her invitees have a right and easement of enjoyment in and to the Common Areas, which easement is appurtenant to and passes with the title to every Lot. The use of the Limited Common Easement Areas, however, are limited to the Owners and invitees of the Lots designated in the declaration establishing the Limited Common Easement Area.

4.2 **Title to Common Areas.** Except for portions dedicated to the public or any governmental authority and otherwise provided in this Section 4.2, title to the Common Areas, except the Common Easement Areas and Limited Common Easement Areas, will be conveyed to the Association by Declarant AS IS, but free and clear of monetary liens, on or before the Turnover Meeting. The Association, upon such conveyance, will assume all obligations to maintain, insure, and otherwise assume the obligations of the Declarant in respect of the Common Areas set forth in this Agreement or the Plat or any agreement entered by Declarant with City of Wilsonville in respect of such tracts. Title to Common Easement Areas and Limited Common Easement Areas, if any, subject to the easements set forth in this Declaration or the supplemental declaration creating such areas, rests in the Owners of the respective Lots within which such areas are located, or to the public if part of dedicated street rights-of-way.

4.3 **Extent of Owners' Rights.** The rights and easements of enjoyment in the Common Areas created hereby are subject to the following and to all other provisions of this Declaration:

(a) **Association Easements.** Declarant grants to the Association for the benefit of the Association and all Owners of Lots within the Property the following easements over, under and upon the Common Maintenance Areas:

(1) An easement for underground installation and maintenance of power, gas, electric, water and other utility and communication lines and services installed by Declarant or with the approval of the Board of Directors of the Association and any such easement shown on any plat of the Property.

(2) An easement for construction, maintenance, repair, and use of such areas, including any common facilities on the Common Area tracts.

(3) An easement for access for regular upkeep, maintenance, modification and replacement of the Front Yard landscaping and related irrigation equipment, including drainage systems, if any, and for making emergency repairs to the landscaping and related equipment and settings in the Front Yards of the Lots necessary for the public safety or to prevent damage to the Common Maintenance Areas or to another Lot, or to enforce this Declaration or the Rules and Regulations, or with the approval of the Board of Directors of the Association; and notwithstanding that such areas of Lots are not regular Common Maintenance Areas, an easement for access to unfenced yard landscaping and irrigation controllers on Lots to enforce this Declaration or the Rules and Regulations, including but not limited to standards for Lot maintenance thereunder.

(4) An easement for the purpose of making repairs to any existing structures on Common Areas.

(b) **Public and Utility Easements.**

The Common Areas are subject to the public and utility easements established the Plat. In addition, the public is hereby granted access easements over all sidewalks, pedestrian accesses and trails in the Common Areas within the Property as designated on the Plat. In addition, Declarant or the Association may (and, to the extent required by law will) grant or assign such easements to municipalities or other utilities performing utility services and to communication

companies, and the Association may grant free access thereon to police, fire and other public officials, and to employees of utility companies and communications companies serving the Property.

(c) **Use of the Common Areas.** The Common Areas will be used for the purposes set forth in any plat of the Property; Common Area tracts identified on any plat of the Property may not be partitioned or otherwise divided into parcels for residential use; and, no private structure of any type will be constructed on the Common Areas. Except as otherwise provided in this Declaration, the Common Areas are reserved for the use and enjoyment of all Owners. No private use may be made of the Common Areas except as otherwise provided in this Declaration. No Owner may place or cause to be placed on the Common Areas any trash, structure, equipment, furniture, package, or object of any kind. Nothing in this Declaration prevents the placing of a sign or signs upon the Common Areas by Declarant or the Association identifying the Property or identifying pathways or items of interest, signs restricting certain uses, or warning, traffic or directional signs, provided that such signs are approved by the Architectural Review Committee and comply with any applicable sign ordinances. The Board of Directors has authority to abate any trespass or encroachment upon the Common Areas at any time, by any reasonable means and with or without having to bring legal proceedings. A declaration annexing Additional Property may provide that the Owners of such Additional Property do not have the right to use a particular Common Area or facility located on such Common Area, in which event such Common Area will automatically become a "Limited Common Area" assigned to the Lots that have access thereto.

(d) **Alienation of the Common Areas.** The Association may not by act or omission seek to abandon, partition, subdivide, encumber as security for a debt, sell, transfer or convey the Common Areas owned directly or indirectly by the Association for the benefit of the Lots unless the holders of at least 80 percent of the Class A voting rights and the Class B Member (as defined in Section 8.3), if any, have given their prior written approval and unless approved by City of Wilsonville. Such approvals will not be required for dedications under Section 2.5. The Association, upon approval in writing of at least two-thirds of the Class A voting rights and the Class B Member, if any, and if approved by order or resolution of City of Wilsonville, may dedicate or convey any portion of the Common Areas to a park district or other public body. Any sale, transfer, conveyance or encumbrance permitted by this Declaration may provide that the Common Area may be released from any restrictions imposed by this Declaration if the request for approval of the action also includes approval of the release.

(e) **Leases, Easements, Rights-of-Way, Licenses and Similar Interests and Vacations of Roadways.** Notwithstanding the provisions of Section 4.3(d), the Association may execute, acknowledge and deliver leases, easements, rights-of-way, licenses and other similar interests affecting the Common Areas and consent to vacation of roadways within and adjacent to the Common Areas, subject to such approvals as are required by ORS 94.665(4) and (5).

(f) **Limitations on Use.** Use of the Common Areas is subject to the following:

- (1) The provisions of this Declaration and any applicable supplemental declaration;
- (2) Any restrictions or limitations contained in any deed or other instrument conveying such property to the Association;

(3) Easements reserved or granted in this Declaration or any supplemental declaration;

(4) The Common Areas may not be used for the construction of residential structures at any time.

(5) The Board's right to:

(A) adopt Rules and Regulations regulating use and enjoyment of the Common Areas, including rules limiting the number of guests who may use the Common Areas;

(B) suspend the right of an Owner to use the Common Areas as provided in this Declaration;

(C) dedicate or transfer all or any part of the Common Areas, subject to such approval requirements as may be set forth in this Declaration;

(D) impose reasonable membership requirements and charge reasonable admission or other use fees for the use of any recreational facility situated upon the Common Areas;

(E) permit use of any recreational facilities situated on the Common Areas by Persons other than Owners, their families, lessees and guests with or without payment of use fees established by the Board;

(F) designate areas and facilities of Common Areas as Public Areas; and

(G) provide certain Owners the rights to the exclusive use of those portions of the Common Areas designated as Limited Common Areas.

4.4 **Delegation of Use.** Any Owner may extend the Owner's right of use and enjoyment of the Common Areas to the members of the Owner's family, lessees and social invitees, as applicable, subject to reasonable regulation by the Board of Directors. An Owner who leases the Owner's Home will be deemed to have assigned all such rights to the lessee of such Home for the period of the lease.

4.5 **Easements Reserved by Declarant.** So long as Declarant owns any Lot, Declarant reserves an easement for itself and its successor and assigns (including any builder who purchased more than one Lot from Declarant for purposes of development), over, under and across the Common Areas to carry out sales and rental activities necessary or convenient for the sale or rental of Lots, including, without limitation, advertising and "For Sale" signs. Declarant, for itself and its successors and assigns, hereby retains a right and easement of ingress and egress over, in, upon, under and across the Common Areas and the right to store materials thereon and to make such other use thereof as may be reasonably necessary or incident to the construction of the Improvements on the Property or other real property owned by Declarant; provided, however, that no such rights may be exercised by Declarant in such a way as to unreasonably interfere with the occupancy of, use of, enjoyment of or access to an Owner's Lot by the Owner or the Owner's family, tenants, employees, guests, or invitees.

4.6 **Easement to Serve Other Property.** Declarant reserves for itself and its duly authorized agents, successors, assigns and Mortgagees, and the developers of Improvements in all future phases of Stafford Meadows, a perpetual easement over the Common Areas for the purposes of enjoyment, use, access and development of the property, even if such property is never made subject to this Declaration, including but not limited to, reservations for the benefit of real property in the vicinity of the Property that is owned by or that may be owned in the future by West Hills Land Development LLC, its successors and assigns, for so long as the same reserves annexation rights to the Property. This easement includes, but is not limited to, a right of ingress and egress over the Common Areas for construction, utilities, water and sanitary sewer lines, communication lines, drainage facilities, irrigation systems and signs, and ingress and egress for the benefit of other portions of Stafford Meadows and any Additional Property that becomes subject to this Declaration or any property in the vicinity of the Property or Additional Property that is then owned by Declarant or an affiliate thereof. Declarant agrees that such users are responsible for any damage caused to the Common Areas resulting from their actions in connection with development of such property. If the easement is exercised for permanent use by such property and such property or any portion thereof benefiting from such easement is not made subject to this Declaration, Declarant, its successors or assigns will enter a reasonable agreement with the Association to share the cost of any maintenance of such facilities. The allocation of costs in any such agreement will be based on the relative extent of use of such facilities and the number of dwelling units in such property compared to the number of Homes in the Property.

4.7 **Limited Common Areas.** If any Limited Common Areas are included in an annexation declaration, the respective Limited Common Areas will be subject to a reciprocal access easement for the use by the Owners of the benefited Lots for vehicular access and utilities and communication lines serving such Lots. Such areas will be operated, maintained, replaced, and improved by the Association, but the entire cost thereof, including reserves for future maintenance, repairs, and replacements, will be assessed on an equal basis as Limited Common Area Assessments to the Owners of Lots to which such Limited Common Areas pertain.

Article 5

PROPERTY RIGHTS IN LOTS

5.1 **Use and Occupancy.** The Owner of a Lot in the Property is entitled to the exclusive use and benefit of such Lot, except as otherwise expressly provided in this Declaration, but the Lot is bound by, and each Owner and Declarant must comply with, the restrictions contained in Article 6, all other provisions of this Declaration and the provisions of any supplement or amendment to this Declaration.

5.2 **Easements Reserved.** In addition to any utility and drainage easements shown on any recorded plat, Declarant hereby reserves the following easements for the benefit of Declarant and the Association:

(a) **Adjacent Common Maintenance Area.** The Owner of any Lot that includes a Common Maintenance Area or adjoins or blends together visually with any Common Maintenance Area must, as the Association so requires, permit the Association to enter upon the Lot to perform the maintenance of such Common Maintenance Area. The Owner and Occupant of each Lot is

responsible for controlling such Owner's or Occupant's pets so they do not harm or otherwise disturb Persons performing such maintenance on behalf of the Association.

(b) **Utility Easements.** Easements for installation and maintenance of utilities and drainage facilities may be reserved over portions of certain Lots, as shown on any recorded plat. Within the utility easement areas, the Architectural Review Committee will not permit any structure, planting or other material to be placed or permitted to remain on the easement area if such structure, planting or other material may damage or interfere with the installation or maintenance of utilities, change the direction of flow of drainage systems or drainage infiltration facilities in the easements, or obstruct or retard the flow of water through drainage channels in the easements and/or to the extent not permitted in the City of Wilsonville Development Agreements. The easement area of each Lot and all Improvements in it will be maintained continuously by the Owner of the Lot, except for those Improvements for which a public authority or utility company is responsible, and except Common Maintenance Areas, which are maintained by the Association.

(c) **Construction on Adjoining Lot.** Declarant hereby reserves for the benefit of Declarant and its assigns a temporary easement over each Lot for access to the adjoining Lot for construction purposes, including temporary placement of ladders or scaffolding. Declarant will restore the Lot to its condition as it existed prior to such access and will be responsible for any damage to the Lot. Declarant hereby reserves for the benefit of Declarant and its assigns a temporary easement over each Lot Declarant then-currently owns to accommodate uses related to portions of the Property being used for the 2019 "Street of Dreams" event.

(d) **Utility Inspection and Repairs.** Each utility and communication service provider and its agents or employees have authority to access all Lots, but not Improvements constructed thereon, and the Common Areas on which communication, power, gas, drainage, sewage or water facilities may be located for installing, operating, maintaining, improving or constructing such facilities; reading meters; inspecting the condition of pipes, lines and facilities; and completing repairs. The Owner of any such Lot will be given advance notice if possible. In the case of an emergency, as determined solely by the utility or communication service provider, no prior notice will be required.

(e) **Easements for Encroachments.** Declarant grants reciprocal appurtenant easements of encroachment, and for maintenance and use of any permitted encroachment, between each Lot and any adjacent Common Areas and between adjacent Lots due to the unintentional placement or settling or shifting of the Improvements constructed, reconstructed or altered thereon (in accordance with the terms of this Declaration and the Design Guidelines) to a distance of not more than three feet, as measured from any point on the common boundary along a line perpendicular to such boundary. However, in no event will an easement for encroachment exist if such encroachment occurred due to willful and knowing conduct on the part of, or with the knowledge and consent of, the Person claiming the benefit of such easement.

(f) **Easements for Maintenance, Emergency and Enforcement.** Upon request given to the Owner and any Occupant, any Person authorized by the Association may enter a Lot to perform necessary maintenance, repair, or replacement of any property for which the Association has maintenance, repair or replacement responsibility under this Declaration, to make emergency repairs to a Lot that are necessary for the public safety or to prevent damage to Common Areas or to another Lot, or to enforce this Declaration or the Rules and Regulations. Requests for entry must be made in advance and for a reasonable time, except in the case of any emergency, when

the right of entry is immediate. An emergency entry does not constitute a trespass or otherwise create a right of action in the Owner of the Lot.

(g) **Future Easements.** Declarant reserves the nonexclusive right and power to grant and record such specific easements as may be necessary, in the sole discretion of Declarant, in connection with the development of any of the Property. The location of any such easement is subject to the written approval of the Owner of the burdened Lot, which approval will not unreasonably be withheld, delayed or conditioned.

Article 6

GENERAL USE RESTRICTIONS

6.1 **Structures Permitted.** No structures may be erected or permitted to remain on any Lot except a single Home and structures normally accessory thereto that have been constructed by Declarant or have first been approved by the Architectural Review Committee pursuant to Article 7. A Home will be deemed a permitted improvement on a Lot under this Section 6.1 notwithstanding that a Home may include within its exterior walls an independent living area with a separate outside entrance. This provision does not exclude construction of a private greenhouse or storage unit, or an accessory dwelling unit as defined by City of Wilsonville ordinances, provided that the location, size and design of such structures are in conformity with the applicable ordinances and permit requirements of City of Wilsonville, are compatible in design and style with the Home constructed on the Lot, and have been approved by the Committee.

6.2 **Residential Use.** Lots must only be used for residential purposes. Except with the consent of the Board of Directors, no trade, craft, business, profession, commercial or similar activity of any kind will be conducted on any Lot, nor may any goods, equipment, vehicles, materials, or supplies used in connection with any trade, service or business be kept or stored on any such Lot. The mere parking on a Lot of a vehicle bearing the name of a business will not, in itself, constitute a violation of this provision. Nothing in this Section 6.2 will be deemed to prohibit (a) activities relating to the sale of Homes; (b) the right of Declarant or any contractor or home builder to construct Improvements on any Lot, to store construction materials and equipment on such Lots in the normal course of construction, and to use one or more Homes as sales offices or model homes for purposes of sales in Stafford Meadows; and (c) the right of the Owner of a Lot to maintain his or her professional personal library, keep his or her personal business or professional records or accounts, handle his or her personal business or professional telephone calls or confer with business or professional associates, clients or customers in his or her Home by appointment only or to operate a registered or certified family child care home pursuant to ORS 329A.250 to 329A.500. The Board will not approve commercial activities otherwise prohibited by this Section 6.2 unless the Board determines that only normal residential activities would be observable outside of the Home and that the activities would not be in violation of applicable law. The Board may specify acceptable activities in the Rules and Regulations.

6.3 **Offensive or Unlawful Activities.** No noxious or offensive activities may be carried out upon the Property, nor will anything be done or placed on the Property that interferes with or jeopardizes the enjoyment of the Property, or that is a source of annoyance to Owners or Occupants. Occupants will use extreme care about creating disturbances, making noises or using musical instruments, radios, televisions, amplifiers and audio equipment that may disturb other Occupants.

No unlawful use may be made of the Property or any part thereof, and all valid laws, zoning ordinances and regulations of all governmental bodies having jurisdiction over the Property must be observed. Owners and other Occupants must not engage in any abusive or harassing behavior, either verbal or physical, or any form of intimidation or aggression directed at other Owners, Occupants, guests or invitees, or directed at the managing agent, its agents or employees, or vendors.

6.4 **Animals.** No animals, livestock, or poultry of any kind may be raised, bred, kept or permitted within any Lot other than seeing eye horses and a reasonable number of ordinary household pets that are not kept, bred, or raised for commercial purposes and that are reasonably controlled so as not to be a nuisance. The Board of Directors has the authority to determine what is an "ordinary household pet." Any unrestrained or barking dog constitutes a nuisance. Any inconvenience, damage or unpleasantness caused by such pets are the responsibility of their respective Owners. No animal is permitted to roam the Property unattended, and each dog must be kept on a leash while outside a Lot. The construction or installation of dog-runs and doghouses are subject to prior review and approval by the Architectural Review Committee pursuant to Article 7. An Owner or Occupant may be required to remove a pet upon receipt of the third written notice from the Board of violations of any rule, regulation or restriction governing pets within the Property.

6.5 **Maintenance of Structures.** Each Owner must maintain the Owner's Lot and Improvements thereon, including sidewalks adjacent to the Owner's Lot, and walkways and the driveway, in a clean and attractive condition, in good repair and in such fashion as not to create a fire or other hazard. Such maintenance includes, without limitation, exterior painting or staining, repair, replacement and care for roofs, gutters, downspouts, exterior building surfaces, walks, lights, perimeter fences and other exterior Improvements and glass surfaces. All repainting or re-staining, any change in type of roof or roof color and any exterior remodeling or changes are subject to prior review and approval by the Architectural Review Committee. Damage caused by fire, flood, storm, earthquake, riot, vandalism or other causes are likewise the responsibility of each Owner and must be restored within a reasonable time. Any change in appearance must first be approved by the Committee.

6.6 **Landscape Installation.** All landscaping on a Lot must be completed within a reasonable time not to exceed 90 days from the date of occupancy of the Home constructed on a Lot. In the event of undue hardship due to weather conditions, this provision may be extended for a reasonable length of time upon approval of the Architectural Review Committee. Landscape plans will be submitted to the Committee for approval. Landscaping in the Front Yards must not be changed by an Owner without the approval of the Committee. Notwithstanding such limitations, an Owner may utilize planting pots or other free standing, movable planters within the Front Yard of his or her Lot; provided that the planters and plants growing in the planters are properly maintained. The Board of Directors may regulate the number and type of such planters.

6.7 **Maintenance of Landscaping.** In any every portion of the Owner's Lot other than the Front Yard, the Owner will keep all shrubs, trees, grass and plantings of every kind on the Owner's Lot, neatly trimmed, properly cultivated, and free of trash, weeds and other unsightly material. Following initial installation by the Declarant or builder the Association will be responsible for maintenance and irrigation of landscaping of the Front Yard of Lots, including the irrigation equipment and controllers. No Owner or Occupant of one of these Lots may alter, change or tamper with the irrigation equipment, controllers or settings in a Front Yard the Association maintains, which settings belong to the Association.

6.8 **Boundary Fences.** The responsibility for and cost of maintenance, repair and replacement of fencing on boundary lines between Lots will be shared by the Owners on either side of the fence in accordance with ORS Chapter 96; provided, however, that the Association is responsible for the maintenance of any fencing or walls adjacent to Tracts E and H the cost of which will be a common expense.

6.9 **Fences, Hedges and Walls.** No fence, hedge, structure, wall, or retaining wall may be constructed or exist anywhere on any Lot without prior approval of the Architectural Review Committee and in accordance with its Design Guidelines. No planting or structure obstructing vision at driveways or intersections is permissible or may be maintained. Installation and maintenance of retaining walls that are required and approved by the Committee due to topographic conditions of a given Lot are the sole and absolute responsibility of the individual Lot Owner, are to be aesthetically incorporated into the landscaping of the Lot, and are not the responsibility of the Association.

6.10 **Pest and Weed Control.** No Owner will permit any thing or condition to exist upon any portion of the Property that will induce, breed or harbor infectious plant or animal diseases or noxious insects or vermin. Each Owner must control noxious weeds on the Owner's Lot.

6.11 **Parking.** Except as may otherwise be provided in the Rules and Regulations, parking in excess of 24 hours of boats, trailers, motorcycles, mobile homes, campers or other recreational vehicles or equipment, regardless of weight, are not be allowed on any part of the Property or on public streets within the Property unless within areas designated for such purposes by the Board of Directors or within the confines of an enclosed garage and approved by the Architectural Review Committee before construction or screened from view in a manner approved by the Committee. No portion of the vehicle may project beyond the screened area. If there is no rear fencing and the vehicle could be seen from outside the Lot other than from the front road, the vehicle must also be screened from view from that direction. Vehicles may not be used for storage of materials for more than 48 hours without approval from the Committee. No motor vehicle of any type may constructed, reconstructed, or repaired in such a manner as will be visible from neighboring property, nor may any vehicle be occupied for residential purposes while located within the Property. The Rules and Regulations may restrict the amount of noise vehicles may generate. The parking of vehicles is prohibited on any public or private street within the Property if posted or marked "No Parking" or if curbs are painted to restrict parking. Blocking a Common Area tract established under any plat of the Property, a roadway, Limited Common Area driveway, or alley is prohibited. No parking is permitted in Common Areas unless so posted.

6.12 **Vehicles in Disrepair.** No Owner will permit any vehicle that is in an extreme state of disrepair or not currently licensed to be abandoned or to remain parked on the Owner's Lot (unless screened from view) or on the Common Area or any street for a period in excess of 48 hours. A vehicle will be deemed in an "extreme state of disrepair" when the Board of Directors determines that its presence reasonably offends the Occupants of the area due to its appearance or continued inoperability. Should any Owner fail to remove such vehicle within five days following the date on which notice is mailed to him or her by the Association, the Association may have the vehicle removed from the Property and charge the expense of such removal to the Owner.

6.13 **Signs.** No signs may be erected or maintained on any Lot except that not more than one "For Sale" sign placed by the Owner, Declarant or a licensed real estate agent, not exceeding 24 inches high and 36 inches long, may be temporarily displayed within the Front Yard of any Lot or

inside of a first floor, front street facing window of a Home located on a Lot, and two such signs may be placed on a Lot during the course of initial construction of a dwelling on such Lot. "For Rent" and "For Lease" signs are prohibited. The restrictions contained in this paragraph do not prohibit the temporary placement of "political" signs on any Lot by the Owner, subject to reasonable regulations adopted by the Architectural Review Committee relating to size and length of display.

6.14 **Rubbish, Trash and Outside Storage.** No part of the Property may be used as a dumping ground for trash or rubbish of any kind, and no rubbish, refuse or garbage is allowed to accumulate. All garbage and other waste must be kept in appropriate sanitary containers for proper disposal and out of public view, except the night before and during garbage pickup days. Yard rakings, dirt, and other material resulting from landscaping work will not be dumped onto Lots, streets, or Common Maintenance Areas. Storage areas, and the storage of machinery and equipment are prohibited on any Lot, unless obscured from view of neighboring property and streets by an appropriate screen or enclosure approved by the Architectural Review Committee. Tarps and covers are prohibited except as otherwise provided in the Rules and Regulations and the Design Guidelines. Should any Owner or Occupant responsible for its generation fail to remove any such materials within 10 days following the date on which notice is mailed to the Owner or Occupant by the Board of Directors, the Association may have the materials removed and charge the expense of such removal to the Owner.

6.15 **Construction.** The construction of any building on any Lot, including painting and all exterior finish, must be completed within eight months from the beginning of construction so as to present a finished appearance when viewed from any angle, and the Home will not be occupied until so completed. In the event of undue hardship due to weather conditions or other causes beyond the reasonable control of the Owner, this time period may be extended for a reasonable length of time upon approval from the Architectural Review Committee. The building area must be kept reasonably clean and in workmanlike order, free of litter, during the construction period with a garbage can or other garbage disposal facility on the site during such period. Debris may not be deposited on any other Lot. All construction debris, stumps, trees, etc. must be periodically removed from each Lot by the builder or Owner, and such debris will not be dumped in any area within the Property unless approved by the Committee. The Rules and Regulations may impose reasonable limitations on the hours during which construction activities may take place. If construction has not commenced upon any Lot within one year after an Owner has acquired it, other than Declarant or an affiliate of Declarant, the Owner must install the sidewalk and landscape the area within 20 feet from the curb. The Owner will irrigate and maintain this area. The Committee may waive this requirement if it determines that construction will commence within a reasonable time. In any case, all unimproved or unoccupied Lots will be kept in a neat and orderly condition, free of brush, vines, weeds and other debris, and grass thereon must be cut or mowed at sufficient intervals to prevent creation of a nuisance or fire hazard.

6.16 **Temporary Structures.** No incomplete building or structure of a temporary character, nor any trailer, basement, tent, shack, garage, barn, or other outbuilding may be used on any Lot at any time as a residence either temporarily or permanently.

6.17 **Recreational Equipment.** Unless approved by the Architectural Review Committee or permitted by the Design Guidelines, no playground, athletic or recreational equipment or structures, including without limitation, permanently installed basketball backboards, hoops and related supporting structures, will be placed, installed or utilized on any Lot in view from any street,

sidewalk or Common Area within the Property. Portable basketball backboards, hoops, soccer goal nets, and related supporting structures may be used during daylight hours, so long as such equipment is stored out of view from any street, sidewalk, or Common Area within the Property.

6.18 **Service Facilities.** Service facilities (garbage containers, fuel tanks, clotheslines, etc.) will be screened so that the elements screened are not visible at any time from the street or a neighboring property. The Architectural Review Committee may develop guidelines for clotheslines that are consistent with the green sustainability objectives of Stafford Meadows. All telephone, power, natural gas, cable television and other communication lines will be placed underground, except as otherwise mandated by local jurisdictions or public utility companies.

6.19 **Antennas and Satellite Dishes.** Exterior antennas, satellite receivers, and transmission dishes are prohibited, except to the extent expressly mandated by rules adopted by the Federal Communication Commission. Specifically, ham radio antennas, cell towers, satellite dishes one meter or larger, television antennas or on masts 12 feet or higher and multi-point distribution antennas are prohibited. To the extent permitted by Federal Communication Commission rules, the Board of Directors may require all other antennas and dishes to be hidden from view from streets and adjoining dwellings. Other communication devices will not be permitted to be placed upon any Lot except in accordance with rules established by the Architectural Review Committee in accordance with Section 7.3.

6.20 **Exterior Lighting or Noisemaking Devices.** Except with the consent of the Architectural Review Committee, no exterior lighting or noisemaking devices may be installed or maintained on any Lot, other than as originally installed by the builder of the home and security alarms and fire alarms. Seasonal holiday lighting and decorations are permissible if consistent with any applicable Rules and Regulations and if installed not more than 30 days before and removed within 30 days after the celebrated holiday. The Committee may regulate the shielding or hours of use of lighting in order to reduce annoyance to neighboring properties. The location of air conditioning compressors must be approved by the Committee prior to installation.

6.21 **Subdividing or Partitioning Lots.** Except as otherwise provided in this Declaration, no Lot may be subdivided or partitioned, nor may its Lot lines be adjusted, without the approval of Clackamas County and the Architectural Review Committee.

6.22 **Grades, Slopes and Drainage.** Each Owner of a Lot accepts the burden of the established drainage pattern and grades, slopes and courses related thereto over any Lot or Common Area, and will not in any manner alter, modify or interfere with such drainage pattern, grades, slopes and courses, any public vegetated swale or rain garden, without the prior approval of the Architectural Review Committee, and then only to the extent and in the manner specifically approved. No structure, plantings or other materials may be placed or permitted to remain on or within any grades, slopes or courses, nor may any other activities be undertaken that may damage or interfere with established slope ratios, create erosion or sliding problems, or obstruct, change the direction of or retard the flow of water through drainage channels.

6.23 **Garages.** All garage doors must remain closed except to permit entrance and exit and in connection with outside activities. Garages will be used primarily for parking of vehicles, and only secondarily for storage, and must not be used as office or living space without the prior approval of the Architectural Review Committee.

6.24 **Windows, Decks, Porches and Outside Walls.** To preserve the attractive appearance of the Property, the Association may regulate the nature of items that may be placed in or on windows, decks, porches, and the outside walls so as to be visible from the street or Common Areas, including, without limitation, window air conditioners and fans. Window coverings, curtains, shutters, drapes or blinds, other than those of commercially produced quality, are not permitted to be visible from any public or private street, pathway, Common Area or adjacent property. No aluminum foil, reflective film, or similar treatment may be placed on windows or glass doors. Garments, rugs, laundry and other similar items may not be hung from windows, facades, porches or decks.

6.25 **Air Conditioning Units.** Window or portable air conditioning units are prohibited.

6.26 **Firearms and Fireworks.** Firearms may not be discharged within Stafford Meadows at any time. Firearms are to be unloaded at all times while in Stafford Meadows. Weapons including "BB" guns, pellet guns, dart guns, paint-ball guns and any other weapon capable of firing a projectile are considered firearms. Oregon statutory law prohibits the use of certain types of fireworks. Only fireworks considered legal are allowed. Owners and their guests must clean up any fireworks discharged in Stafford Meadows.

6.27 **Nonbiodegradable Substances.** No motor oil, paint or other caustic or nonbiodegradable substance may be deposited in any street drain, sewer system or on the grounds within Stafford Meadows Any fine levied by a governmental agency and/or costs associated with the cleanup of any nonbiodegradable substance for any spill that is caused by any Owner or their guests will be the responsibility of the offending Owner.

6.28 **Leasing and Rental of Homes.** A Home may not be leased or rented for a period of less than 30 days. All leases of a Home must be by written agreement specifying that: (i) the tenant is subject to all provisions of the Declaration, Bylaws and Rules and Regulations; and (ii) failure to comply with any provision of the Declaration, Bylaws or Rules and Regulations constitutes a default under the rental agreement. The Owner must provide each tenant a copy of the Declaration, Bylaws and Rules and Regulations. The Owner is responsible for any violations by tenants and is directly responsible for either correcting or eliminating such violations or causing tenant to do the same.

6.29 **Rules and Regulations.** In addition, the Association from time to time may adopt, modify, or revoke such nondiscriminatory Rules and Regulations governing the conduct of Persons and the operation and use of the Property as it may deem necessary or appropriate to ensure the peaceful and orderly use and enjoyment of the Property. A copy of the Rules and Regulations, upon adoption, and a copy of each amendment, modification or revocation thereof, must be delivered by the Board of Directors promptly to each Owner. The Rules and Regulations may be adopted by the Board, except as may be otherwise provided in the Bylaws of the Association.

Article 7

ARCHITECTURAL REVIEW COMMITTEE

7.1 **Architectural Review.** No Improvement may be commenced, erected, placed or altered on any Lot, including without limitation re-landscaping, until the construction or landscaping plans, respectively, and specifications showing the nature, shape, heights, materials, colors and proposed location of the Improvement or landscaping, have been submitted to and approved in

writing by the Architectural Review Committee, except that construction by Declarant or any affiliate of Declarant will be presumed to have been approved and is thereby exempt from this review. Such exception for Declarant and such builders' construction will include without limitation the construction of buildings, hedges, walls, and fences. The building plans to be submitted will consist of one complete set of plans and specifications in the usual form showing insofar as appropriate, (i) size and dimensions of the Improvements; (ii) exterior design; (iii) approximate exterior color scheme; (iv) location of Improvements on the Lot, including setbacks, driveway and parking areas; and (v) location of existing trees to be removed. These plans and specifications must be left with the Committee until 60 days after notice of completion has been received by the Committee. This is for determining whether, after inspection by the Committee, the Improvement complies substantially with the plans and specifications that were submitted and approved. The Committee is not responsible for determining compliance with structural and building codes, zoning codes, or any other governmental regulations, all of which are the responsibility of the applicant. The procedure and specific requirements for review and approval of construction may be set forth in Design Guidelines adopted from time to time by the Committee. The Committee may charge a reasonable fee to cover the cost of processing an application. In all cases in which the Committee's consent is required by this Declaration, the provisions of this Article 7 apply, except that this Article 7 does not apply to construction by Declarant or any affiliate of Declarant.

7.2 **Committee Decision.** The Architectural Review Committee will render its decision with respect to a construction proposal within 30 working days after it has received all material required by it with respect to the application. In the event the Committee fails to render its approval or disapproval within 45 working days after the Committee has received all material required by it with respect to the proposal, or if no suit to enforce this Declaration has been commenced within one year after completion thereof, approval will not be required and the related provisions of this Declaration will be deemed to have been fully complied with.

7.3 **Committee Discretion.** The Architectural Review Committee may withhold consent to any proposed work if the Committee finds the proposed work would be inappropriate for the particular Lot or incompatible with the Design Guidelines or design standards that the Committee intends for Stafford Meadows. It is the intent and purpose of this Declaration to ensure quality of workmanship and materials, to ensure harmony of external design with the existing Improvements and with respect to topography and finished grade elevations, and to ensure compliance with the setback requirements contained in the conditions of approval of Clackamas County. Considerations such as siting, shape, size, color, design, materials, height, screening, impairment of the view from other Lots or other effect on the enjoyment of other Lots or the Common Area, disturbance of existing terrain and vegetation, and any other factors that the Committee reasonably believes to be relevant may be considered by the Committee in determining whether or not to consent to any proposed work. Regulations on siting of television antennas and satellite receiving dishes must be in conformance with any applicable Federal Communications Commission rules.

7.4 **Design Guidelines.**

(a) **Adoption of Design Guidelines.** Declarant or the Architectural Review Committee will prepare Design Guidelines, which may contain general provisions applicable to all of the Property as well as specific provisions that vary from Neighborhood to Neighborhood or any portions of a Neighborhood or Neighborhoods or as to types of use or Improvements. The Design Guidelines will interpret and implement the provisions of this Declaration for architectural review and

establish guidelines for architectural design, placement of buildings, color schemes, exterior finishes and materials and similar features that may be used in Stafford Meadows; provided, however that the Design Guidelines will not be in derogation of the minimum standards established by this Declaration. The Design Guidelines are not the exclusive basis for decisions of the Committee, and compliance with the Design Guidelines does not guarantee approval of any application. Regulations on siting of television antennas and satellite receiving dishes will be in conformance with any applicable Federal Communications Commission rules. The Design Guidelines may not unreasonably restrict solar energy systems in violation of ORS 105.880 or electrical vehicle charging stations in conflict with ORS 94.762.

(b) **Publication of Design Guidelines.** The Architectural Review Committee must make the Design Guidelines available to Owners and builders who seek to engage in development or construction within the Property. In Declarant's discretion, the Design Guidelines may be recorded, in which event the recorded version, as it may be amended from time to time, will control in the event of any dispute as to which version of the Design Guidelines was in effect at any particular time.

(c) **Amendment of Design Guidelines.** Declarant has sole and full authority to amend the Design Guidelines during the Development Period notwithstanding a delegation of reviewing authority to the Architectural Review Committee unless Declarant also delegates the power to amend to the Committee. Upon delegation of Declarant's right to amend, the Committee will have the authority to amend the Design Guidelines with the consent of the Board of Directors. Any amendments to the Design Guidelines will be prospective only and will not apply to require modifications to or removal of structures previously approved once the approved construction or modification has commenced. There is no limitation on the scope of amendments to the Design Guidelines, and such amendments may remove requirements previously imposed or otherwise make the Design Guidelines less restrictive.

7.5 **Membership: Appointment and Removal.** The Architectural Review Committee will consist of as many Persons as Declarant may from time to time appoint. Declarant, at its discretion, may appoint a single Person to serve as the Committee and may remove any member of the Committee from office at any time and may appoint new or additional members at any time. The Association will keep on file at its principal office a list of the names and addresses of the members of the Committee. Declarant may at any time delegate to the Board of Directors of the Association the right to appoint or remove members of the Committee. In such event, or in the event Declarant fails to appoint an Architectural Review Committee, the members of the Committee will be appointed by, and serve on behalf of, the Board, or if the Board fails to appoint such members, then the Board will serve as the Committee. The term of office for each member appointed by the Board will be one year unless lengthened by the Board at the time of appointment or unless the Board serves as the Committee, in which case the terms of the members will be the same as their terms as Board members. The Board may appoint any or all of its members to the Committee and is not required to appoint non-Board members. The Board may appoint one or more members to the Committee who are not Owners, but who have special expertise regarding the matters that come before the Committee. In the sole discretion of the Board, such non-Owner members of the Committee may be paid for such services, the cost of which may be paid by the applicants or treated as a common expense, as determined by the Board.

7.6 **Majority Action.** Except as otherwise provided in this Declaration, a majority of the members of the Architectural Review Committee has the power to act on behalf of the Committee, without the necessity of a meeting and without the necessity of consulting the remaining members of the Committee. The Committee may render its decision only by written instrument setting forth the action taken by the consenting members.

7.7 **Liability.** Neither the Architectural Review Committee nor any member thereof is liable to any Owner, Occupant, builder or developer for any damage, loss or prejudice suffered or claimed on account of any action or failure to act of the Committee or a member of the Committee, and the Association will indemnify the Committee and its members therefrom, provided only that the member has, in accordance with the actual knowledge possessed by him or her, acted in good faith.

7.8 **Nonwaiver.** Consent by the Architectural Review Committee to any matter proposed to it or within its jurisdiction will not be deemed to constitute a precedent or waiver impairing its right to withhold approval as to any similar matter thereafter proposed or submitted to it for consent.

7.9 **Appeal.** At any time after Declarant has delegated appointment of the members of the Architectural Review Committee to the Board of Directors pursuant to Section 7.5, any Owner adversely affected by action of the Committee may appeal such action to the Board. Appeals must be made in writing within 10 days of the Committee's action and must contain specific objections or mitigating circumstances justifying the appeal. If the Board is already acting as the Committee, the appeal will be treated as a request for a rehearing, in which case the Board will meet and receive evidence and argument on the matter. A final, conclusive decision will be made by the Board within 15 working days after receipt of such notification.

7.10 **Effective Period of Consent.** The Architectural Review Committee's consent to any proposed work will automatically be revoked one year after issuance unless construction of the work has been substantially commenced in the judgment of the Committee and thereafter diligently pursued, or unless the Owner has applied for and received an extension of time from the Committee.

7.11 **Estoppel Certificate.** Within 20 business days after written request is delivered to the Architectural Review Committee by any Owner, and upon payment to the Committee of a reasonable fee fixed by the Committee to cover costs, the Committee will provide such Owner with an estoppel certificate executed by a member of the Committee and acknowledged, certifying with respect to any Lot owned by the Owner, that as of the date of the certificate either (a) all Improvements made or done upon or within such Lot by the Owner comply with this Declaration or (b) such Improvements do not so comply, in which event the certificate must also identify the noncomplying Improvements and set forth with particularity the nature of such noncompliance. Any purchaser from the Owner, and any Mortgagee or other encumbrancer, is entitled to rely on such certificate with respect to the matters set forth therein, such matters being conclusive as between Declarant, the Committee, the Association and all Owners, and such purchaser or Mortgagee.

7.12 **Enforcement.** If during or after the construction the Architectural Review Committee finds that the work was not performed in substantial conformance with the approval granted, or that the required approval was not obtained, the Committee will notify the Owner in writing of the noncompliance, specifying the particulars of the noncompliance. The Committee may require conforming changes to be made or that construction be stopped. The cost of any required changes will be borne by the Owner. The Committee has the power and authority to order any manner

of changes or complete removal of any Improvement, alteration, or other activity for which prior written approval from the Committee is required and has not been obtained or waived in writing. If an Owner fails to comply with an order of the Committee, then, subject to the Owner's right of appeal under Section 7.9, either the Committee or the Board of Directors may enforce compliance in accordance with the procedures set forth in Section 11.1.

Article 8

ASSOCIATION

Declarant has organized, or before conveyance of the first Lot will organize, an association of all of the Owners within Stafford Meadows. Such Association, and its successors and assigns, will be organized as an Oregon nonprofit corporation under the name "**Stafford Meadows Homeowners Association,**" and will have such property, powers and obligations as are set forth in this Declaration for the benefit of the Property and all Owners of Lots located therein.

8.1 **Organization.** Declarant will, before the first Lot is conveyed to an Owner, organize the Association as a nonprofit corporation under the general nonprofit corporation laws of the State of Oregon. The Articles of Incorporation of the Association will provide for its perpetual existence, but in the event the Association is at any time dissolved, whether inadvertently or deliberately, it will automatically be succeeded by an unincorporated association of the same name. In that event, the unincorporated association will have all the property, powers and obligations of the incorporated association existing immediately prior to dissolution. To the greatest extent possible, any successor unincorporated association will be governed by the Articles of Incorporation and Bylaws of the Association as if they had been made to constitute the governing documents of the unincorporated association and will be served by the members of the Board of Directors and the officers who served immediately prior to dissolution.

8.2 **Membership.** Every Owner of one or more Lots within the Property must, immediately upon creation of the Association and thereafter during the entire period of such Owner's ownership of one or more Lots within the Property, be a member of the Association. Such membership commences, exists, and continues simply by virtue of such ownership; expires automatically upon termination of such ownership; and need not be confirmed or evidenced by any certificate or acceptance of membership.

8.3 **Voting Rights.** The Association has two classes of voting membership:

Class A. Class A Members are all Owners with the exception of the Class B Member and are entitled to one vote for each Lot owned. When more than one Person holds an interest in any Lot, all such Persons are members. The vote for such Lot is exercised as they among themselves determine, but in no event will more than one vote be cast with respect to any Lot.

Class B. The Class B Member is Declarant, who is entitled to three votes for each Lot owned by Declarant. The Class B Membership will cease and be converted to Class A Membership on the happening of any of the following events, whichever occurs earlier:

(1) When all of the Lots in the final phase of development of Stafford Meadows have been Sold and conveyed to Owners other than a successor Declarant; or

(2) At such earlier time as Declarant may elect in writing to terminate Class B Membership.

8.4 **General Powers and Obligations.** The Association has, exercises and performs all of the following powers, duties, and obligations:

(a) The powers, duties and obligations granted to the Association by this Declaration.

(b) The powers and obligations of a nonprofit corporation pursuant to the general nonprofit corporation laws of the State of Oregon.

(c) The powers, duties and obligations of a homeowners association pursuant to the Oregon Planned Community Act.

(d) Any additional or different powers, duties and obligations necessary or desirable for carrying out the functions of the Association pursuant to this Declaration or otherwise promoting the general benefit of the Owners within the Property.

The powers and obligations of the Association may from time to time be amended, repealed, enlarged or restricted by changes in this Declaration made in accordance with the provisions of this Declaration, accompanied by any required changes in the Articles of Incorporation or Bylaws of the Association made in accordance with such instruments and with the nonprofit corporation laws of the State of Oregon.

8.5 **Specific Powers and Duties.** The powers and duties of the Association include, without limitation, all of the following:

(a) **Maintenance and Services.** The Association will provide maintenance and services for the Property as provided in Article 9 and other provisions of this Declaration.

(b) **Insurance.** The Association will obtain and maintain in force policies of insurance as determined by the Board of Directors and in accordance with any requirements in this Declaration or the Bylaws of the Association.

(c) **Rulemaking.** The Association will make, establish, promulgate, amend and repeal Rules and Regulations as provided in Section 0.

(d) **Assessments.** The Association will adopt budgets and impose and collect Assessments as provided in Article 10.

(e) **Enforcement.** The Association will perform such acts, whether or not expressly authorized by this Declaration, as may be reasonably necessary to enforce the provisions of this Declaration and the Rules and Regulations adopted by the Association, including, without limitation, enforcement of the decisions of the Architectural Review Committee. Nothing in this Declaration may be construed as requiring the Association to take any specific action to enforce violations.

(f) **Employment of Agents, Advisers and Contractors.** The Association, through its Board of Directors, may employ the services of any Person as manager; hire employees to manage, conduct and perform the business, obligations and duties of the Association; employ professional counsel and obtain advice from such Persons such as, but not limited to, landscape architects, architects, planners, attorneys and accountants; and contract for or otherwise provide for all services necessary or convenient for the management, maintenance and operation of the Property; provided, however, the Board may not incur or commit the Association to incur legal fees in excess of \$5,000 for any specific litigation or claim matter or enter into any contingent fee contract or any claim in excess of \$100,000 unless the Owners have enacted a resolution authorizing the incurring of such fees by a vote of 75 percent of the total voting rights of the Association. These limitations are not applicable to legal fees incurred in defending the Association or the Board from claims or litigation brought against them. The limitations set forth in this paragraph (f) will increase by 10 percent on each fifth anniversary of the recording of this Declaration.

(g) **Borrow Money.** The Association may borrow and repay money for the purpose of performing its duties under this Declaration; provided, however, that such borrowing in any calendar year may not exceed 20 percent of the estimated budgeted expenses of the Association for that calendar year unless the owners have enacted a resolution authorizing the project by a majority of the voting rights of the members. The Association may pledge Association income to secure such borrowing, and, subject to Section 4.3(d), encumber the Common Areas as security for the repayment of such borrowed money.

(h) **Acquire and Hold Title to Property.** The Association may acquire and hold title to real and personal property and interests therein, and must accept any real or personal property, leasehold or other property interests within Stafford Meadows conveyed to the Association by Declarant.

(i) **Transfers, Dedications, Encumbrances and Easements.** Except as otherwise provided in Sections 4.3(d) and 4.3(e), the Association may sell, transfer or encumber and grant easements upon all or any portion of the Common Area, or other real property to which it then holds title, to a Person, whether public or private, and dedicate or transfer all or any portion of such Common Area or property to any public agency, authority or utility for public purposes.

(j) **Create Classes of Service and Make Appropriate Charges.** The Association may, in its sole discretion, create various classes of service and make appropriate Individual Assessments or charges therefor to the users of such services, including, but not limited to, reasonable admission and other fees for the use of any and all recreational facilities situated on the Common Areas, without being required to render such services to those of its members who do not assent to such charges and to such related Rules and Regulations as the Board deems proper. In addition, the Board has the right to discontinue any service upon nonpayment of Assessments or to eliminate any service for which there is no demand or for which there are inadequate funds to maintain the same.

(k) **Restoring Damaged Improvements.** In the event of damage to or destruction of Common Areas or other property that the Association insures, the Board of Directors or its duly authorized agent must file and adjust all insurance claims and obtain reliable and detailed estimates of the cost of repairing or restoring the property to substantially the condition in which it existed prior to the damage, allowing for changes or Improvements necessitated by changes in

applicable building codes. If a decision is made not to restore the damaged Improvements, and no alternative Improvements are authorized, the affected property will be cleared of all debris and ruins and thereafter will be maintained by the Association in a neat and attractive, landscaped condition. If insurance proceeds are insufficient to cover the costs of reconstruction, the Board may levy Special Assessments to cover the shortfall against those Owners responsible for the premiums for the applicable insurance coverage. Any insurance proceeds remaining after paying the costs of repair or reconstruction, or after such settlement as is necessary and appropriate, will be retained by the Association for the benefit of all or some of the Owners, as appropriate, and placed in a capital Improvements account. This is a covenant for the benefit of Mortgagees and may be enforced by the Mortgagee of any affected Lot.

(l) **Security.** The Association may, but is not obligated to, maintain or support certain activities within Stafford Meadows designed to make the Property more enjoyable or safer than it otherwise might be. **Neither the Association, Declarant nor any managing agent will be considered insurers or guarantors of security or safety within the Property, nor will either be held liable for any loss or damage by reason of failure to provide adequate security or ineffectiveness of security or safety measures undertaken. No representation or warranty is made that any system or measure, including any mechanism or system for limiting access to the Property, cannot be compromised or circumvented, nor that any such system or measure undertaken will in all cases prevent loss or provide the detection or protection for which it is designed or intended. Each Owner acknowledges and agrees that the Association, the Board of Directors and any managing agent are not insurers and that each Person using the Property assumes all risks for personal injury and loss or damage to property resulting from acts of third parties.**

(m) **Services.** The Association may provide or contract for such services as the Board of Directors may reasonably deem to be of benefit to the Property, including, without limitation, landscape services, garbage and trash removal and security services.

(n) **Implied Rights and Obligations.** The Association may exercise any other right or privilege reasonably to be inferred from the existence of any right or privilege expressly given to the Association under this Declaration or reasonably necessary to effectuate any such right or privilege.

8.6 **Liability.** Neither a member of the Board of Directors nor an officer of the Association or member of the Architectural Review Committee or any other committee established by the Board will be liable to the Association, any Owner or any third party for any damage, loss or prejudice suffered or claimed on account of any action or failure to act in the performance of his or her duties, so long as the individual acted in good faith; believed that the conduct was in the best interests of the Association, or at least was not opposed to its best interests; and, in the case of criminal proceedings, had no reason to believe the conduct was unlawful. In the event any member of the Board or any officer or committee member of the Association is threatened with or made a party to any proceeding because the individual was or is a director, officer, or committee member of the Association, the Association will defend the individual against such claims and indemnify the individual against liability and expenses incurred to the maximum extent permitted by law.

8.7 **Interim Board; Turnover Meeting.** Declarant has the right to appoint an interim board of one to three directors, who will serve as the Board of Directors of the Association until

replaced by Declarant or until their successors take office at the Turnover Meeting following termination of Class B Membership. Declarant will call a meeting of the Association for the purpose of turning over administrative responsibility for the Property to the Association not later than 90 days after termination of the Class B Membership in accordance with Section 8.3. At the Turnover Meeting the interim directors will resign and their successors will be elected by the Owners, as provided in this Declaration and in the Bylaws of the Association. If Declarant fails to call the Turnover Meeting required by this Section 8.7, any Owner or Mortgagee of a Lot may call the meeting by giving notice as provided in the Bylaws.

8.8 Contracts Entered into by Declarant or Before Turnover Meeting. Notwithstanding any other provision of this Declaration, any management contracts, service contracts or employment contracts entered into by Declarant or the Board of Directors on behalf of the Association before the Turnover Meeting will have a term of not more than three years. In addition, any such contract must provide that it may be terminated without cause or penalty by the Association or Board upon not less than 30 days' notice to the other party given not later than 60 days after the Turnover Meeting. The limitations contained in this Section 8.8 do not apply to those contracts referred to in ORS 94.700(2).

8.9 Bylaws. The Bylaws of the Association and any amendment or modification of the Bylaws will be recorded in the Deed Records of Clackamas County, Oregon. On behalf of the Association, the Declarant will adopt and record the initial Bylaws as provided in ORS 94.625.

Article 9

MAINTENANCE

9.1 Common Maintenance Areas. The Common Maintenance Areas include the Common Areas, Limited Common Areas, Common Easement Areas, and the Front Yards of Lots in Stafford Meadows, and the wall maintenance areas designated on the Plat, until such maintenance is assumed by the local jurisdiction, if ever.

9.2 Maintenance and Lighting of Common Maintenance Areas. The Association is responsible for exterior lighting, if any, in the Common Areas and will perform all maintenance upon the Common Maintenance Areas, including, but not limited to, entrance monuments, gates, fences, walls in Common Areas or bordering the Common Areas (including without limitation any fence or wall along S.W. Boeckman Road, and any public vegetated swale along any roadway in the Property), signs, parking areas, pathways, bicycle paths, unless the maintenance thereof is assumed by a public body. Sidewalks, notwithstanding the public easement over them, are the Lot Owner's responsibility to maintain, repair, and replace and to keep free of leaves, ice, and snow. The Association is responsible for maintenance and irrigation of landscaping in the Front Yards and the walls constructed in the wall maintenance easement areas designated on the Plat, and for the design and any modification thereof.

(a) In the Front Yards, irrigation systems, including related controllers, monitors, and equipment, belong to the Lot Owner. Landscaping irrigation settings will be set by the Association and no Owner may tamper with or change such settings. The Association has the right of access to each such controller, monitor, or other equipment wherever located on a Lot. The cost of water for irrigation of the Front Yards is the responsibility of the Association and will be a common

expense. Rain gardens are part of the Property's overall stormwater treatment plan, whether located in the public right of way or on a portion of a Lot; any rain garden located on any Lot will be the responsibility of the Association to maintain as part of the Lot's Front Yard landscaping, which must be performed so that the rain garden area works for its intended stormwater collection and filtering functions. The Association will also maintain and irrigate the area of the street right-of-way between the curb and the sidewalk. Such areas will be maintained in attractive condition and in a good and workmanlike manner to render them fit for the purposes for which they are intended. The maintenance of Front Yards by the Association does not include maintenance of special features, which are the Owner's responsibility, including but not limited to decorative water features (ponds, streams, waterfalls, etc.), bridges, gazebos, foot paths, putting greens, or any other Improvement other than ordinary landscaping, which are the responsibility of the Lot Owner. Front Yard maintenance expenses borne by the Association will be Individual Expenses to be determined by the board of directors according to Section 10.3 below.

(b) The Association is hereby assigned and assumes the City of Wilsonville Development Agreements in respect of all the Property thereunder that subjected to this Declaration. Except to the extent of the Declarant's obligations to install, construct, and for the stated bond period therein, inspect and maintain, certain improvements on the affected Common Areas, this assignment and assumption includes Declarant's on-going maintenance, repair, inspection, and replacement obligations under the City of Wilsonville Development Agreements.

9.3 **Maintenance of Shared Irrigation Systems and Utility Facilities.** The Association will perform or contract to perform maintenance of (i) all irrigation systems and facilities within Common Maintenance Areas, and (ii) any private utilities serving a Common Area (other than Common Easement Areas), except to the extent such maintenance is performed by the utilities furnishing such services. The Association is not liable for any interruption or failure of such services. Each Owner is responsible for maintaining utility lines within his or her Lot other than those serving the Common Maintenance Areas.

9.4 **Owner's Responsibility.** Except as otherwise provided in this Declaration or by written agreement with the Association, all maintenance of the Lots and Improvements, including landscaping for which the Association is not responsible, walkways, and the driveway thereon as provided in Section 6.5 and 6.7 will be the sole responsibility of the Lot Owner, who will maintain the Lot in a neat and attractive condition in accordance with the community-wide standard of Stafford Meadows. Sidewalks, notwithstanding the public easement over them, are the Lot Owner's responsibility to maintain, repair, and replace and to keep free of leaves, ice, and snow. The Association may, in the discretion of the Board of Directors, assume the maintenance responsibilities of such Owner if, in the opinion of the Board, the level and quality of maintenance being provided by such Owner does not satisfy such standard. Before assuming such maintenance responsibilities, the Board will notify the Owner in writing of its intention to do so, and if such Owner has not commenced and diligently pursued remedial action within 15 days after mailing of such written notice, then the Association may proceed. The expenses of such maintenance by the Association will be reimbursed to the Association by the Owner, together with interest as provided in Section 11.3. Such charges will be an Individual Assessment and lien on the Lot as provided in Sections 10.4(d) and 11.1.

9.5 **Damage Liability.** Any damage to any Common Maintenance Area by Owners or their children, agents, visitors, friends, relatives, tenants, Occupants or service personnel, to the extent

not covered by the Association’s insurance (including any deductible), will be assessed to such Owners as an Individual Assessment.

9.6 **Maintenance Plan.** Declarant will initially prepare and thereafter the Board of Directors must implement, review, and update a maintenance plan (the “**Maintenance Plan**”) for the maintenance, repair and replacement of all property for which the Association has maintenance, repair or replacement responsibility under this Declaration or the Bylaws or the Oregon Planned Community Act. The Maintenance Plan will describe the maintenance, repair or replacement to be conducted; include a schedule for maintenance, repair or replacement; be appropriate for the size and complexity of the maintenance, repair and replacement responsibility of the Association; and address issues that include, but are not limited to, warranties and the useful life of the items of which the Association has maintenance, repair or replacement responsibility. The Board must review and update the Maintenance Plan as necessary. Changes or updates to the Maintenance Plan will be based on advice of competent experts or consultants. For a period of 10 years following recording of the Declaration, any changes to the Maintenance Plan without the approval of the Declarant and the original general contractor may void any applicable warranty and will release them from liability for any damage resulting from such change.

Article 10

ASSESSMENTS

10.1 **Purpose of Assessments.** The Association may levy Assessments. The Assessments levied by the Association must be used exclusively to promote the recreation, health, safety and welfare of the Owners and Occupants of the Property and for the improvement, operation and maintenance of the Common Maintenance Areas.

10.2 **When Lots Become Subject to Assessment.** Upon the first sale of each Lot to a purchaser other than (i) Declarant, (ii) another developer or builder in a bulk sale of Lots, (iii) a successor declarant, or (iv) an affiliate of Declarant, the Lot Sold becomes subject to assessment and the Owner will pay General Assessments, Special Assessments, Emergency Assessments, Limited Common Area Assessments, and if any, Individual Assessments.

10.3 **Allocation of Assessments.** Except as may otherwise be provided in an applicable supplemental declaration annexing Additional Property to this Declaration, all Lots subject to assessment will pay an equal share of the General Assessments, Special Assessments, and Emergency Assessments. The cost of Front Yard maintenance, including landscaping upkeep, repair and operation of irrigation systems, and water for irrigation, will be Individual Expenses, which will be reasonably determined by the board of directors based on the size and features of any given Lot’s Front Yard and categories of corresponding assessments for the Front Yard maintenance performed by the Association. The board has the authority to create categories of Lots based on their size and Front Yard features, including without limitation that some Lots will have private rain gardens in their Front Yards and others will not, for the purpose of creating categories of Lots in respect of the Front Yard assessments; in other words, notwithstanding that Front Yard maintenance costs will be assessed as Individual Assessments, Front Yards may be lumped together by size and feature for simplification of assessment invoicing. If the irrigation water is not separately metered on a Lot, the board of directors will reasonably estimate irrigation as between Lots sharing a landscaping water meter and allocate the water costs accordingly or according to categories of Lots for Front Yard assessment.

10.4 **Type of Assessments.** The Association is authorized to levy the following types of Assessments:

(a) **General Assessments.** The Association will levy General Assessments for the common expenses incurred by or on behalf of the Association in accordance with this Declaration. The Board of Directors will from time to time and at least annually prepare an operating budget for the Association, taking into account the current costs of maintenance and services and future needs of the Association, any previous over-assessment and any common profits of the Association. The budget must take into account the number of Lots subject to assessment as of the first day of the fiscal year for which the budget is prepared and the number of Lots reasonably anticipated to become subject to assessment during the fiscal year. The budget may be based upon a greater number of Lots than those reasonably anticipated to be subject to assessment during the fiscal year if the Declarant agrees to subsidize the Association for any shortfall in the Operations Fund. The budget will provide for such reserve or contingency funds as the Board deems necessary or as may be required by law, but not less than the reserves required by Section 10.7. General Assessments for such operating expenses and reserves will then be apportioned among the Lots as provided in Section 10.3. The Board may revise the budget and adjust the General Assessment from time to time during the year. Within 30 days after the adoption of a final budget by the Board, the Board will send a copy of the final budget to each Owner. If the Board fails to adopt a budget, the last adopted budget continues in effect. The manner of billing and collection of Assessments is as provided in the Bylaws.

(b) **Special Assessments.** The Board of Directors may levy during any fiscal year a Special Assessment, applicable to that year only, for the purpose of deferring all or any part of the cost of any construction or reconstruction, unexpected repair, or acquisition or replacement of a described capital Improvement, or for any other one-time expenditure not to be paid for out of General Assessments. Special Assessments for acquisition or construction of new capital Improvements or additions that in the aggregate in any fiscal year exceed an amount equal to 15 percent of the budgeted gross expenses of the Association for the fiscal year may be levied only if approved by a majority of the voting rights voting on such matter, together with the written consent of the Class B Member, if any. Prior to the Turnover Meeting, any Special Assessment for acquisition or construction of new capital Improvements or additions must be approved by not less than 50 percent of the Class A voting rights, together with the written consent of the Class B Member. Special Assessments will be apportioned as provided in Section 10.3 and may be payable in lump sum or in installments, with or without interest or discount, as determined by the Board.

(c) **Emergency Assessments.** If the General Assessments levied at any time are or will become inadequate to meet all expenses incurred under this Declaration for any reason, including nonpayment of any Owner's Assessments on a current basis, the Board of Directors will immediately determine the approximate amount of such inadequacy and issue a supplemental budget, noting the reason therefor, and levy an Emergency Assessment for the amount required to meet all such expenses on a current basis. Emergency Assessments will be apportioned as set forth in Section 10.3 and payable as determined by the Board.

(d) **Limited Common Area Assessments.** General Assessments, Special Assessments and Emergency Assessments relating to maintenance, upkeep, repair, replacement or improvements to Limited Common Areas will be assessed exclusively and on an equal basis to the Lots having the right to use such Limited Common Areas.

(e) **Individual Assessments.** Any common expense or any part of a common expense benefiting fewer than all of the Lots may be assessed as Individual Assessments exclusively against the Lots benefited. Individual Assessments include, without limitation, charges for services provided under Sections 8.5(j), 9.2(a), and 10.4(a) and any loss or cost incurred by the Association that the Board of Directors determines is the fault of one or more Owners and not paid by insurance. Individual Assessments also include default Assessments levied against any Lot to reimburse the Association for costs incurred in bringing such Lot or its Owner into compliance with the provisions of this Declaration or the Rules and Regulations of the Association and for fines or other charges imposed pursuant to this Declaration for violation thereof. Unless otherwise provided by the Board, Individual Assessments will be due 30 days after the Board has given written notice thereof to the Owners subject to the Individual Assessments.

(f) **Working Fund Assessments.** Upon the first sale of a Lot to a purchaser other than a successor Declarant and upon any subsequent sale of such Lot, the purchaser will pay to the Association a Working Fund Assessment equal to two times the monthly General Assessment then applicable to the Lot. The Board of Directors may deposit Working Fund Assessments either in the Operations Fund or in the Reserve Fund, at the discretion of the Board.

10.5 **Assessment of Additional Property.** When Additional Properties are annexed to Stafford Meadows, the Lots included therein become subject to Assessments from the date of such annexation to the extent provided in Section 10.2. The Board of Directors, however, at its option may elect to recompute the budget based upon the additional Lots subject to Assessment and additional Common Areas and recompute General Assessments for all Lots, including the new Lots, for the balance of the fiscal year. Notwithstanding any provision of this Declaration apparently to the contrary, a declaration annexing Additional Property may provide that such Additional Property does not have the right to use a particular Common Area or facility located thereon, in which case such Additional Property will not be assessed for the costs of operating, maintaining, repairing, replacing or improving such Common Area or facility.

10.6 **Operations Fund.** The Association will keep all funds received by it as Assessments, other than reserves described in Section 10.7 or Working Fund Assessments deposited in the Reserve Fund, separate and apart from its other funds, in an Operations Fund in a bank account in the name of the Association. The Association will use such fund for the purpose of promoting the recreation, health, safety and welfare of the residents within the Property and in particular for the improvement and maintenance of properties, services and facilities devoted to this purpose and related to the use and enjoyment of the Common Maintenance Areas and the Lots, including but not limited to:

- (a) Payment of the cost of operation, maintenance, utilities, services, repairs, and replacements for the Common Maintenance Areas.
- (b) Payment of the cost of insurance maintained by the Association.
- (c) Payment of taxes assessed against the Common Areas and any Improvements thereon.
- (d) Payment of the cost of other services that the Association deems to be of general benefit to the Owners, including, but not limited to, accounting, legal, and secretarial services.

10.7 **Reserve Fund.**

(a) **Establishment of Account.** Declarant, on behalf of the Association, will conduct an initial reserve study as described in Section 10.7(c) and establish a Reserve Fund in a bank account in the name of the Association to fund major maintenance, repair or replacement of any common properties that will normally require replacement in whole or in part in more than one and less than 30 years; for exterior painting if the Common Maintenance Areas or other property to be maintained by the Association includes exterior painted surfaces; and for other items, whether or not involving Common Maintenance Areas, if the Association has responsibility to maintain the items, including items required by the Maintenance Plan established pursuant to Section 9.6. The Reserve Fund need not include those items that can reasonably be funded from the general budget or other funds of the Association or for those items for which one or more, but less than all, Owners are responsible for maintenance and replacement under the provisions of this Declaration or the Bylaws. Nothing in this Section 10 prohibits prudent investment of the Reserve Fund.

(b) **Funding of Reserve Fund.** The Reserve Fund will be funded by Assessments against the individual Lots assessed for maintenance of the items for which the Reserve Fund is being established, which sums will be included in the regular General Assessment for the Lot and the Limited Common Area Assessments, if applicable. The Board, however, may borrow funds from the Reserve Fund to meet high seasonal demands on the regular operating funds or to meet other temporary expenses that will later be paid from General Assessments, Special Assessments, or Emergency Assessments. The Reserve Fund also includes Working Fund Assessments to the extent so allocated by the Board of Directors pursuant to Section 10.4(f). The Reserve Fund will be established in the name of the Association. The Association is responsible for administering the Reserve Fund and making periodic payments into the account. The Board of Directors or the Owners may not vote to eliminate funding the Reserve Account unless the Board determines that the Reserve Account will be adequately funded for the following year, except that after the Turnover Meeting the Board, with the approval of all Owners, may, on an annual basis, elect not to fund the Reserve Fund for the following year. Assessments paid into the Reserve Fund are the property of the Association and are not refundable to sellers or Owners of Lots. Sellers of the Lots, however, may treat their outstanding share of the Reserve Fund as a separate item in any sales agreement.

(c) **Reserve Studies.** The reserve portion of the initial Assessment determined by Declarant will be based on a reserve study described in this paragraph (c) or other sources of information. The Board of Directors will annually conduct a reserve study, or review and update an existing study, to determine the Reserve Fund requirements, and may adjust the amount of payments as indicated by the study or update and provide other reserve items that the Board, in its discretion, may deem appropriate. The reserve study will:

- (1) Identify all items for which reserves are to be established;
- (2) Include the estimated remaining useful life of each item as of the date of the reserve study; and
- (3) Include for each item, as applicable, an estimated cost of maintenance, repair and replacement at the end of its useful life.

(d) **Use of Reserve Fund.** If a Reserve Fund is required, the Reserve Fund will be used only for the purposes for which the reserves have been established and kept separate from other funds. After the Turnover Meeting, however, the Board of Directors may borrow funds from the Reserve Fund to meet high seasonal demands on the regular operating funds or to meet unexpected increases in expenses if the Board has adopted a resolution, which may be an annual continuing resolution, authorizing the borrowing of funds. Not later than the adoption of the budget for the following year, the Board will adopt by resolution a written payment plan providing for repayment of the borrowed funds within a reasonable period. Assessments paid into the Reserve Fund are the property of the Association and are not refundable to sellers or Owners of Lots. Sellers of the Lots, however, may treat their outstanding share of the Reserve Fund as a separate item in any sales agreement.

10.8 **Declarant's Subsidy.** Declarant may, but is not be obligated to, reduce the General Assessments for any fiscal year by payment of a subsidy (in addition to any other amounts then owed by Declarant), which may be either a contribution, an advance against future Assessments due from Declarant or a loan, in Declarant's discretion. Any such subsidy will be disclosed as a line item in the income portion of the Association's budget. Payment of such subsidy in any year will not obligate Declarant to continue payment of such subsidy in future years unless otherwise provided in a written agreement between the Association and Declarant.

10.9 **Commencement of Assessment Obligation; Time of Payment.** The obligation to pay Assessments under this Declaration commences as to each Lot on the first day of the month after such Lot becomes subject to Assessment. The first annual General Assessment levied on each Lot will be adjusted according to the number of months remaining in the fiscal year at the time Assessments commence for such Lot.

10.10 **Payment of Assessments.** Assessments must be paid in such manner and on such dates as the Board of Directors may establish. Unless the Board otherwise provides, the General Assessment is due and payable in advance on the first day of each fiscal year. If any Owner is delinquent in paying any Assessments or other charges levied on his or her Lot, the Board may require the outstanding balance on all Assessments to be paid in full immediately. Until the Turnover Meeting, any obligation of Declarant to pay Assessments may be satisfied in the form of cash or by "in kind" contributions of services or materials, or by a combination of these.

10.11 **Creation of Lien and Personal Obligation of Assessments.** Declarant, for each Lot owned by it within the Property, hereby covenants, and each Owner of any Lot by acceptance of a conveyance thereof, whether or not so expressed in any such conveyance, will be deemed to covenant to pay to the Association all Assessments or other charges as may be fixed, established and collected from time to time in the manner provided in this Declaration or the Association Bylaws. Such Assessments and charges, together with any interest, late charges, expenses or attorneys' fees imposed pursuant to Article 11, are a charge on the land and a continuing lien upon the Lot against which each such Assessment or charge is made. Such Assessments, charges, and other costs are also the personal obligation of the Person who was the Owner of such Lot at the time when the Assessment or charge fell due. Such liens and personal obligations will be enforced in the manner set forth in Article 11.

10.12 **Voluntary Conveyance.** In a voluntary conveyance of a Lot the grantee will be jointly and severally liable with the grantor for all unpaid Assessments against the grantor of the Lot up to

the time of the grant or conveyance, without prejudice to the grantee's right to recover from the grantor the amounts paid by the grantee therefor. However, upon request of an Owner or Owner's agent for the benefit of a prospective purchaser, the Board of Directors will make and deliver a written statement of the unpaid Assessments against the prospective grantor of the Lot effective through a date specified in the statement, and the grantee in that case will not be liable for any unpaid Assessments against the grantor not included in the written statement.

10.13 **No Waiver.** Failure of the Board of Directors to fix Assessment amounts or rates or to deliver or mail each Owner an Assessment notice will not be deemed a waiver, modification or release of any Owner from the obligation to pay Assessments. In such event, each Owner will continue to pay Assessments on the same basis as during the last year for which an Assessment was made, if any, until a new Assessment is levied, at which time the Association may retroactively assess any shortfalls in collections.

10.14 **No Option to Exempt.** No Owner may exempt himself or herself from liability for Assessments by nonuse of Common Areas, abandonment of his or her Lot, or any other means. The obligation to pay Assessments is a separate and independent covenant on the part of each Owner. No diminution or abatement of Assessments or set-off may be claimed or allowed for any alleged failure of the Association or Board of Directors to take some action or perform some function required of it, or for inconvenience or discomfort arising from the making of repairs or Improvements, or from any other action it takes.

10.15 **Certificate.** Upon written request, the Association must furnish to any Owner liable for any type of Assessment a certificate in writing signed by an Association officer setting forth whether such Assessment has been paid. Such certificate is conclusive evidence of payment. The Association may require the advance payment of a reasonable processing fee for the issuance of such certificate.

Article 11

ENFORCEMENT

11.1 **Violation of General Protective Covenants.** If an Owner constructs or permits to be constructed on his or her Lot an Improvement contrary to the provisions of this Declaration, or violates any provisions of this Declaration, the Bylaws, or the Rules and Regulations, then the Association acting through the Board of Directors will notify the Owner in writing of any such specific violations. If the Owner is unable, is unwilling, or refuses to comply with the Association's specific directives for remedy or abatement, or the Owner and the Association cannot agree to a mutually acceptable solution within the framework and intent of this Declaration, after notice and opportunity to be heard and within 14 days after issuing written notice to the Owner, then the Association acting through the Board has the right to do any or all of the following:

- (a) Assess reasonable fines against such Owner, based upon a resolution adopted by the Board of Directors that is delivered to each Lot, mailed to the mailing address of each Lot or mailed to the mailing address designated by the Owner of each Lot in writing, which fines constitute Individual Assessments for purposes of this Declaration;

(b) Enter the offending Lot and remove the cause of such violation, or alter, repair or change the item that is in violation of this Declaration in such a manner as to make it conform thereto, in which case the Association may assess such Owner for the entire cost of the work done, which amount will be payable to the Operations Fund as an Individual Assessment, provided that no items of construction will be altered or demolished in the absence of judicial proceedings;

(c) Cause any vehicle parked in violation of this Declaration or of the Rules and Regulations to be towed and impounded at the Owner's expense;

(d) Suspend the voting rights, any utility services paid for out of Assessments and the right to use the Common Areas for the period that the violations remain unabated, provided that the Association does not deprive any Owner of access to and from the Owner's Lot in the absence of a lien foreclosure or court order to such effect; and

(e) Bring suit or action against the Owner on behalf of the Association and other Owners to enforce this Declaration.

11.2 Default in Payment of Assessments; Enforcement of Lien. If an Assessment or other charge levied under this Declaration is not paid within 30 days after its due date, such Assessment or charge becomes delinquent and bears interest from the due date at the rate set forth below. In such event the Association may exercise any or all of the following remedies:

(a) The Association may suspend such Owner's voting rights, any utility or communication service paid for out of Assessments and right to use the Common Areas until such amounts, plus other charges under this Declaration, are paid in full, and may declare all remaining periodic installments of any General Assessment immediately due and payable. In no event, however, will the Association deprive any Owner of access to and from the Owner's Lot in the absence of a lien foreclosure or court order to such effect.

(b) The Association has a lien in accordance with ORS 94.709 against each Lot for any Assessment levied against the Lot, including any fines or other charges imposed under this Declaration or the Bylaws against the Owner of the Lot, and may foreclose such lien in the manner provided in ORS 94.709.

(c) The Association may bring an action to recover a money judgment for unpaid Assessments under this Declaration without foreclosing or waiving the lien described in Section 11.2(b). Recovery on any such action, however, operates to satisfy the lien, or the portion thereof, for which recovery is made.

(d) The Association has any other remedy available to it by law or in equity.

11.3 Interest, Late Charges and Expenses. Any amount not paid to the Association when due in accordance with this Declaration bears interest from the due date until paid at a rate that is the greater of 12 percent per annum or such other rate as may be established by the Board of Directors, but not to exceed the lawful rate of interest under the laws of the state of Oregon. A late charge may be charged for each delinquent Assessment in an amount established from time to time by resolution of the Board, which resolution is delivered to each Lot, mailed to the mailing address of each Lot or mailed to the mailing address designated by the Owner in writing, together with all

expenses incurred by the Association in collecting such unpaid Assessments, including attorneys' fees (even if suit is not instituted). In the event the Association files a notice of lien, the lien amount also includes the recording fees associated with filing the notice, and a fee for preparing the notice of lien, established from time to time by resolution of the Board.

11.4 **Costs and Attorneys' Fees.** In the event of any suit or action to enforce this Declaration, the Bylaws, the Rules and Regulations, or the Oregon Planned Community Act, or to collect any money due hereunder or to foreclose a lien, the prevailing party in such suit or act will be entitled to recover all costs and expenses incurred by it in connection with such suit or action, including a foreclosure title report, and will recover such amount as the court may determine to be reasonable as attorneys' fees at trial and upon any appeal or petition for review thereof or in connection with any bankruptcy proceedings or special bankruptcy remedies.

11.5 **Assignment of Rents.** As security for the payment of all obligations owing to the Association pursuant to this Section 11.5, each Owner hereby grants to the Association the right to collect the rents, issues and profits of the Owner's Lot; provided, however, that the Owner will retain the right, prior to any default by such Owner in performance of the Owner's obligations under this Declaration, to collect and retain such rents, issues and profits as they become due and payable. Upon any such default, the Association may, at any time after 10 days written notice to the Owner, either in person, by agent or by a receiver to be appointed by a court of competent jurisdiction, and without regard to the adequacy of any security for such indebtedness, in its own name sue for or otherwise collect such rents, issues and profits, including those past due and unpaid, and apply them, less costs and expenses of operation and collection, including reasonable attorneys' fees, in payment of such indebtedness to the Association, and in such order as the Association may determine. Such action will not cure nor waive any default under this Declaration or invalidate any act done pursuant to this Declaration. The assignment of rents and powers described in this Section 11.5 does not affect, and will in all respects be subordinated to, the rights and powers of the holder of any first or second Mortgage on any Lot to do the same or similar acts

11.6 **Nonexclusiveness and Accumulation of Remedies.** An election by the Association to pursue any remedy provided for violation of this Declaration will not prevent concurrent or subsequent exercise of another remedy permitted under this Declaration. The remedies provided in this Declaration are not exclusive but are in addition to all other remedies, including actions for damages and suits for injunctions and specific performance, available under applicable law to the Association. In addition, any aggrieved Owner may bring an action against another Owner or the Association to recover damages or to enjoin, abate, or remedy any violation of this Declaration by appropriate legal proceedings.

11.7 **Enforcement by Clackamas County.** The provisions of this Declaration relating to preservation and maintenance of Common Areas will be deemed to be for the benefit of Clackamas County as well as the Association and Owners of Lots, and Clackamas County may enforce such provisions by appropriate proceedings at law or in equity, or may cause such maintenance to be performed, the costs of which will become a lien upon the Property.

Article 12

DISPUTE RESOLUTION

12.1 Mediation.

(a) Except as otherwise provided in this Section 12.1, before initiating litigation, arbitration, or an administrative proceeding in which the Association and an Owner have an adversarial relationship, the party that intends to initiate litigation, arbitration or an administrative proceeding will offer to use any dispute resolution program available within Clackamas County, Oregon that is in substantial compliance with the standards and guidelines adopted under ORS 36.175. The written offer must be hand-delivered or mailed by certified mail, return receipt requested, to the address, contained in the records of the Association, for the other party.

(b) If the party receiving the offer does not accept the offer within 10 days after receipt of the offer, such acceptance to be made by written notice, hand-delivered or mailed by certified mail, return receipt requested, to the address, contained in the records of the Association, for the other party, the initiating party may commence the litigation, arbitration or administrative proceeding. The notice of acceptance of the offer to participate in the program must contain the name, address, and telephone number of the body administering the dispute resolution program.

(c) If a qualified dispute resolution program exists within Clackamas County, Oregon and an offer to use the program is not made as required under Section 12.1(a), then litigation, arbitration or an administrative proceeding may be stayed for 30 days upon a motion of the noninitiating party. If the litigation, arbitration or administrative action is stayed under this Section 12.1(c), both parties must participate in the dispute resolution process.

(d) Unless a stay has been granted under Section 12.1(c), if the dispute resolution process is not completed within 30 days after receipt of the initial offer, the initiating party may commence litigation, arbitration or an administrative proceeding without regard to whether the dispute resolution is completed.

(e) Once made, the decision of the court, arbitrator or administrative body arising from litigation, arbitration or an administrative proceeding may not be set aside on the grounds that an offer to use a dispute resolution program was not made.

(f) The requirements of this Section 12.1 do not apply to circumstances in which irreparable harm to a party will occur due to delay or to litigation, arbitration, or an administrative proceeding initiated to collect Assessments, other than Assessments attributable to fines.

12.2 Arbitration. Any claim, controversy or dispute by or among Declarant (including members, officers, directors, shareholders and affiliates of Declarant), Association, the Architectural Review Committee, or one or more Owners, or any of them, arising out of or related to this Declaration, the Bylaws, the Rules and Regulations, or the Property will be first subject to mediation as described in Section 12.1 or otherwise, and if not timely settled by mediation will be resolved by arbitration in accordance with this Article 12. The decisions and award of the arbitrator are final, binding and nonappealable. The arbitration will be conducted in the Portland, Oregon, metropolitan area or at such other location as may be agreed upon by the parties, pursuant to the arbitration statutes

of the state of Oregon, and any arbitration award may be enforced by any court with jurisdiction. Filing for arbitration will be treated the same as filing in court for purposes of meeting any applicable statute of limitations or for purposes of filing a notice of pending action ("lis pendens").

12.3 Selection of Arbitrator. The arbitration will be conducted by a single arbitrator selected by mutual agreement of the parties. The arbitrator selected must be neutral and unbiased, except to the extent the arbitrator's prior relationship with any party is fully disclosed and consented to by the other party or parties. If the parties are unable to agree upon the arbitrator within 10 days after a party's demand for arbitration, upon application of any party, the presiding judge of the Circuit Court of Clackamas County, Oregon will designate the arbitrator.

12.4 Consolidated Arbitration. Upon demand by any party, claims between or among the parties and third parties will be submitted in a single, consolidated arbitration. Notwithstanding the provisions of this Article 12, in the event any claim, controversy or dispute involves a claim by either party against a third party who is not required to and does not voluntarily agree to submit such claim to arbitration, then either party may elect to have the matter determined by a court of law in a consolidated proceeding, rather than by arbitration. In such case, the parties hereby waive trial by jury and agree that the matter will be determined by a judge sitting without a jury.

12.5 Discovery. The parties to the arbitration are entitled to such discovery as would be available to them in an action in Clackamas County Circuit Court. The arbitrator has all of the authority of the court incidental to such discovery, including, without limitation, authority to issue orders to produce documents or other materials, to issue orders to appear and submit to deposition, and to impose appropriate sanctions, including, without limitation, award against a party for failure to comply with any order.

12.6 Evidence. The parties to the arbitration may offer such evidence as they desire and will produce such additional evidence as the arbitrator may deem necessary for an understanding and determination of the dispute. The arbitrator will determine the admissibility of the evidence offered. All evidence will be taken in the presence of the arbitrator and all of the parties, except when any of the parties is absent in default or has waived its right to be present.

12.7 Excluded Matters. Notwithstanding the foregoing, the following matters are not subject to mediation or arbitration under this Article 12 (but are subject to the applicable provisions of Section 12.8): (a) actions relating to the collection of fees, Assessments, fines and other charges imposed or levied by the Association (other than disputes as to the validity or amount of such fees, Assessments, fines or charges, which disputes will be subject to mediation/arbitration as provided above); and (b) actions to enforce any order, decision or award rendered by arbitration pursuant to this Article 12. The filing of a lis pendens or the application to any court for the issuance of any provisional process or similar remedy described in the Oregon or Federal Rules of Civil Procedure will not constitute a waiver of the right or duty to utilize the procedures specified in this Article 12.

12.8 Costs and Attorneys' Fees. The fees of any mediator and the costs of mediation will be divided and paid equally by the parties. Each party will pay its own attorneys' fees and costs in connection with any mediation. The fees of any arbitrator and the costs of arbitration will be paid by the nonprevailing party or parties; if none, such fees and costs will be divided and paid equally by the parties. Should any suit, action or arbitration be commenced in connection with any dispute related to or arising out of this Declaration, the Bylaws, the Rules and Regulations, or the Oregon Planned

Community Act to obtain a judicial construction of any provision of this Declaration, the Bylaws or the Rules and Regulations; to rescind this Declaration; or to enforce or collect any judgment or decree of any court or any award obtained during arbitration, the prevailing party will be entitled to recover its costs and disbursements, together with such investigation, expert witness and attorneys' fees incurred in connection with such dispute as the court or arbitrator may adjudge reasonable, at trial, in the arbitration, upon any motion for reconsideration, upon petition for review, and on any appeal of such suit, action or arbitration proceeding. The determination of who is the prevailing party and the amount of reasonable attorneys' fees to be paid to the prevailing party will be decided by the arbitrator (with respect to attorneys' fees incurred before and during the arbitration proceeding) and by the court or courts, including any appellate or review court, in which such matter is tried, heard or decided, including a court that hears a request to compel or enjoin arbitration or that hears exceptions made to an arbitration award submitted to it for confirmation as a judgment (with respect to attorneys' fees incurred in such proceedings).

12.9 **Survival.** The mediation and arbitration agreement set forth in this Article 12 will survive the transfer by any party of its interest or involvement in the Property and any Lot therein and will survive the termination of this Declaration.

Article 13

MORTGAGEES

The following provisions are for the benefit of holders, insurers and guarantors of first Mortgage on Lots. The provisions of this Article 13 apply to both this Declaration and to the Bylaws, notwithstanding any other provisions contained therein.

13.1 **Subordination of Lien to Mortgages.** The lien of the Assessments or charges provided for in this Declaration are subordinate to the lien of any Mortgage on such Lot which was made in good faith and for value and which was recorded prior to the recordation of the notice of lien. Sale or transfer of any Lot does not affect the Assessment lien, but the sale or transfer of any Lot that is subject to any Mortgage or deed of trust pursuant to a decree of foreclosure or nonjudicial sale thereunder extinguishes any lien of an Assessment, notice of which was recorded after the recording of the Mortgage. Such sale or transfer, however, does not release the Lot from liability for any Assessments or charges thereafter becoming due or from the lien of such Assessments or charges.

13.2 **Reimbursement of First Mortgagees.** First Mortgagees of Lots may, jointly or singly, pay taxes or other charges which are in default and which may or have become a charge against any Common Areas and may pay overdue premiums on hazard insurance policies or secure new hazard insurance coverage on the lapse of a policy, for such Common Area. First Mortgagees making such payments are owed immediate reimbursement therefor from the Association.

13.3 **Notification of First Mortgagee.** If a first Mortgagee has requested such notice in writing from the Association, the Board will notify such Mortgagee of any individual Lot of any default in performance of this Declaration by the Owner which is not cured within 60 days after notice of default to the Owner.

13.4 **Notice to Association.** Upon request, each Owner is obligated to furnish to the Association the name and address of the holder of any Mortgage encumbering such Owner's Lot.

Article 14

AMENDMENT AND REPEAL

14.1 **How Proposed.** Amendments to or repeal of this Declaration will be proposed by either a majority of the Board of Directors or by Owners holding 30 percent or more of the Association's voting rights. The proposed amendment or repeal must be reduced to writing and will be included in the notice of any meeting at which action is to be taken thereon or attached to any request for consent to the amendment or repeal.

14.2 **Approval Required.** This Declaration, or any provision thereof, as from time to time in effect with respect to all or any part of the Property, may be amended or repealed by the vote or written consent of Owners representing not less than 75 percent of the voting rights, without regard to any weighted vote for the Class B Member, together with the written consent of the Class B Member, if such Class B Membership has not been terminated as provided in this Declaration. In no event will an amendment under this section create, limit or diminish special Declarant rights without Declarant's written consent, or change the boundaries of any Lot or any uses to which any Lot is restricted under this Declaration or change the method of determining liability for common expenses, the method of determining the right to common profits or the method of determining voting rights of any Lot unless the Owners of the affected Lots unanimously consent to the amendment. Declarant may not amend this Declaration to increase the scope of special Declarant rights reserved in this Declaration after the sale of the first Lot unless Owners representing 75 percent of the total vote, other than Declarant, agree to the amendment. To the extent any amendment relates to the preservation or maintenance of the Common Areas or private utility lines, a City of Wilsonville Development Agreement, or the existence of an entity responsible for accomplishing the same, such amendment must be approved by the planning department of City of Wilsonville.

14.3 **Recordation.** Any such amendment or repeal becomes effective only upon recordation in the Deed Records of Clackamas County, Oregon of a certificate of the president and secretary of the Association setting forth in full the amendment, amendments or repeal so approved and certifying that such amendment, amendments or repeal have been approved in the manner required by this Declaration and ORS 94.590, and acknowledged in the manner provided for acknowledgment of deeds.

14.4 **Regulatory Amendments.** Notwithstanding the provisions of Section 14.2, until the Turnover Meeting has occurred, Declarant has the right to amend this Declaration or the Bylaws of the Association to comply with the requirements of the Federal Housing Administration; the United States Department of Veterans Affairs; the Farmers Home Administration of the United States; the Federal National Mortgage Association; the Government National Mortgage Association; the Federal Home Mortgage Loan Corporation; any department, bureau, board, commission or agency of the United States or the state of Oregon; or any corporation wholly owned, directly or indirectly, by the United States or the state of Oregon that insures, guarantees or provides financing for a planned community or lots in a planned community. After the Turnover Meeting, any such amendment must be approved by the Association in accordance with the approval provisions of this Declaration or the Bylaws, as applicable.

Article 15

MISCELLANEOUS PROVISIONS

15.1 **No Implied Obligations.** Nothing in this Declaration may be construed to require Declarant or any successor Declarant to subject Additional Property to this Declaration or to improve or develop any of the Property or to do so for any particular uses.

15.2 **Right to Approve Additional Covenants.** No Person may record any declaration of covenants, conditions and restrictions, declaration of condominium or similar instrument affecting any portion of the Property without Declarant's prior written consent. Any attempted recordation without such consent will result in such instrument being void and of no force or effect unless subsequently approved in writing by Declarant.

15.3 **Notice of Sale or Transfer of Title.** Any Owner selling or otherwise transferring title to his or her Lot must give the Association written notice within seven days after the transfer of the name and address of the purchaser or transferee, the date of such transfer of title and such other information as the Association may reasonably require. The transferor continues to be jointly and severally responsible with the transferee for all obligations of the Owner of the Lot, including Assessment obligations, until the date upon which such notice is received by the Board, notwithstanding the transfer of title.

15.4 **Exclusive Rights to Use Name of Development.** No Person may use the name "Stafford Meadows" or any derivative of such name in any printed, digital (i.e., internet) or other promotional or commercial material without Declarant's prior written consent. However, an Owner may use the name "Stafford Meadows" where such term is used solely to specify that the Owner's property is located within the Property. In no event will any Owner enter into an agreement with any third party for the sale, rental, or management of the Owner's Lot if such agreement purports to grant any right to such third party to use the name "Stafford Meadows" or any derivative of such name in violation of this provision.

15.5 **Lessees and Other Invitees.** Lessees, employees, invitees, licensees, contractors, family members, guests, and other Persons entering the Property under rights derived from an Owner must comply with all of the provisions of this Declaration restricting or regulating the Owner's use, improvement or enjoyment of his or her Lot and other areas within the Property. The Owner is responsible for obtaining such compliance and will be liable for any failure of compliance by such Persons in the same manner and to the same extent as if the failure had been committed by the Owner.

15.6 **Nonwaiver.** Failure by the Association or by any Owner to enforce any covenant or restriction contained in this Declaration will in no event be deemed a waiver of the right to do so thereafter.

15.7 **Construction and Severability.** This Declaration will be liberally construed as an entire document to accomplish the purposes hereof as stated in the introductory paragraphs hereof. Nevertheless, each provision of this Declaration will be deemed independent and severable, and the invalidity or partial invalidity of any provision will not affect the validity or enforceability of the remaining part of that or any other provision.

15.8 **Terminology and Captions.** As used in this Declaration, the singular includes the plural and the plural the singular, and the masculine and neuter each include the masculine, feminine and neuter, as the context requires. All captions used in this Declaration are intended solely for convenience of reference and in no way limit any of the provisions of this Declaration.

15.9 **Notices.** All notices to the Association or to the Board of Directors will be sent care of the manager or, if there is no manager, to the principal office of the Association or to such other address as the Board may designate from time to time. All notices to any Owner will be sent to such address as may have been designated by such Owner from time to time, in writing, to the Board or, if no address has been designated, to the Owner's Lot. In the discretion of the Board, any notice, information or other written material required to be given to an Owner or director under this Declaration or the Bylaws or pursuant to the Oregon Planned Community Act, may be given by electronic mail, facsimile or other form of electronic communication acceptable to the Board, except for the following notices: failure to pay an Assessment, foreclosure of an Association lien under ORS 94.709, or an action the Association may take against an Owner. An Owner or director may decline to receive notice by electronic mail, facsimile or other form of electronic communication and may direct the Board to provide notice in any other manner permitted under this Declaration or the Bylaws or the Oregon Planned Community Act.

15.10 **Private Agreement.** This Declaration and the covenants and agreements contained herein constitute a private agreement among the Owners of Lots in Stafford Meadows. This Declaration does not restrict City of Wilsonville's authority to adopt or amend its development regulations. It is the duty of every Person engaged in development or remodeling of a Lot and/or Improvement in Stafford Meadows to know the requirements of this Declaration and the covenants

and agreements contained herein. There may be conflicting requirements between this Declaration and regulations of City of Wilsonville. In the event there is a conflict between a regulation of City of Wilsonville and this Declaration, any question regarding which provision controls will be directed to the Architectural Review Committee. In each case, Clackamas County will limit its review of a development application to the requirements of its regulations and will not be liable for any approvals or permits that are granted in compliance with the regulations of City of Wilsonville, Clackamas County, the state of Oregon or any other jurisdiction, but that are not in compliance with this Declaration. Declarant, the Committee and the Association, or any one of them, will not be liable for any approvals that are granted in compliance with this Declaration, but that are not in compliance with the regulations of City of Wilsonville, Clackamas County, the State of Oregon or any other jurisdiction.

IN WITNESS WHEREOF, Declarant has executed this Declaration on the date set forth above.

WEST HILLS LAND DEVELOPMENT LLC,
an Oregon limited liability company

[Handwritten Signature]
Walter E. Remmers, Member

STATE OF OREGON)
)ss.
COUNTY OF Multnomah)

The foregoing instrument was acknowledged before me this 12th day of December, 2018, by Walter E. Remmers, member of West Hills Land Development LLC, an Oregon limited liability company, on its behalf.

[Handwritten Signature]
Notary Public for Oregon
My commission expires: March 01, 2022



23P

AFTER RECORDING RETURN TO:

Michelle D. Da Rosa LLC
Attorney at Law
205 SE Spokane Street, Suite 300
Portland, OR 97202
Zachary Taylor

Clackamas County Official Records
Sherry Hall, County Clerk

2019-002824



\$203.00


01/17/2019 12:56:31 PM

PD-BYL Cnt=1 Stn=54 COUNTER2
\$115.00 \$16.00 \$62.00 \$10.00

BYLAWS OF STAFFORD MEADOWS HOMEOWNERS ASSOCIATION

Attached hereto are the initial Bylaws of Stafford Meadows Homeowners Association adopted January 18, 2019 by the Declarant pursuant to the Declaration of Protective Covenants, Conditions, Restrictions and Easements for Stafford Meadows recorded 1/15, 2019 in the Records of ~~Washington~~ Clackamas County, Oregon, as Document No. 2019-002161.

WEST HILLS LAND DEVELOPMENT LLC,
an Oregon limited liability company

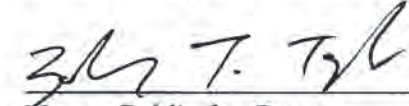
By: 
Walter E. Remmers, member

Address: 3330 NW Yeon, Suite 200
Portland, OR 97210

STATE OF OREGON)
)ss.
COUNTY of Multnomah)

This instrument was acknowledged before me this 12th day of December, 2018, by Walter E. Remmers, member of West Hills Land Development LLC, an Oregon limited liability company, on its behalf.




Notary Public for Oregon
My commission expires March 1, 2022

**BYLAWS OF
STAFFORD MEADOWS HOMEOWNERS ASSOCIATION**

TABLE OF CONTENTS

	Page
Article 1 DEFINITIONS	1
1.1 Association	1
1.2 Articles of Incorporation	1
1.3 Declaration	1
1.4 Incorporation by Reference	1
Article 2 MEMBERSHIP	1
2.1 Membership	1
2.2 Membership List	1
Article 3 MEETINGS AND VOTING	1
3.1 Place of Meetings	1
3.2 Turnover Meeting	1
3.3 Annual Meeting	2
3.4 Special Meetings	2
3.5 Notice of Meeting	2
3.6 Quorum	2
3.7 Voting Rights	3
3.8 Fiduciaries and Joint Owners	3
3.9 Tenants and Contract Vendors	3
3.10 Casting of Votes and Consents	4
3.11 Majority Vote	4
3.12 Rules of Order	4
Article 4 DIRECTORS: MANAGEMENT	5
4.1 Number and Qualification	5
4.2 Interim Directors	5
4.3 Transitional Advisory Committee	5
4.4 Election and Tenure of Office	5
4.5 Vacancies	6
4.6 Removal of Directors	6
4.7 Powers	6
4.8 Meetings	8
4.9 Open Meetings	8
4.10 Notice of Meetings	9
4.11 Quorum and Vote	9
4.12 Right Of Declarant To Disapprove Actions	9
4.13 Liability	10
4.14 Compensation	10
4.15 Executive, Covenants and Other Committees	10
4.16 Enforcement Procedures	11
Article 5 OFFICERS	12
5.1 Designation and Qualification	12
5.2 Election and Vacancies	12
5.3 Removal and Resignation	12
5.4 President	12
5.5 Vice Presidents	12

5.6 Secretary..... 12

5.7 Treasurer..... 13

5.8 Compensation of Officers. 13

Article 6 ASSESSMENTS, RECORDS AND REPORTS..... 13

6.1 Assessments. 13

6.2 Records. 14

6.3 Statement of Assessments Due..... 14

6.4 Inspection of Books and Records. 15

6.5 Payment of Vouchers. 15

6.6 Execution of Documents..... 15

6.7 Reports and Audits. 15

Article 7 INSURANCE..... 16

7.1 Types of Insurance..... 16

7.2 Insurance by Lot Owners. 17

7.3 Planned Community Act Requirements. 17

Article 8 GENERAL PROVISIONS 17

8.1 Seal..... 17

8.2 Notice..... 17

8.3 Waiver of Notice..... 18

8.4 Action Without Meeting. 18

8.5 Conflicts..... 18

Article 9 AMENDMENTS TO BYLAWS 18

9.1 How Proposed..... 18

9.2 Adoption..... 18

9.3 Execution and Recording..... 19

H

**BYLAWS OF
STAFFORD MEADOWS HOMEOWNERS ASSOCIATION**

Article 1

DEFINITIONS

1.1 **Association.** "Association" means Stafford Meadows Homeowners Association, a nonprofit corporation organized and existing under the laws of the State of Oregon.

1.2 **Articles of Incorporation.** "Articles of Incorporation" means the Articles of Incorporation of the Association.

1.3 **Declaration.** The "Declaration" means the recorded Declaration of Protective Covenants, Conditions, Restrictions and Easements for Stafford Meadows, as the same may be subsequently amended or supplemented pursuant to the terms thereof.

1.4 **Incorporation by Reference.** Except as otherwise provided herein, the terms that are defined in Article 1 of the Declaration are used in these Bylaws as therein defined.

Article 2

MEMBERSHIP

2.1 **Membership.** Every Owner of one or more Lots within the Property will, immediately upon creation of the Association and thereafter during the entire period of such ownership, be a member of the Association. Such membership commences, exists and continues simply by virtue of such ownership, expires automatically upon termination of such ownership, and need not be confirmed or evidenced by any certificate or acceptance of membership. The Association has two classes of membership, Class A and Class B, as set forth in the Declaration.

2.2 **Membership List.** The Secretary will maintain at the principal office of the Association a membership list showing the name and address of the Owner of each Lot. The Secretary may accept as satisfactory proof of such ownership a duly executed and acknowledged conveyance, a title insurance policy, or other evidence reasonably acceptable to the Board of Directors.

Article 3

MEETINGS AND VOTING

3.1 **Place of Meetings.** Meetings of the members of the Association will be held at such reasonable place convenient to the members as may be designated in the notice of the meeting

3.2 **Turnover Meeting.** Declarant will call the first meeting of the Owners to organize the Association within 90 days after termination of the Class B Membership as provided in Section

3.7 below. Notice of such meeting will be given to all Owners as provided in Section 3.5. If a quorum of the Owners is present, the Owners will elect not fewer than the number of directors sufficient to constitute a quorum of the Board of Directors. If the Declarant fails to call the meeting, the meeting may be called and notice given by any Owner or Mortgagee of a Lot. The expense of giving notice will be paid or reimbursed by the Association. In the event of a lack of quorum at such Turnover Meeting, it may be adjourned as provided in Section 3.6. Nothing in this section may be construed as preventing Declarant from calling the Turnover Meeting before such date or from calling informal, informational meetings of the Owners.

3.3 **Annual Meeting.** The annual meeting of the members for the election of directors and for the transaction of such other business as may properly come before the meeting will be held at a reasonable hour and on a reasonable day as may be established by the Board of Directors or, if the Board fail to designate a date by the first day of September, then at 7:30 p.m. on the second Thursday in October. The first annual meeting will be held within one year after the date of the Turnover Meeting.

3.4 **Special Meetings.** A special meeting of the Association may be called at any time by the President or by a majority of the Board of Directors. A special meeting will be called by the president or secretary upon receipt of a written request stating the purpose of the meeting from members having at least 30 percent of the voting rights entitled to be cast at such meeting. Business transacted at a special meeting will be confined to the purposes stated in the notice of meeting.

3.5 **Notice of Meeting.**

(a) Written or printed notice stating the place, day and hour of the meeting, the items on the agenda, including the general nature of any proposed amendment to the Declaration or these Bylaws, any budget changes, any proposal to remove a director or officer and, in case of a special meeting, the purpose or purposes for which the meeting is called, will be delivered not less than 10 or more than 50 days before the date of the meeting. Such notice will be given either personally, by mail or, to the extent permitted by law, by electronic mail, facsimile or other form of electronic communication acceptable to the Board of Directors, by or at the direction of the President, the Secretary, or the persons calling the meeting, to each member entitled to vote at such meeting and to all Mortgagees who have requested such notice. For a period of 10 years following recording of the Declaration, notices of meetings (including agendas) must also be given to Declarant (or any designee of Declarant specified in any written notice to the Association) in the same manner as given to Owners, and Declarant or a representative of Declarant will be entitled to attend such meetings. If mailed, such notice will be deemed to be delivered when deposited in the United States mail, with postage fully prepaid thereon, addressed to the member at his or her most recent address as it appears on the records of the Association or to the mailing address of his or her Lot.

(b) When a meeting is adjourned for 30 days or more, or when a redetermination of the Persons entitled to receive notice of the adjourned meeting is required by law, notice of the adjourned meeting will be given as for an original meeting. In all other cases, no notice of the adjournment or of the business to be transacted at the adjourned meeting need be given other than by announcement at the meeting at which such adjournment is taken.

3.6 **Quorum.** At any meeting of the Association, members having at least 25 percent of the voting rights entitled to be cast at such meeting, present in person, by proxy or by absentee ballot,

if permitted by the Board of Directors, constitutes a quorum, except when a larger quorum is required by the Declaration. When a quorum is once present to organize a meeting, it cannot be broken by the subsequent withdrawal of a member or members. If any meeting of members cannot be organized because of a lack of quorum, the members who are present, either in person or by proxy, may adjourn the meeting from time to time not less than 48 hours or more than 30 days from the time the original meeting was called until a quorum is present, in which case, at the re-scheduled meeting at least 10 percent of the voting rights entitled to be cast at such meeting, present in person, or by proxy, or by absentee ballot (if permitted by the Board of Directors) will constitute a quorum, or half the number of a larger quorum required by the Declaration. If the notice of a meeting of the Association provided that if the meeting fails to meet the 25%-quorum requirement then the quorum will be reduced to 10 percent, then a meeting may continue with a quorum of 10 percent of the voting rights entitled to be cast at such meeting are present in person, or by proxy, or by absentee ballot (if permitted by the Board of Directors).

3.7 **Voting Rights.** The Association has two classes of voting membership:

Class A. Class A Members are all Owners with the exception of the Class B Member and is entitled to one vote for each Lot owned. When more than one Person holds an interest in any Lot, all such Persons will be members. The vote for such Lot is exercised as they among themselves determine, but in no event will more than one vote be cast with respect to any Lot.

Class B. The Class B Member is the Declarant, who is entitled to three votes for each Lot owned by Declarant. The Class B Membership ceases and is converted to Class A Membership on the happening of either of the following events, whichever occurs earlier:

(1) When all of the Lots in the final phase of development of Stafford Meadows have been Sold and conveyed to Owners other than a successor Declarant; or

(2) At such earlier time as Declarant may elect in writing to terminate Class B Membership.

3.8 **Fiduciaries and Joint Owners.** An attorney-in-fact, executor, administrator, guardian, conservator or trustee may vote or grant consent with respect to any Lot owned or held in a fiduciary capacity, whether or not the specific right has been transferred to his or her name; provided that such Person satisfies the Secretary that he or she is the attorney-in-fact, executor, administrator, guardian, conservator or trustee, holding such Lot in a fiduciary capacity. Whenever any Lot is owned by two or more Persons jointly, according to the records of the Association, the vote of such Lot may be exercised by any one of the Owners, in the absence of protest by a co-Owner. In the event of disagreement among the co-Owners, the vote of such Lot will be disregarded completely in determining the proportion of votes given with respect to such matter, unless a valid court order establishes the authority of a co-Owner to vote.

3.9 **Tenants and Contract Vendors.** Unless otherwise expressly stated in the rental agreement or lease, all voting rights allocated to a Lot are exercised by the Owner. Unless otherwise stated in the contract, all voting rights allocated to a Lot are exercised by the vendee of any recorded land sale contract on the Lot.

3.10 **Casting of Votes and Consents.** The voting rights or consent of an Owner may be cast in person at a meeting of the Association or, at the discretion of the Board of Directors, by proxy in accordance with paragraph (a) of this Section, by absentee ballot in accordance with paragraph (b) of this Section, by written ballot in accordance with paragraph (c) of this Section, or by any other method specified in the Declaration, these Bylaws or the Oregon Planned Community Act.

(a) **Proxies.** A proxy must be dated and signed by the Owner and it is not valid if it is undated or purports to be revocable without notice; such proxy terminates one year after its date unless the proxy specifies a shorter term. The Board of Directors may not require that a proxy be on a form prescribed by the Board. An Owner may not revoke a proxy given pursuant to this paragraph except by actual notice of revocation to the person presiding over a meeting of the Association or to the Board if a vote is being conducted by written ballot in lieu of a meeting. A copy of a proxy in compliance with this paragraph provided to the Association by facsimile, electronic mail or other means of electronic communication utilized by the Board is valid.

(b) **Absentee Ballots.** An absentee ballot, if authorized by the Board of Directors, will set forth each proposed action and provide an opportunity to vote for or against each proposed action. All solicitations for votes by absentee ballot must include instructions for delivery of the completed absentee ballot, including the delivery location and instructions about whether the ballot may be canceled if the ballot has been delivered according to the instructions. An absentee ballot will be counted as an Owner present for the purpose of establishing a quorum. Even if an absentee ballot has been delivered to an Owner, the Owner may vote in person at a meeting if the Owner has returned the absentee ballot and canceled the absentee ballot, if cancellation is permitted in the instructions given under this paragraph.

(c) **Ballot Meetings.** At the discretion of the Board of Directors, any action that may be taken at any annual, regular or special meeting of the Association may be taken without a meeting by written ballot to the extent and in the manner provided in ORS 94.647

(d) **Electronic Ballots.** To the extent authorized by the Board of Directors and permitted by the Oregon Planned Community Act, any vote, approval or consent of an owner may be given by electronic ballot.

(e) **Mortgages.** An Owner may pledge or assign such Owner's voting rights to a Mortgagee. In such a case, the Mortgagee or its designated representative will be entitled to receive all notices to which the Owner is entitled under these Bylaws and to exercise the Owner's voting rights from and after the time that the Mortgagee will give written notice of such pledge or assignment to the Board of Directors. Any first Mortgagee may designate a representative to attend all or any meetings of the Association.

3.11 **Majority Vote.** The vote of a majority of the voting rights entitled to be cast by the members present or represented by absentee ballot or proxy, at a meeting at which a quorum is present, is necessary for the adoption of any matter voted upon by the members, unless a greater proportion is required by law, by the Declaration, by the Articles of Incorporation, or by these Bylaws.

3.12 **Rules of Order.** Unless other rules of order are adopted by resolution of the Association or the Board of Directors, all meetings of the Association are to be conducted according to the latest edition of *Robert's Rules of Order*, published by Robert's Rules Association.

Article 4

DIRECTORS: MANAGEMENT

4.1 **Number and Qualification.** The affairs of the Association will be governed by a Board of Directors of three or five individuals. All directors, other than interim directors appointed by Declarant, must be Owners or co-Owners of Lots. For purposes of this section, an officer, employee or agent of a corporation, a member, manager, employee or agent of a limited liability company, or a partner, employee or agent of a partnership may serve on the Board if such corporation, limited liability company or partnership is an Owner or co-Owner of a Lot. In addition, a trustee may serve on the Board if the trustee holds legal title to a Lot for the benefit of the owner of the beneficial interest in the Lot; and an executor, administrator, guardian, conservator or other individual appointed by a court to serve in a fiduciary capacity for an Owner of a Lot, or an officer or employee of an entity if an entity is appointed, may serve on the Board.

4.2 **Interim Directors.** Upon the recording of the Declaration, Declarant will appoint an interim board of one to three directors, who serve until replaced by Declarant or until their successors have been replaced by the Owners as provided below.

4.3 **Transitional Advisory Committee.** Unless the Turnover Meeting has already been held, Declarant will call a meeting of the Owners for the purpose of forming a Transitional Advisory Committee. The meeting must be called within 60 days after the date Declarant conveys 50 percent or more of the Lots then existing in Stafford Meadows to Owners other than a successor Declarant. The committee will consist of two or more Owners elected by the Owners other than Declarant and not more than one representative of Declarant. The members serve until the Turnover Meeting. The Transitional Advisory Committee is advisory only, and its purpose is to enable ease of transition from administrative control of the Association by Declarant to control by the Owners. The committee will have access to any information, documents and records that Declarant must turn over to the Owners at the time of the Turnover Meeting. If Declarant fails to call the meeting to elect a Transitional Advisory Committee within the time specified, the meeting may be called and notice given by any Owner. If the Owners fail to elect a Transitional Advisory Committee at the meeting called for such purpose, Declarant will have no further obligation to form the committee.

4.4 **Election and Tenure of Office.**

(a) At the Turnover Meeting, the interim directors will resign and the members will elect three directors, two to serve for two years and one to serve for one year. The nominees receiving the greatest number of votes serve for two years. In the event of a tie, term selection will be by random means. Thereafter, the successors to each director serve for terms of two years each.

(b) Upon a majority vote of the voting rights entitled to be cast by the members present or represented by absentee ballot or proxy at a meeting or ballot meeting at which a quorum is present, the Board of Directors may be increased from three directors to five directors. At the next annual meeting or a special meeting called for such purpose, two additional directors will be elected, one to serve for a two-year term and one to serve for a one-year term. Term selection will be in the same manner as provided in paragraph (a) above.

(c) All directors hold office until their respective successors have been elected by the members. Election is by plurality.

4.5 Vacancies.

(a) A vacancy in the Board of Directors will exist upon the death, resignation or removal of any director, or if the authorized number of directors is increased, or if the members fail at any annual or special meeting of members at which any director or directors are to be elected to elect the full authorized number of directors to be voted for at that meeting.

(b) Vacancies in the Board of Directors caused by any reason other than the removal of a director by a vote of the Association will be filled by vote of the majority of the remaining directors, even though they may constitute less than a quorum, or by a sole remaining director. Each person so elected will serve as a director until a successor is elected to fill the unexpired term at the next annual meeting of the Association or the next special meeting of the Association called for that purpose. Vacancies in interim directors are filled by Declarant.

4.6 Removal of Directors. At any regular or special meeting of the Association duly called, any one or more of the directors, other than interim directors, may be removed with or without cause by a majority vote of the members present in person or by proxy, and a successor may be elected at that meeting to fill the vacancy thus created. The members must vote on the removal of each director separately. The notice and agenda of any such meeting will state that such removal is to be considered, and any director whose removal has been proposed must be given an opportunity to be heard at that meeting and prior to the vote. A removed director remains a director until the vacancy has been filled.

4.7 Powers. The Board of Directors has all the powers and duties necessary for the administration of the affairs of the Association, except such powers and duties as by law or by the Declaration or by these Bylaws may not be delegated to the Board by the Owners. The Board may delegate responsibilities to committees or a managing agent but must retain ultimate control and supervision. The powers and duties to be exercised by the Board include, but not be limited to, those set forth in Section 8.5 of the Declaration and the following:

(a) Carry out the program for maintenance, upkeep, repair and replacement of any property required to be maintained by the Association as described in the Declaration and these Bylaws.

(b) Determine the amounts required for operation, maintenance and other affairs of the Association, and the making of such expenditures.

(c) Prepare a budget for the Association, and assessment and collection of the Assessments.

(d) Employ and dismiss such personnel as may be necessary for such maintenance, upkeep and repair.

(e) Employ legal, accounting or other personnel for reasonable compensation to perform such services as may be required for the proper administration of the Association; provided,

however, the Board of Directors may not incur or commit the Association to incur legal fees in excess of \$5,000 for any specific litigation or claim matter or enter into any contingent fee contract on any claim in excess of \$100,000 unless the Owners have enacted a resolution authorizing the incurring of such fees by a vote of 75 percent of the total voting rights. These limitations are not applicable to legal fees incurred in defending the Association or the Board from claims or litigation brought against them. The limitations set forth in this paragraph will increase by ten percent on each fifth anniversary of the recording of the Declaration. To the extent required by the Oregon Planned Community Act, the Board will notify the Owners before instituting litigation or administrative proceedings. With regard to any pending litigation involving the Association, the Board will periodically report to the Owners the status (including settlement offers), progress and method of funding such litigation. Nothing in this paragraph may be construed as requiring the Board to disclose any privileged communication between the Association and its counsel.

(f) Open bank accounts on behalf of the Association and designating the signatories required therefor.

(g) Prepare and file, or cause to be prepared and filed, any required income tax returns or forms for the Association.

(h) Purchase Lots at foreclosure or other judicial sales in the name of the Association or its designee.

(i) Sell, lease, mortgage, vote the votes appurtenant to (other than for the election of directors), or otherwise deal with Lots acquired by the Association or its designee.

(j) Obtain insurance or bonds pursuant to the provisions of these Bylaws and review such insurance coverage at least annually.

(k) Make additions and improvements to, or alterations of, the Common Areas, or modify, close, remove, eliminate or discontinue use of any common facility, including any improvement or landscaping, except that any such modification, closure, removal, elimination or discontinuance (other than on a temporary basis) of any swimming pool, spa or recreational or community building must be approved by a majority vote of the members at a meeting or by written ballot held or conducted in accordance with these Bylaws.

(l) From time to time adopt, modify, or revoke such rules and regulations governing the details for the operation of the Association, the conduct of Persons and the operation and use of the Property as the Board of Directors may deem necessary or appropriate to ensure the peaceful and orderly use and enjoyment of the Property. Such action may be overruled or modified by vote of not less than 75 percent of the voting rights of each class of members present, in person or by proxy, at any meeting, the notice of which will have stated that such modification or revocation of rules and regulations will be under consideration.

(m) Enforce by legal means the provisions of the Declaration, these Bylaws and any rules and regulations adopted hereunder.

(n) In the name of the Association, maintain a current mailing address of the Association, file annual reports with the Oregon Secretary of State, and maintain and keep current the information required to enable the Association to comply with ORS 94.670(7).

(o) Subject to Section 8.8 of the Declaration, enter into management agreements with professional management firms.

4.8 Meetings.

(a) Meetings of the Board of Directors will be held at such place as may be designated from time to time by the Board or other Persons, calling the meeting.

(b) Annual meetings of the Board of Directors will be held within 30 days following the adjournment of the annual meetings of the members.

(c) Special meetings of the Board of Directors for any purpose or purposes may be called at any time by the President or by any two directors.

Unless other rules of order are adopted by resolution of the Association or the Board of Directors, all meetings of the Board will be conducted according to the latest edition of *Robert's Rules of Order*, published by Robert's Rules Association.

4.9 Open Meetings.

(a) All meetings of the Board of Directors must be open to Owners except that, in the discretion of the Board, the Board may close the meeting to Owners other than Board members and meet in executive session to consult with legal counsel or to consider personnel matters, including salary negotiations and employee discipline, negotiation of contracts with third parties or collection of unpaid assessments. Except in the case of an emergency, the Board will vote in an open meeting on whether to meet in executive session. If the Board votes to meet in executive session, the presiding officer will state the general nature of the action to be considered and; as precisely as possible, when and under what circumstances the deliberations can be disclosed to Owners. The statement, motion or decision to meet in the executive session must be included in the minutes of the meeting, and any contract or action considered in executive session does not become effective unless the Board, following the executive session, reconvenes in open meeting and votes on the contract or action, which is reasonably identified in the open meeting and included in the minutes.

(b) Meetings of the Board of Directors may be conducted by telephonic communication or by other means of communication that allows all members of the Board participating to hear each other simultaneously or otherwise to be able to communicate during the meeting, except that if a majority of the Lots are principal residences of the occupants, then: (i) for other than emergency meetings, notice of each Board's meeting must be posted at a place or places on the property at least three days before the meeting, or notice will be provided by a method otherwise reasonably calculated to inform the Owners of such meeting; and (ii) only emergency meetings of the Board may be conducted by telephonic communication. The meeting and notice requirements of this section may not be circumvented by chance, social meetings, or any other means.

4.10 Notice of Meetings.

(a) Notice of the time and place of meetings will be given to each director orally, or delivered in writing personally, by mail or to the extent permitted by the Oregon Planned Community Act, by electronic mail, facsimile or other form of electronic communication acceptable to the Board of Directors, at least 24 hours before the meeting. Notice is sufficient if received at the required time or if mailed or sent electronically not less than 72 hours before the meeting. If mailed, the notice will be directed to the address shown on the Association's records or to the director's actual address ascertained by the person giving the notice. Such notice need not be given for an adjourned meeting if such time and place is fixed at the meeting adjourned. For a period of 10 years following recording of the Declaration, notices of meetings (including agendas) must also be given to Declarant in the same manner as given to the directors.

(b) Attendance of a director at a meeting constitutes a waiver of notice of such meeting except when a director attends a meeting for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened.

4.11 Quorum and Vote.

(a) A majority of the directors constitutes a quorum for the transaction of business. A minority of the directors, in the absence of a quorum, may adjourn from time to time but may not transact any business.

(b) The action of a majority of the directors present at any meeting at which there is a quorum is the act of the Board of Directors unless a greater number is required by law, the Declaration, the Articles of incorporation or these Bylaws.

(c) A director who is present at a meeting of the Board of Directors at which action is taken on any Association matter is presumed to have assented to the action unless the director votes against the action or abstains from voting on the action because the director claims a conflict of interest. When action is taken on any matter at a meeting of the Board, the vote or abstention of each director present must be recorded in the minutes of the meeting. Directors may not vote by proxy or by secret ballot at meetings of the Board, except that officers may be elected by secret ballot.

4.12 Right Of Declarant To Disapprove Actions. So long as Declarant or any affiliate of Declarant owns any property within Stafford Meadows, directly or indirectly, in whole or in part, Declarant has a right to disapprove any action, policy or program of the Association, the Board of Directors and any committee which, in the sole judgment of the Declarant, would tend to impair the rights of Declarant or builders under the Declaration or these Bylaws, or interfere with development, construction or marketing of any portion of the Property, or diminish the level of services being provided by the Association. This right to disapprove is in addition to, and not in lieu of, any right to approve or disapprove specific actions of the Association, the Board or any committee as may be granted to the Class B Member or Declarant in the Declaration or these Bylaws.

(a) The Declarant must be given written notice of all meetings of the Association, the Board of Directors or any committee thereof and of all proposed actions of the Association, the Board or any committee thereof to be approved at such meetings or by written request in lieu of a meeting. Such notice will be given by certified mail, return receipt requested, or by personal delivery

at the address it has registered with the Secretary of the Association, which notice complies with the requirements for Board meetings set forth in these Bylaws and which notice will, except in the case of the regular meetings held pursuant to the Bylaws, set forth with reasonable particularity the agenda to be followed at such meeting.

(b) The Declarant must be given the opportunity at any such meeting to join in or to have its representatives or agents join in discussion from the floor of any prospective action, policy, or program which would be subject to the right of disapproval set forth herein. The Declarant, its representatives or agents may make its concerns, thoughts, and suggestions known to the Board of Directors and/or the members of the subject committee.

(c) No action, policy or program subject to the right of disapproval set forth herein become effective or be implemented until and unless the requirements of subsections (a) and (b) above have been met and the time period set forth in subsection (d) below has expired.

(d) The Declarant, acting through any officer or director, agent or authorized representative, may exercise its right to disapprove at any time within 10 days following the meeting at which such action was proposed or, in the case of any action taken by written consent in lieu of a meeting, at any time within 10 days following receipt of written notice of the proposed action. This right to disapprove may be used to block proposed actions but does not include a right to require any action or counteraction on behalf of any committee, the Board of Directors, or the Association unless such action or counteraction countermands an action, policy or program that was not properly noticed and implemented. The Declarant will not use its right to disapprove to reduce the level of services which the Association is obligated to provide or to prevent capital repairs or any expenditure required to comply with applicable laws and regulations.

4.13 **Liability.** Neither a member of the Board of Directors nor an officer of the Association or a member of the Architectural Review Committee or any other committee established by the Board will be liable to the Association, any Owner or any third party for any damages, loss or prejudice suffered or claimed on account of any action or failure to act in the performance of his or her duties, so long as the individual acted in good faith, believed that the conduct was in the best interests of the Association, or at least was not opposed to its best interests; and in the case of criminal proceedings, had no reason to believe the conduct was unlawful. In the event any member of the Board or any officer or committee member of the Association is made a party to any proceeding because the individual is or was a director, officer or committee member of the Association, the Association will defend such individual against such claims and indemnify such individual against liability and expenses incurred to the maximum extent permitted by law.

4.14 **Compensation.** No director will receive any compensation from the Association for acting as such.

4.15 **Executive, Covenants and Other Committees.** Subject to law, the provisions of the Declaration and these Bylaws, the Board of Directors, may appoint an Executive Committee, a Covenants Committee to be responsible for covenant enforcement as provided in Section 4.16 and such other standing or temporary committees as may be necessary from time to time consisting of Owners and at least one member of the Board and having such powers as the Board may designate. Such committees hold office at the pleasure of the Board.

4.16 **Enforcement Procedures.** The Association has the power, as provided in the Declaration, to impose sanctions for any violation of the Declaration, these Bylaws or the Rules and Regulations. To the extent specifically required by the Declaration, the Board of Directors must comply with the following procedures prior to the imposition of sanctions:

(a) **Notice.** The Board of Directors or its delegate must serve the alleged violator with written notice describing (i) the nature of the alleged violation, (ii) the proposed sanction to be imposed, (iii) a statement that the alleged violator will have 14 days to present a written request for a hearing before the Board or a Covenants Committee appointed by the Board, if any; and (iv) a statement that the proposed sanction may be imposed as contained in the notice unless a hearing is requested within 14 days of the notice.

(b) **Response.** The alleged violator must respond to the notice of the alleged violation in writing within such 14 day period, regardless of whether the alleged violator is challenging the imposition of the proposed sanction. If the alleged violator cures the alleged violation and notifies the Board of Directors in writing within such 14 day period the Board may, but is not obligated to, waive the sanction. Such waiver does not constitute a waiver of the right to sanction future violations of the same or other provisions by any Person. If a timely request for a hearing is not made, the sanction stated in the notice will be imposed; provided, however, that the Board or Covenants Committee may, but is not obligated to, suspend any proposed sanction if the violation is cured within the 14 day period. Any response or request for a hearing must be delivered to the Association's manager, President or Secretary, or as otherwise specified in the notice of violation.

(c) **Proof of Notice.** Prior to the effectiveness of sanctions imposed pursuant to this section, proof of proper notice must be placed in the minutes of the Board of Directors or Covenants Committee, as applicable. Such proof will be deemed adequate if a copy of the notice, together with a statement of the date and manner of delivery, is entered by the officer, director, or agent who delivered such notice. The notice requirement will be deemed satisfied if the alleged violator or its representative requests and appears at the hearing.

(d) **Hearing.** If a hearing is requested within the allotted 14 day period, the hearing will be held before the Board of Directors or the Covenants Committee, as applicable. The alleged violator will be afforded a reasonable opportunity to be heard. The minutes of the meeting must contain a written statement of the results of the hearing (i.e., the decision) and the sanction, if any, to be imposed.

(e) **Appeal.** Following a hearing before the Covenants Committee, if applicable, the violator must have the right to appeal the decision to the Board of Directors. To exercise this right, the violator must deliver a written notice of appeal to the Association's manager, President or Secretary within 10 days after the hearing date.

(f) **Enforcement Policies.** The Board of Directors, by Resolution, may adopt additional policies and procedures governing enforcement of the Declaration, these Bylaws or the Rules and Regulations.

Article 5

OFFICERS

5.1 **Designation and Qualification.** The officers of the Association are the President, the Secretary, the Treasurer, and such Vice Presidents and subordinate officers as the Board of Directors will from time to time appoint. The President must be a member of the Board, but the other officers need not be directors. Any two offices, except the offices of President and Secretary, may be held by the same person.

5.2 **Election and Vacancies.** The officers of the Association are appointed annually by the Board of Directors at the organization meeting of each new Board to serve for one year and until their respective successors are elected. If any office becomes vacant by reason of death, resignation, removal, disqualification or any other cause, the Board will appoint a successor to fill the unexpired term at any meeting of the Board.

5.3 **Removal and Resignation.**

(a) Any officer may be removed upon the affirmative vote of a majority of the directors whenever, in their judgment, the best interests of the Association will be served thereby. The removal of an officer will be without prejudice to the contract rights, if any, of the officer so removed.

(b) Any officer may resign at any time by giving written notice to the Board of Directors, the President or the Secretary of the Association. Any such resignation takes effect upon receipt of such notice or at any later time specified therein. Unless otherwise specified therein, the acceptance of such resignation is not necessary to make it effective, provided, however, that the Board may reject any postdated resignation by notice in writing to the resigning officer. The effectiveness of such resignation will not prejudice the contract rights, if any, of the Association against the officer so resigning.

5.4 **President.** The President is the chief executive officer of the Association and, subject to the control of the Board of Directors, has powers of general supervision, direction and control of the business and affairs of the Association. He or she presides at all meetings of the members and of the Board. He or she is an ex officio member of all the standing committees, including the executive committee, if any, has the general powers and duties of management usually vested in the office of president of a nonprofit corporation, and has such other powers and duties as may be prescribed by the Board or these Bylaws.

5.5 **Vice Presidents.** The Vice Presidents, if any, performs such duties as the Board of Directors prescribe. In the absence or disability of the President, the President's duties and powers are performed and exercised by the Senior Vice President as designated by the Board.

5.6 **Secretary.**

(a) The Secretary keeps or causes to be kept a book of minutes of all meetings of directors and members showing the time and place of the meeting, whether it was regular or special,

and if special, how authorized, the notice given, the names of those present at directors' meetings, the number of memberships present or represented at members' meetings and the proceedings thereof.

(b) The Secretary gives or causes to be given such notice of the meetings of the members and of the Board of Directors as is required by these Bylaws or by law. The Secretary keeps the seal of the Association, if any, and affixes it to all documents requiring a seal, and has such other powers and perform such other duties as may be prescribed by the Board or these Bylaws.

(c) If there are no Vice Presidents, then in the absence or disability of the President, the President's duties and powers are performed and exercised by the Secretary.

5.7 **Treasurer.** The Treasurer keeps and maintains, or causes to be kept and maintained, adequate and correct accounts of the properties and business transactions of the Association, including accounts of its assets, liabilities, receipts and disbursements. The books of accounts must at all reasonable times be open to inspection by any director. The Treasurer deposits or causes to be deposited all moneys and other valuables in the name and to the credit of the Association with such depositories as may be designated by the Board of Directors. The Treasurer disburses or causes to be disbursed the funds of the Association as may be ordered by the Board, renders to the President and directors, whenever they request it, an account of all of the Treasurer's transactions as Treasurer and of the financial condition of the Association, and has such other powers and perform such other duties as may be prescribed by the Board or these Bylaws.

5.8 **Compensation of Officers.** No officer who is a member of the Board of Directors will receive any compensation from the Association for acting as an officer, unless such compensation is authorized by a resolution duly adopted by the members. The Board may fix any compensation to be paid to other officers.

Article 6

ASSESSMENTS, RECORDS AND REPORTS

6.1 **Assessments.** As provided in the Declaration, the Association, through its Board of Directors, will do the following:

(a) Assess and collect from every Owner Assessments in the manner described in the Declaration.

(b) Keep all funds received by the Association as Assessments, other than reserves described in the Declaration, in the Operations Fund and keep all reserves collected pursuant to the Declaration in the Reserve Fund and use such funds only for the purposes described in the Declaration. All assessments will be deposited and maintained in the name of the Association in one or more separate federally insured accounts, including certificates of deposit, at a financial institution as defined in ORS 706.008, other than an extranational institution. Such funds may be used to purchase obligations of the United States government. All expenses of the Association are paid from the Association's bank account.

(c) From time to time, and at least annually, prepare a budget for the Association, estimating the common expenses expected to be incurred with adequate allowance for reserves based

upon the reserve study required by the Declaration and determine whether the General Assessment should be increased or decreased. Within 30 days after adopting a proposed annual budget, the Board of Directors will provide a summary of the budget to all Owners. If the Board fails to adopt a budget, the last adopted annual budget continues in effect.

(d) Fix the amount of the General Assessment against each Lot at least 30 days in advance of each General Assessment period. Written notice of any Assessment will be sent to every Owner subject thereto and to any first Mortgagee requesting such notice. The due dates will be established by the Board of Directors, which may fix a regular flat Assessment payable on a monthly, quarterly, semiannual or annual basis. The Board will cause to be prepared a roster of the Lots showing Assessments applicable to each Lot. The roster will be kept in the Association office and subject to inspection by any Owner or Mortgagee during regular business hours. Within 10 business days after receiving a written request, and for a reasonable charge, the Association will furnish to any Owner or Mortgagee a recordable certificate setting forth the unpaid Assessments against such Owner's Lot. Such certificate is binding upon the Association, the Board, and every Owner as to the amounts of unpaid Assessments.

(e) When Additional Properties are annexed, the Board of Directors will assess any Lots included therein in accordance with Section 10.5 of the Declaration.

(f) Enforce the Assessments in the manner provided in the Declaration.

(g) Keep records of the receipts and expenditures affecting the Operations Fund and Reserve Fund and make the same available for examination by members and their Mortgagees at convenient hours, maintain an Assessment roll showing the amount of each Assessment against each Owner, the amounts paid upon the account and the balance due on the Assessments, give each member written notice of each Assessment at least 30 days before the time when such Assessments will become due and payable; and for a reasonable charge, promptly provide any Owner or Mortgagee who makes a request in writing with a written certificate of such Owner's unpaid Assessments.

6.2 **Records.** The Association will keep within the State of Oregon correct and complete financial records sufficiently detailed for proper accounting purposes, keep minutes of the proceedings of its members, Board of Directors and committees having any of the authority of the Board, and retain all documents, information and records turned over to the Association by Declarant. All documents, information and records delivered to the Association by Declarant pursuant to ORS 94.616 will be kept within the State of Oregon.

6.3 **Statement of Assessments Due.** The Association will provide, within 10 business days after receipt of a written request from an Owner, a written statement that provides: (a) the amount of assessments due from the Owner and unpaid at the time the request was received, including regular and special assessments, fines and other charges, accrued interest, and late-payment charges; (b) the percentage rate at which interest accrues on assessments that are not paid when due; and (c) the percentage rate used to calculate the charges for late payment or the amount of a fixed-rate charge for late payment. The Association is not required to comply with this section if the Association has commenced litigation by filing a complaint against the Owner and the litigation is pending when the statement would otherwise be due.

6.4 **Inspection of Books and Records.** Except as otherwise provided in ORS 94.670(5), during normal business hours or under other reasonable circumstances, the Association must make reasonably available for examination and, upon written request, available for duplication, by Owners, lenders, and holders of any Mortgage of a Lot that make the request in good faith for a proper purpose, current copies of the Declaration, Articles, Bylaws, Rules and Regulations, amendments or supplements to such documents and the books, records, financial statements and current operating budget of the Association. The Association will maintain a copy, suitable for purposes of duplication, of each of the following: (a) the Declaration, these Bylaws, the Rules and Regulations and any amendments or supplements to them, (b) the most recent financial statement of the Association, and (c) the current operating budget of the Association. The Association, within 10 business days after receipt of a written request by an Owner, will furnish copies of such documents to the requesting Owner. Upon written request, the Association will make such documents, information and records available to such Persons for duplication during reasonable hours. The Board of Directors, by resolution, may adopt reasonable rules governing the frequency, time, location, notice and manner of examination and duplication of Association records and the imposition of a reasonable fee for furnishing copies of such documents, information or records. The fee may include reasonable personnel costs for furnishing the documents, information or records.

6.5 **Payment of Vouchers.** The Treasurer or managing agent will pay all vouchers for all budgeted items and for any nonbudgeted items, up to \$1,000 signed by the President, managing agent, manager or other person authorized by the Board of Directors. Any voucher for nonbudgeted items in excess of \$1,000 requires the authorization of the President or a resolution of the Board.

6.6 **Execution of Documents.** The Board of Directors may, except as otherwise provided in the Declaration, Articles of Incorporation; or these Bylaws, authorize any officer or agent to enter into any contract or execute any instrument in the name of and on behalf of the Association. Such authority may be general or confined to specific instances. Unless so authorized by the Board, no officer, agent, or employee has any power or authority to bind the Association by any contract or engagement, to pledge its credit, or to render it liable for any purpose or for any amount.

6.7 **Reports and Audits.** An annual financial statement consisting of a balance sheet and an income and expense statement for the preceding year will be rendered by the Board of Directors to all Owners and to all Mortgagees who have requested the same within 90 days after the end of each fiscal year. Commencing with the fiscal year following the Turnover Meeting, if the General Assessments exceed \$75,000 for the year, then the Board will cause such financial statements to be reviewed within 300 days after the end of the fiscal year by an independent certified public accountant licensed in Oregon in accordance with the Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants, or if the General Assessments are \$75,000 or less, will cause such review within 300 days after receipt of a petition requesting such review signed by at least a majority of owners. The Board need not cause such a review to be performed if so directed by an affirmative vote of at least 60 percent of the Owners, not including votes of Declarant with respect to Lots owned by Declarant. From time to time, the Board, at the expense of the Association, may obtain an audit of the books and records pertaining to the Association and furnish copies thereof to the members. At any time an Owner or holder of a Mortgage may, at their own expense, cause an audit or inspection to be made of the books and records of the Association.

Article 7

INSURANCE

7.1 **Types of Insurance.** For the benefit of the Association and the Owners, the Board of Directors will obtain and maintain at all times, and pay for out of the Operations Fund, the following insurance:

(a) **Property Damage Insurance.**

(1) The Association will maintain a policy or policies of insurance covering loss or damage from fire, with standard extended coverage and "all risk" endorsements, and such other coverages as the Association may deem desirable.

(2) The amount of the coverage will be for not less than 100 percent of the current replacement cost of the improvements on the Common Areas (exclusive of land, foundation, excavation and other items normally excluded from coverage), subject to a reasonable deductible not to exceed \$10,000.

(3) The policy or policies will include all fixtures and building service equipment to the extent that they are part of the Common Areas and all personal property and supplies belonging to the Association.

(b) **Liability Insurance.**

(1) The Association will maintain comprehensive general liability insurance coverage insuring the Declarant, the Association, the Board of Directors, and the managing agent, against liability to the public or to Owners and their invitees or tenants, incident to the operation, maintenance, ownership or use of the Common Areas, including legal liability arising out of lawsuits related to employment contracts of the Association. There may be excluded from such policy or policies coverage of an Owner (other than as a member of the Association or Board) for liability arising out of acts or omissions of such Owner and liability incident to the ownership and/or use of the part of the Property as to which such Owner has the exclusive use or occupancy.

(2) Limits of liability under such insurance will not be less than \$1,000,000 on a combined single-limit basis.

(3) Such policy or policies will be issued on a comprehensive liability basis and provide a cross-liability endorsement wherein the rights of named insureds under the policy or policies are not prejudiced as respects his, her or their action against another named insured.

(c) **Workers' Compensation Insurance.** The Association will maintain workers' compensation insurance to the extent necessary to comply with any applicable laws.

(d) **Fidelity Insurance.**

(1) The Board of Directors will cause the Association to maintain blanket fidelity insurance for all officers, directors, trustees and employees of the Association and all other

Persons handling or responsible for funds of, or administered by, the Association. In the event that the Association has retained a management agent, the Board may require such agent to maintain fidelity insurance for its officers, employees and agents handling or responsible for funds of, or administered on behalf of, the Association. The cost of such insurance, if any, is borne by the Association.

(2) The total amount of fidelity insurance coverage required will be based upon the best business judgment of the Board of Directors.

(3) Such fidelity insurance will name the Association as obligee and contain waivers by the insurers of all defenses based upon the exclusion of Persons serving without compensation from the definition of "employees" or similar terms or expressions. The insurance will provide that it may not be canceled or substantially modified (including cancellation for nonpayment of premium) without at least 10 days' prior written notice to the Association.

(e) **Director's and officers' liability insurance.** The Association will maintain a policy of directors' and officers' liability insurance with coverage in the amount of not less than \$1,000,000 subject to a reasonable deductible, which deductible is the responsibility of the Association. Such insurance will cover both interim and regular directors and will include coverage for claims brought by the Association, Owners and/or third parties, including, without limitation, claims arising out of construction defects or failure to maintain adequate reserves. Directors and officers will be accepting such positions in reliance upon such insurance protection being maintained by the Association. Therefore, in the event the Association fails to carry such insurance or amends these Bylaws to delete or reduce these insurance requirements, the Association and Owners will be deemed to have released such claims and deemed to have covenanted not to sue or prosecute any claims against its current or former directors or officers that would have been insured under such a policy.

7.2 **Insurance by Lot Owners.** Each Owner are responsible for obtaining, at his or her own expense, homeowner's insurance covering the improvements on the Owner's Lot and liability resulting from use or ownership of the Lot, unless the Association agrees otherwise. The insurance coverage maintained by the Association may not be brought into contribution with the insurance obtained under this section by the Owners.

7.3 **Planned Community Act Requirements.** The insurance maintained by the Association must comply with the requirements of the Oregon Planned Community Act, ORS 94.550 to 94.780.

Article 8

GENERAL PROVISIONS

8.1 **Seal.** The Board of Directors may, by resolution, adopt a corporate seal.

8.2 **Notice.** All notices to the Association or to the Board of Directors will be sent care of the managing agent, or if there is no managing agent, to the principal office of the Association or to such other address as the Board of Directors may hereafter designate from time to time. All notices to members will be sent to the member's unit or to such other address as may have been designated by the member from time to time in writing to the Board of Directors.

8.3 **Waiver of Notice.** Whenever any notice to any member or director is required by law, the Declaration, the Articles of Incorporation, or these Bylaws, a waiver of notice in writing signed at any time by the Person entitled to notice is equivalent to the giving of the notice.

8.4 **Action Without Meeting.** Any action that the law, the Declaration, the Articles of Incorporation or the Bylaws require or permit the members or directors to take at any meeting may be taken without a meeting or ballot meeting if a consent in writing setting forth the action so taken is signed by all of the members or directors entitled to vote on the matter. The consent, which will have the same effect as a unanimous vote of the members or directors, will be filed in the records of minutes of the Association.

8.5 **Conflicts.** These Bylaws are intended to comply with the Oregon Planned Community Act, the Oregon Nonprofit Corporation Law, the Declaration and the Articles of Incorporation. In case of any irreconcilable conflict, such statutes and documents control over these Bylaws.

Article 9

AMENDMENTS TO BYLAWS

9.1 **How Proposed.** Amendments to these Bylaws must be proposed by either a majority of the Board of Directors or by members holding at least 30 percent of the voting rights entitled to be cast for such amendment. The proposed amendment must be reduced to writing and must be included in the notice of any meeting at which action is to be taken thereon or be attached to any request for consent to the amendment.

9.2 **Adoption.**

(a) A resolution adopting a proposed amendment may be proposed by either the Board of Directors or by the members and may be approved by the membership at a meeting called for such purpose, or by written consent of the members. Members not present at the meeting considering such amendment may express their approval in writing or by proxy. Any resolution must be approved by members holding a majority of the voting rights, together with the written consent of the Class B Member, if any. Amendment or repeal of any provision of these Bylaws that is also contained in the Declaration must be approved by the same voting requirement for amendment of such provision of the Declaration.

(b) Notwithstanding the provisions of the preceding paragraph, until the Turnover Meeting has occurred, Declarant has the right to amend these Bylaws in order to comply with the requirements of the Federal Housing Administration, the United States Department of Veterans Affairs, the Farmers Home Administration of the United States, the Federal National Mortgage Association, the Government National Mortgage Association, the Federal Home Mortgage Loan Corporation, any department, bureau, board, commission or agency of the United States or the State of Oregon, or any corporation wholly owned, directly or indirectly, by the United States or the State of Oregon that insures, guarantees or provides financing for a planned community or lots in a planned community. After the Turnover Meeting, any such amendment must be approved as provided in Section 9.2(a).

9.3 **Execution and Recording.** An amendment will not be effective until certified by the President and Secretary of the Association as being adopted in accordance with these Bylaws and ORS 94.625 and recorded in the Deed Records of Clackamas County, Oregon.

Appendix H

Example Building Elevations

WEST HILLS
HOMES NORTHWEST

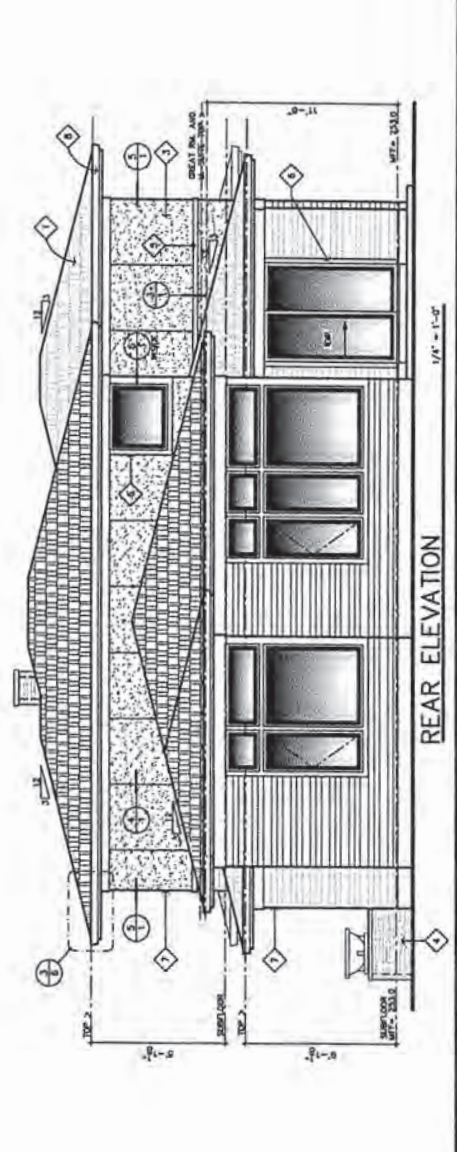
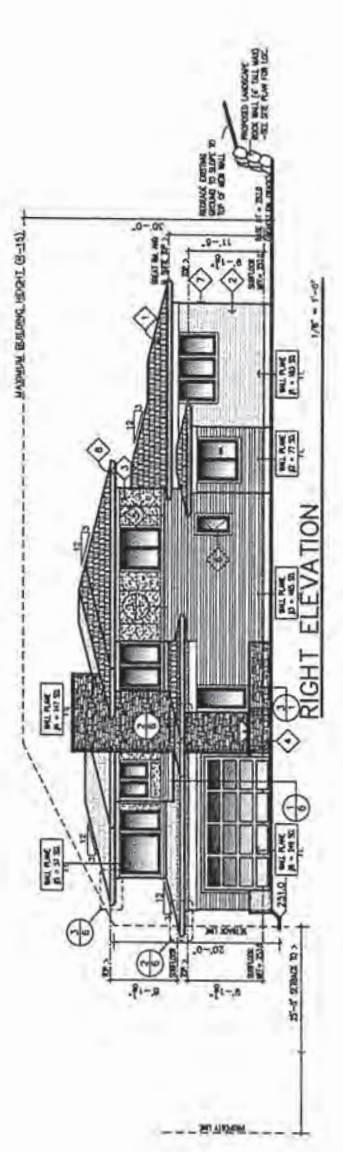
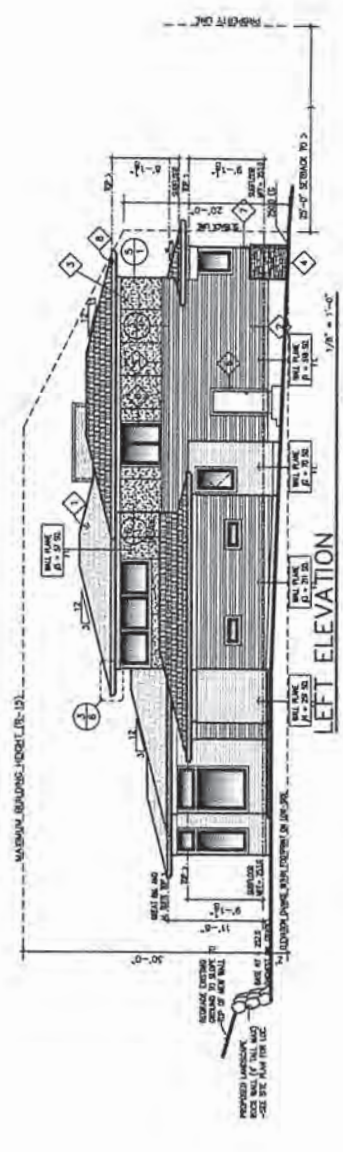
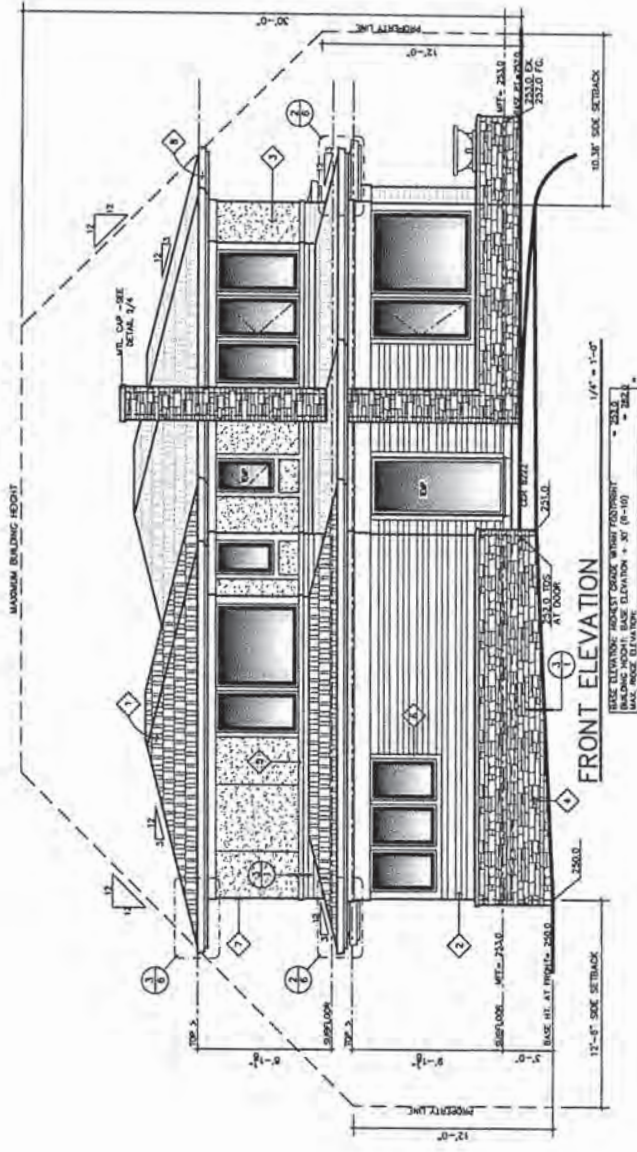
SEE SITE

EVERETT
CUSTOM HOMES

3330 NW YEON AVE STE 100
PORTLAND, OREGON 97210
PHONE (503) 726-7060

These building plans are produced by United States
History and State copyright law. The copyright in
these plans is owned by the author, WEST HILLS
HOMES NORTHWEST. All rights are reserved. No part
of these plans may be reproduced, stored in a
retrieval system, or transmitted in any form or
by any means, electronic, mechanical, photocopying,
recording, or by any information storage and
retrieval system, without the prior written
permission of WEST HILLS HOMES NORTHWEST.
The copyright in these plans is owned by the
author, WEST HILLS HOMES NORTHWEST. No part
of these plans may be reproduced, stored in a
retrieval system, or transmitted in any form or
by any means, electronic, mechanical, photocopying,
recording, or by any information storage and
retrieval system, without the prior written
permission of WEST HILLS HOMES NORTHWEST.

5/23/17 PRELIM LAYOUT DOOR
5/23/17 PRELIM LAYOUT DOOR
5/23/17 PRELIM LAYOUT DOOR
5/23/17 PRELIM LAYOUT DOOR



PLAN 2746
BAYBERRY
PRAIRIE
2-CAR
GARAGE LEFT

MAIN LEVEL: 1,625 SQ FT
UPPER LEVEL: 1,001 SQ FT
GRAND TOTAL: 2,744 SQ FT
GARAGE: 499 SQ FT

SHEET 1

NOTE :
FOR ALL STRUCTURAL
INFORMATION REFER
TO THE (S) SHEETS

© 2017 EVERETT CUSTOM HOMES



WEST HILLS
HOMES NORTHWEST

4-BEDROOMS
2-BATHS
3-CAR GARAGE

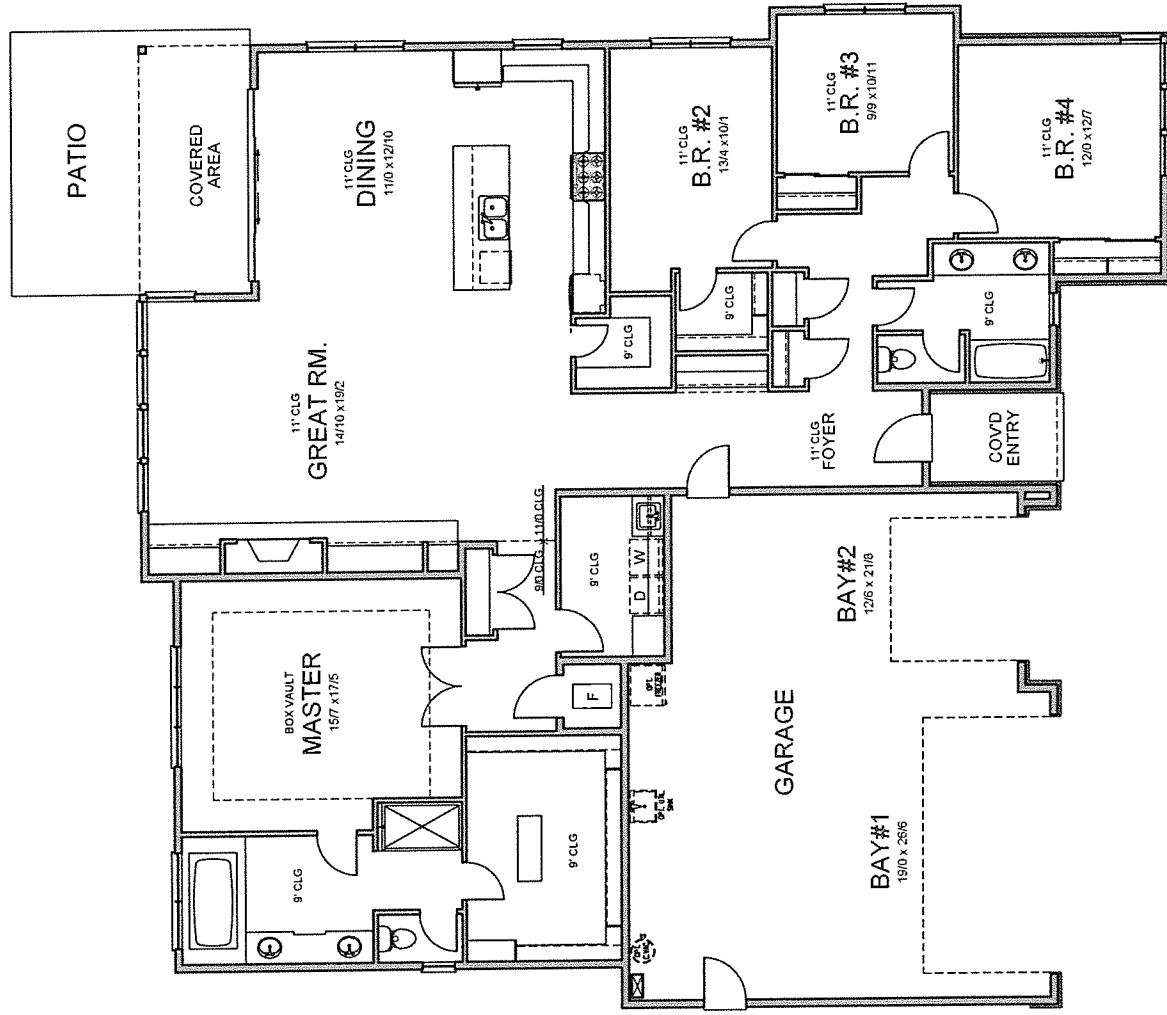
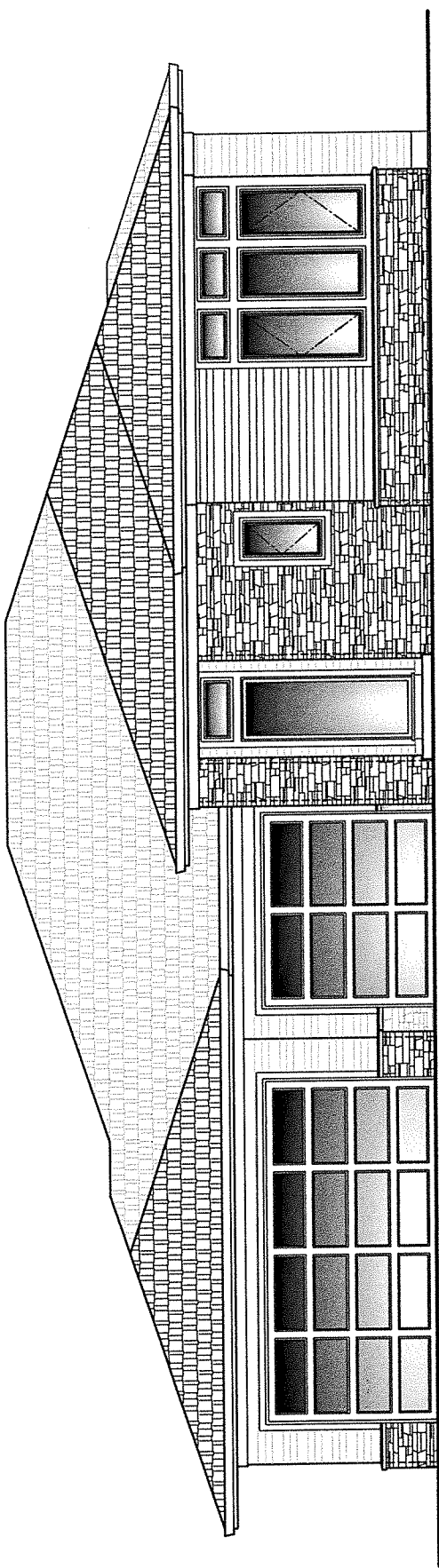
2480 ESLINGER
PRAIRIE

M. FLR. = 2,480 S.F.
TOTAL = 2,480 S.F.
GARAGE = 826 S.F.



EVERETT

CUSTOM HOMES



MAIN LEVEL FLOOR PLAN (9' & 11' CLG'S.)

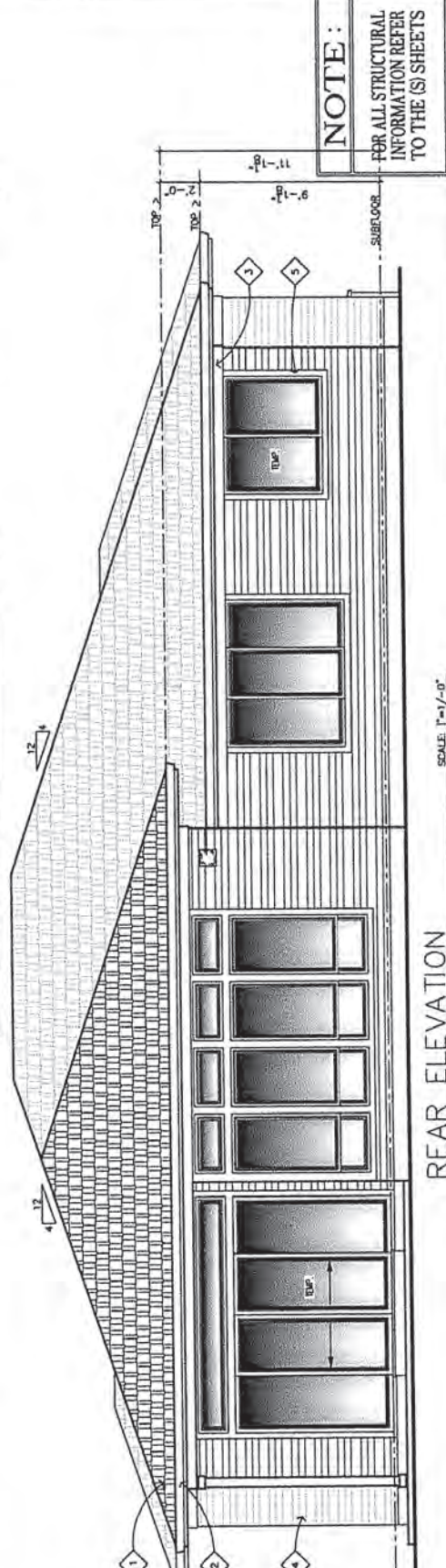
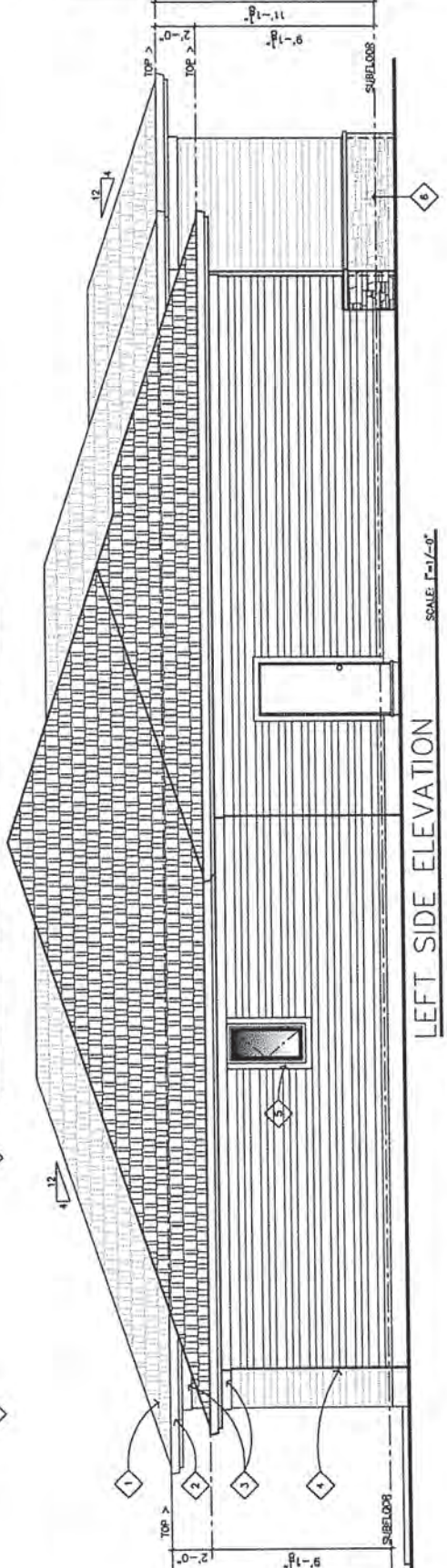
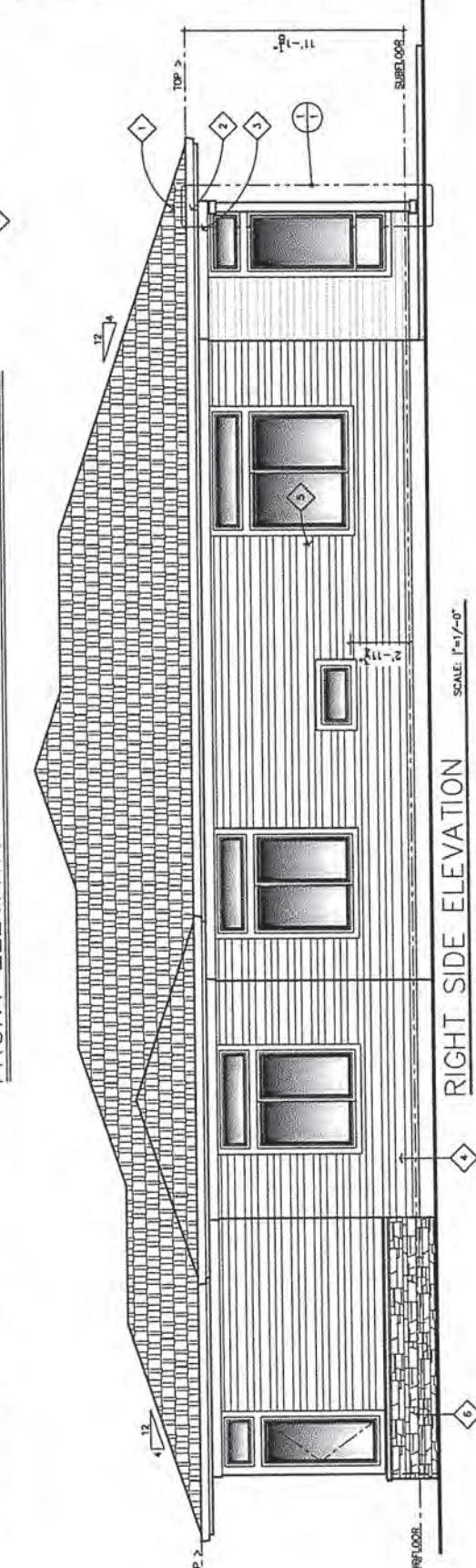
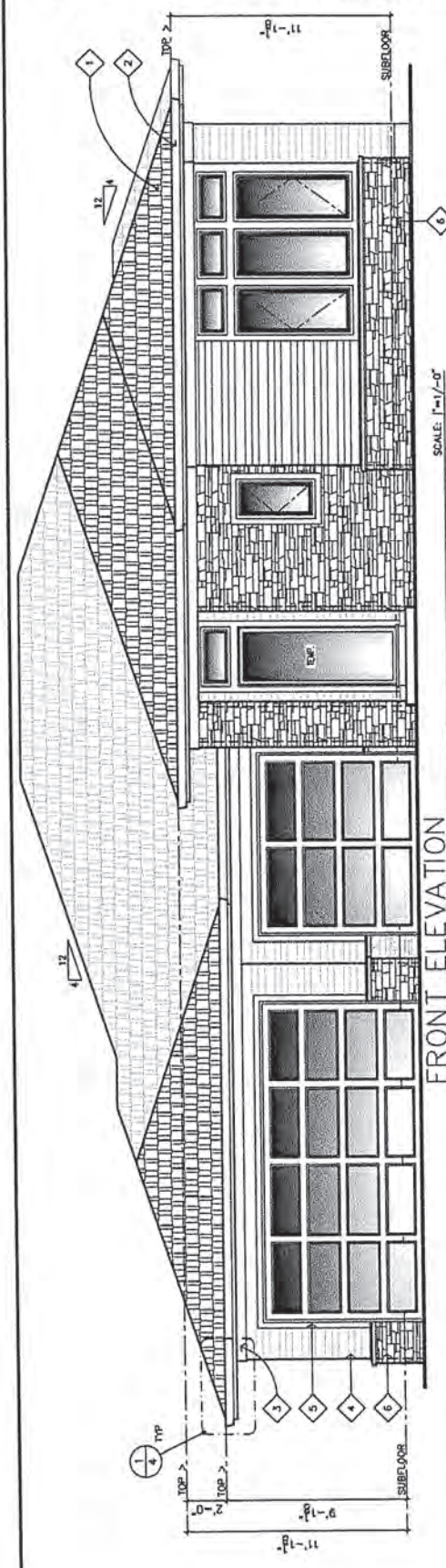
WEST HILLS
HOMES NORTHWEST

EVERETT
CUSTOM HOMES

3300 NW VEON AVE STE. 100
PORTLAND, OREGON 97210
PHONE (503) 769-0660

These building plans are protected by United States federal and state copyright law. The copyright in these plans is owned by Everett Custom Homes, Inc. No part of these plans may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Everett Custom Homes, Inc. In accordance with the copyright law, no part of the building plans may be used for the construction of any residence other than that specifically intended for the lot and address or substitute a related address.

9/18/17, PRELIM. LAYOUT DOR
9/27/17, PRELIM. ENG. CHK. DOR
10/20/17, FIN. ENG. CHK. DOR
10/20/17, PUBLISH PLAN DOR



PLAN 2480
ESLINGER
PRAIRIE
GARAGE LEFT

WASH LEVEL: 2,460.50 FT
GRAND TOTAL: 2,460.50 FT
GARAGE: 806.50 FT
SHEET 1

NOTE:
FOR ALL STRUCTURAL
INFORMATION REFER
TO THE (S) SHEETS

© 2017 EVERETT CUSTOM HOMES



WEST HILLS
HOMES NORTHWEST

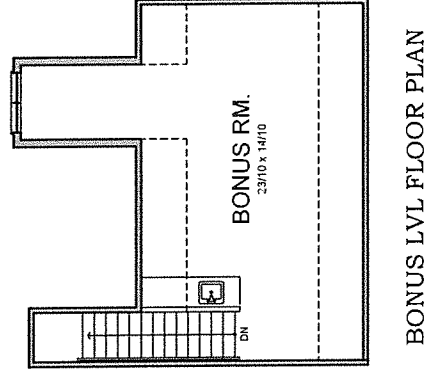
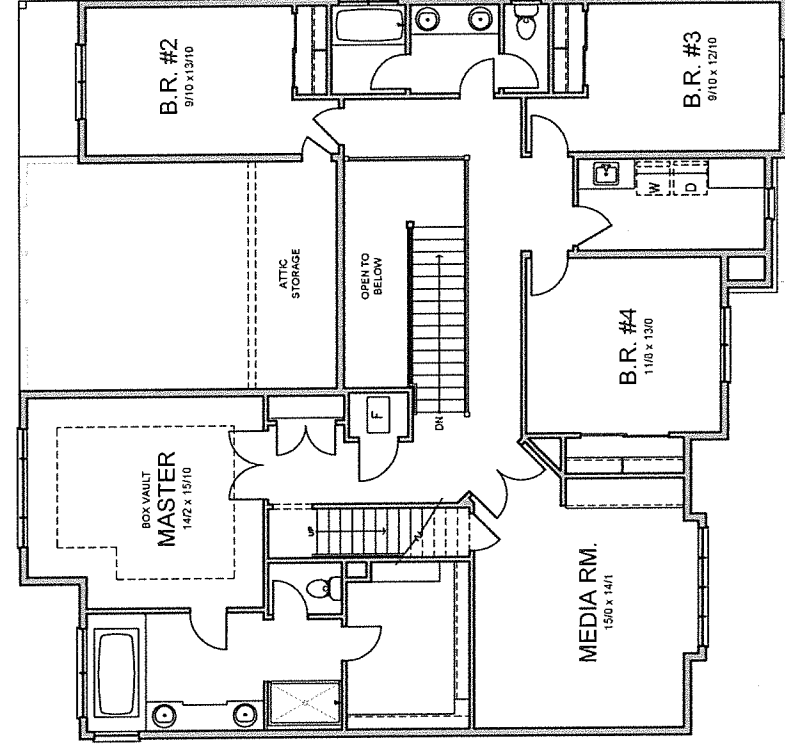
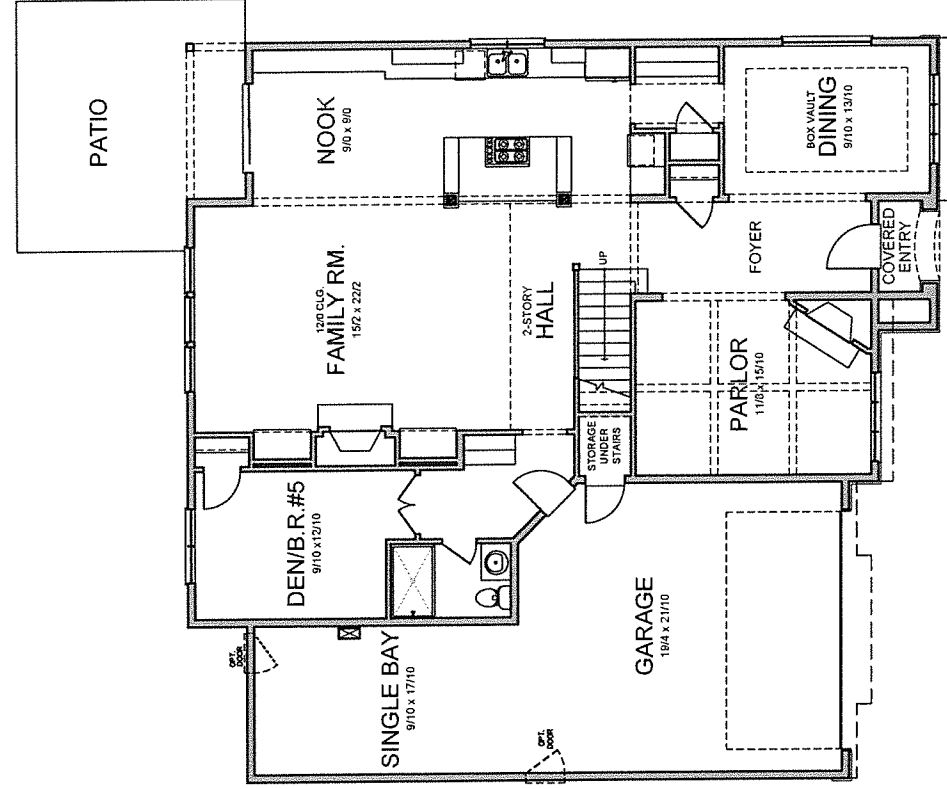
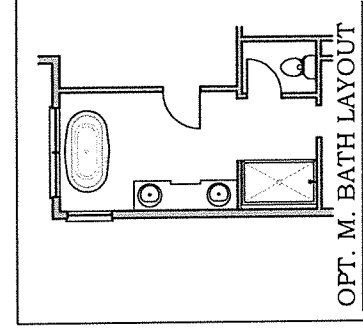
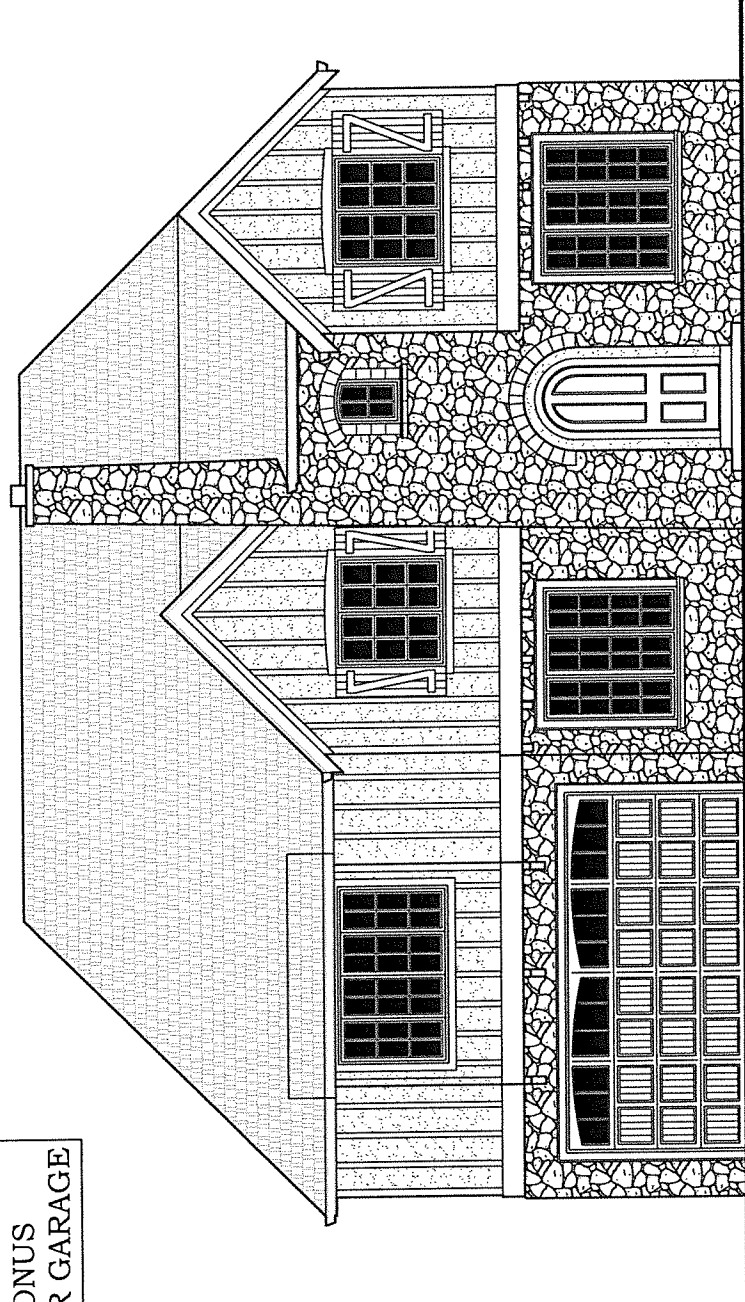
3557 DUNTHORPE
FRENCH

M. FLR. = 1,605 S.F.
U. FLR. = 1,917 S.F.
BONUS = 451 S.F.
TOTAL = 3,973 S.F.
GARAGE = 636 S.F.



EVERETT
CUSTOM HOMES

5-BEDROOMS
3-BATHS
MEDIA, BONUS
TANDEM 3-CAR GARAGE



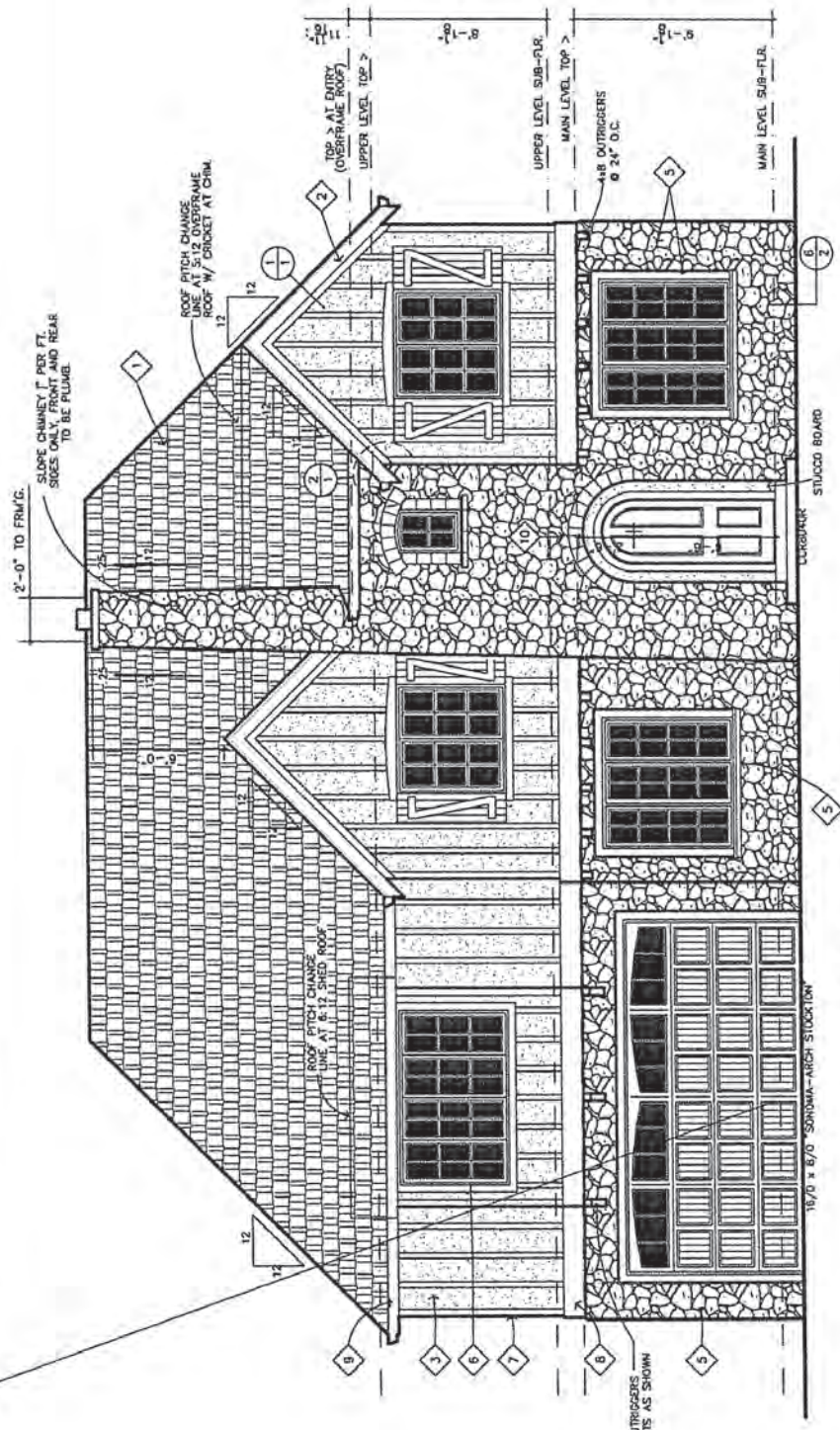


EVERETT
CUSTOM HOMES

3330 NW YEON AVE STE 100
PORTLAND, OREGON 97210
PHONE 503 726-7060

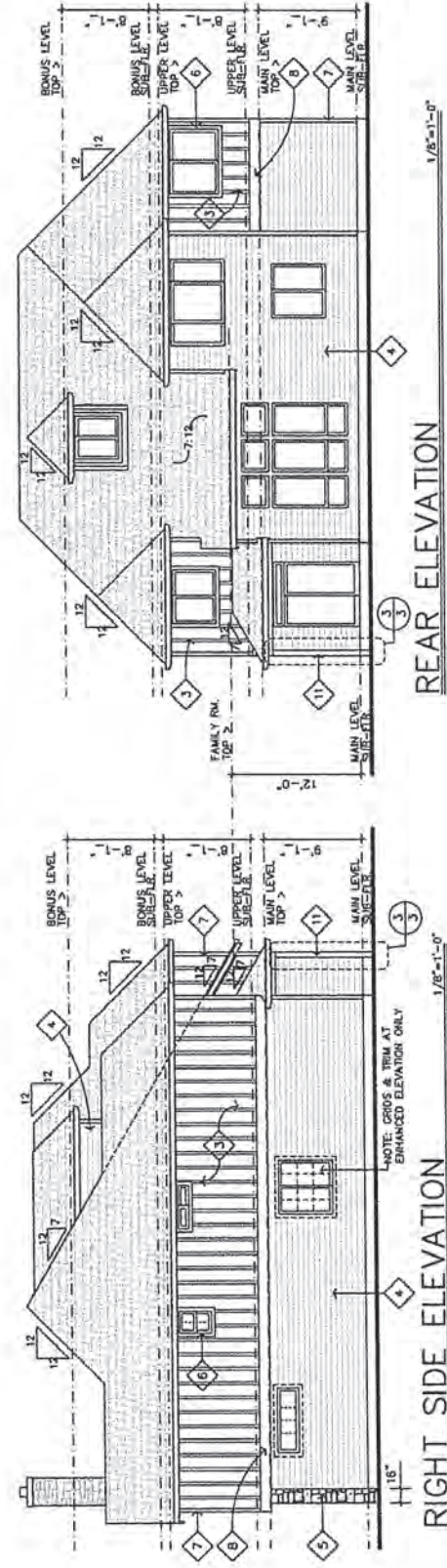
These building plans are prepared by Robert Shaw, Architect and shall constitute the entire contract between the architect and the client. No copyright in these building plans is owned by West Hills Development Company. Permission to the client to make any changes to these building plans shall be at the client's sole risk and without liability to the architect. The architect shall not be responsible for any errors or omissions in these building plans, including those caused by the client's failure to provide accurate information. The client shall be responsible for obtaining all necessary permits and for the construction of the building in accordance with the applicable laws and regulations. The architect shall not be responsible for any action or inaction of the client or any third party.

10/27/16 ED-WALK-THROUGH
11/27/17 ESTIMATE 18-26 (18-23) DOR
12/27/17 ESTIMATE 18-26 (18-23) DOR
3/17/17 EST. TOLER TRANSFER DOR



FRONT ELEVATION

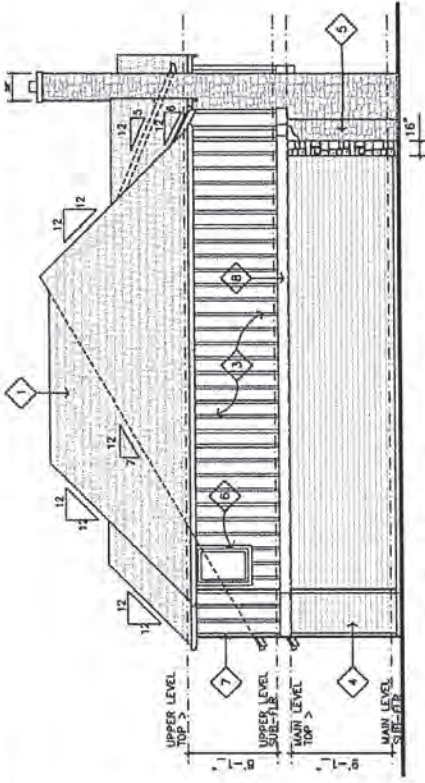
1/8"=1'-0"



REAR ELEVATION

1/8"=1'-0"

- ELEVATION KEYNOTES**
1. ROOFING (TYPICAL): 30 YEAR HEAVY WEIGHT FIBERGLASS COMPOSITION ROOFING.
 2. VOICE BOARD TYPICAL: 1/2" TRIM ON 2x4 VERTICAL BOARD. PROVIDE 1/2" TRIM ON LAP SINGING. TRIM BOARD ON WALL AND BUTT TO UNDERSIDE OF ROOF SHEATHING FOLLOWING. CABLE END VOICE BOARD.
 3. SINGING (TYPICAL): HARDIE STUCCO BRO. SINGING W/ 1 x 3 BATTENS SPACED AT 16" O.C.
 4. SINGING (TYPICAL WHERE SHOWN): HARDIE-BOARD LAP SINGING.
 5. CULTURED STONE (TYPICAL): INSTALL STONE, SILL & TRIM STONE WHERE SHOWN ON ELEV. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE VENER DETAILS 3/1, 4/1, 5/2 FOR INFO.
 6. WINDOW TRIM: 5/4 x 4 AROUND ALL WINDOWS AND DOORS AT FRONT AND ALL WINDOWS AT PANEL AND BATTEN SINGING. NO WINDOW TRIM AT LAP SINGING UNLESS AT ENHANCED ELEVATIONS. FLASH ABOVE ALL HORIZONTAL TRIM.
 7. 5/4 x 4 CORNER TRIM AT LAP SINGING. 1 x 4 CORNER TRIM AT PANEL SINGING.
 8. HORIZONTAL TRIM: 5/4 x 12 W/ 26 GA. 1" FLASHING OVER TOP AND INTEGRATED W/ WEIR.
 9. GUTTERS (TYP-JUN 03): 6" FASCIA STYLE 26 GA. STEEL GUTTER WITH 2"x3" STEEL DOWN-PIPE. ALL GUTTERS AND DOWNPIPES TO BE INSTALLED WITH ALL EQUIV. CONNECT ALL DOWNSPOUTS TO RAIN DRAINS WHERE PROVIDED.
 10. 6x8 TRIMSTONE PER MFR.
 11. P.I. 6x6 POST -BATED FOR BURIAL. SEE DETAIL 5/3



LEFT SIDE ELEVATION

1/8"=1'-0"

**PLAN 3557
DUNTHORPE
FRENCH LEFT
GARAGE LEFT**

MAIN LEVEL: 1605 SQ FT
UPPER LEVEL: 1975 SQ FT
TOTAL: 3580 SQ FT
GARAGE: 650 SQ FT
GRAND TOTAL: 3975 SQ FT
GARAGE: 650 SQ FT

NOTE:
FOR ALL STRUCTURAL INFORMATION REFER TO THE (S) SHEETS

JOB NO.

© 2017 EVERETT CUSTOM HOMES



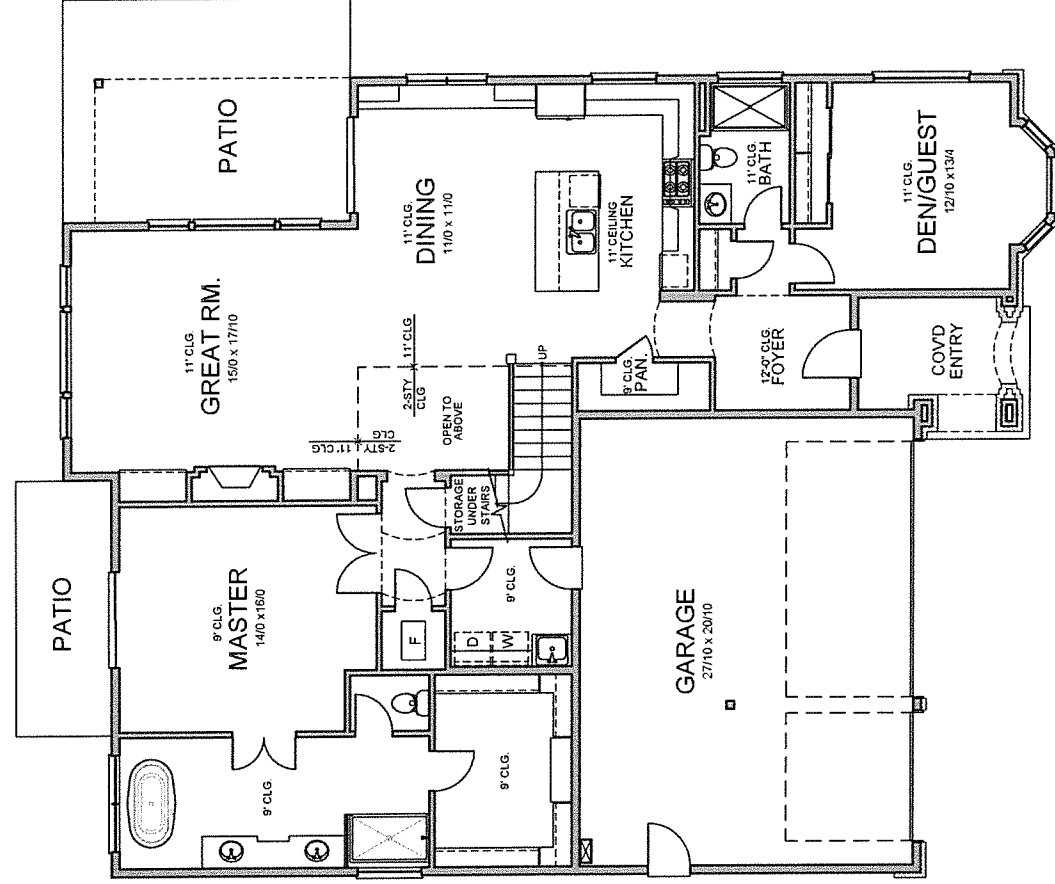
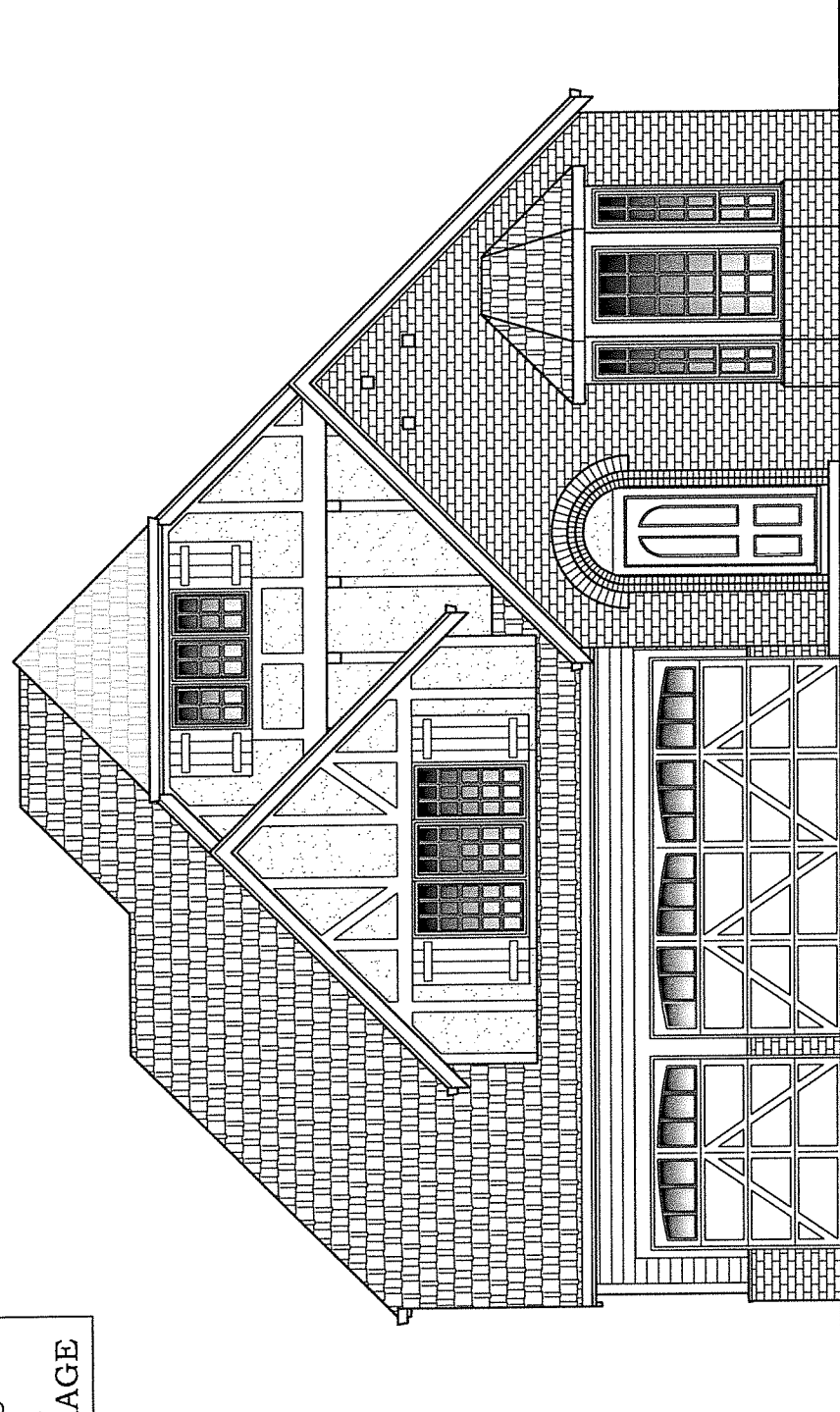
WEST HILLS
HOMES NORTHWEST

2957 WESTLAKE ENGLISH (PH-23)	
M. FLR.	= 1,877 S.F.
U. FLR.	= 1,080 S.F.
TOTAL	= 2,957 S.F.
GARAGE	= 615 S.F.

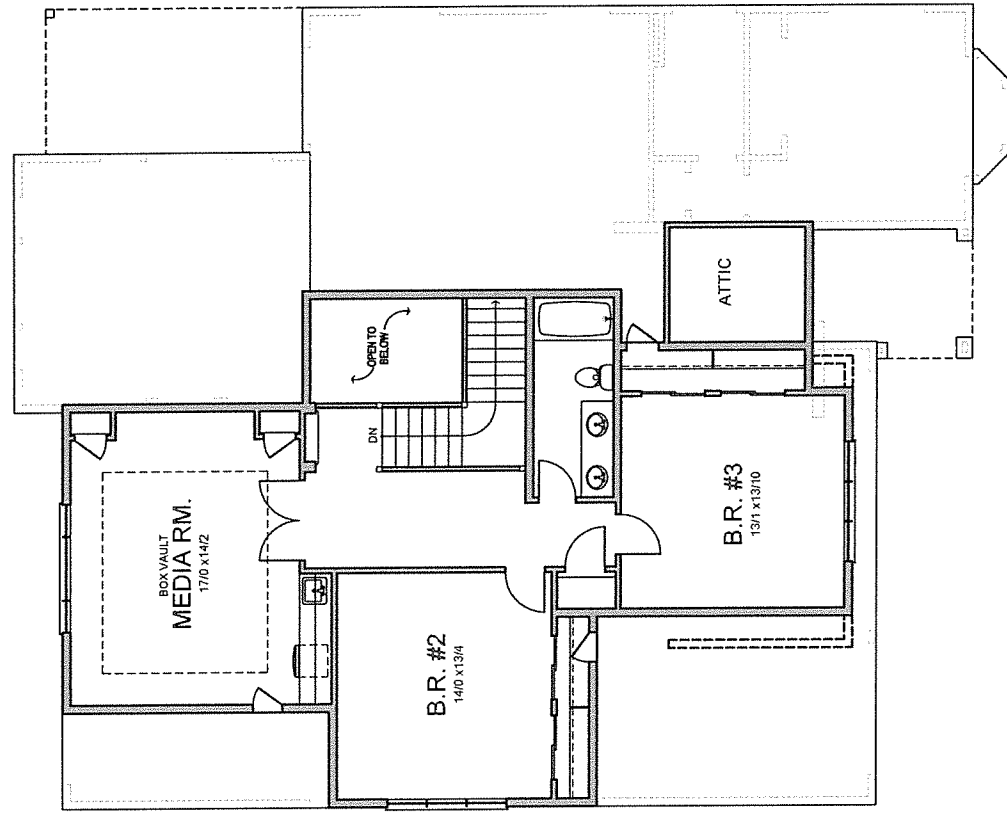


EVERETT
CUSTOM HOMES

4-BEDROOMS
3-BATHS
MEDIA
3-CAR GARAGE



MAIN LEVEL FLOOR PLAN (9' 11" / 12' CLG'S.)



UPPER LEVEL FLOOR PLAN (8' CLG.)



WEST HILLS
HOMES NORTHWEST

3017 BROOKLYN
FRENCH

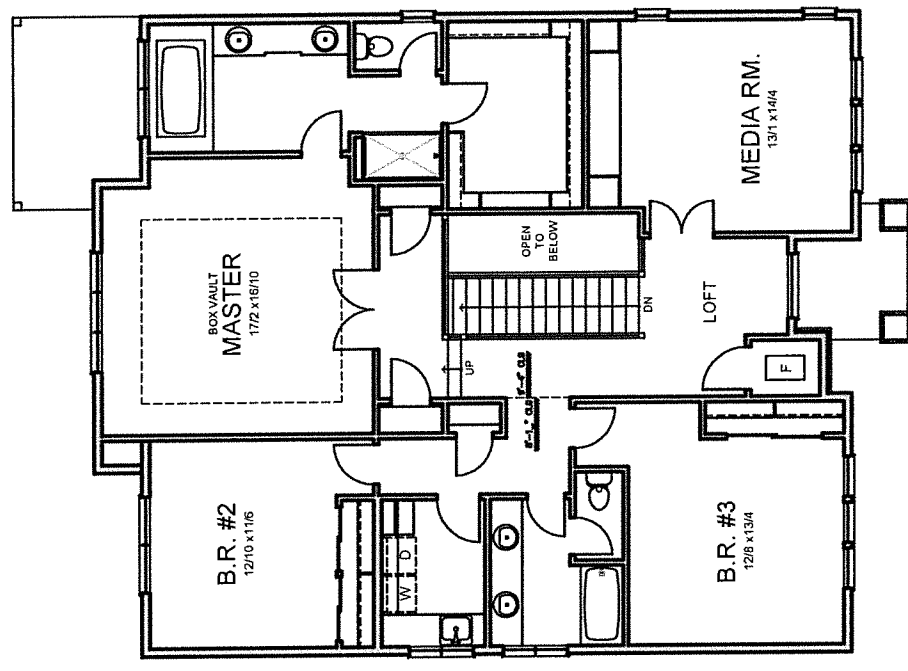
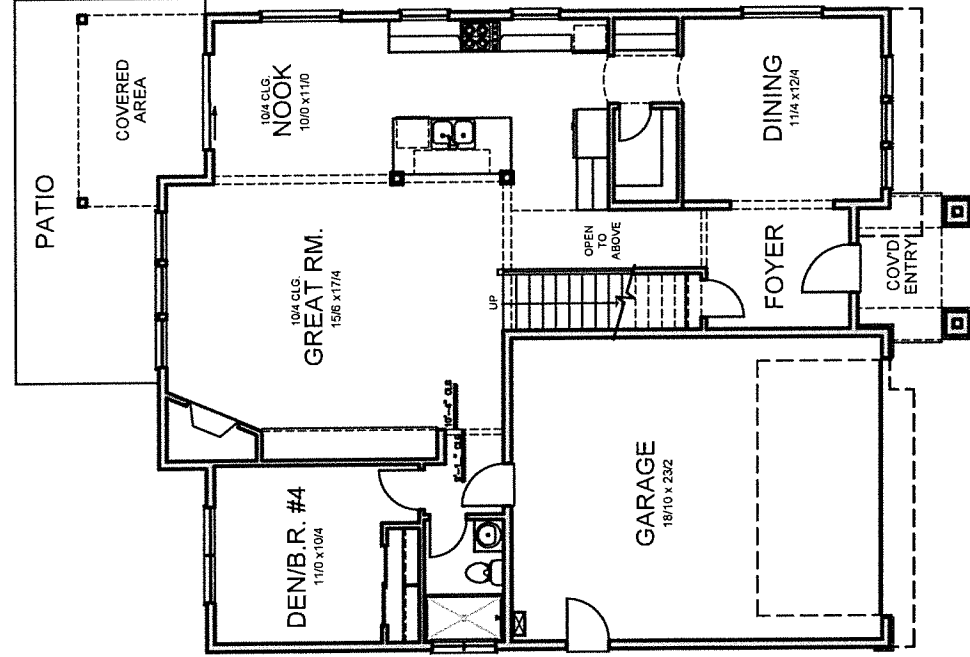
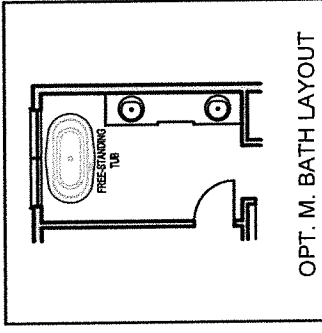
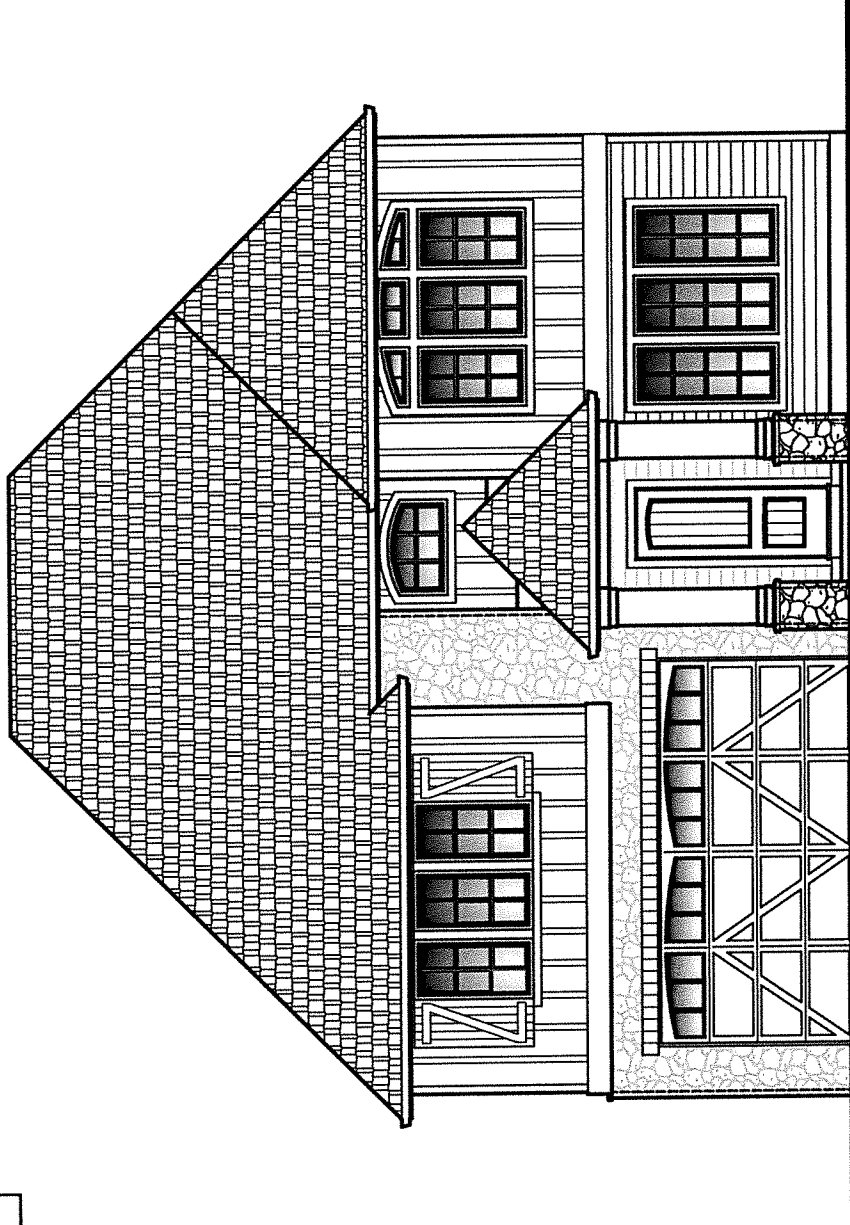
M. FLR.	=	1,268 S.F.
U. FLR.	=	1,772 S.F.
TOTAL	=	3,040 S.F.
GARAGE	=	466 S.F.



EVERETT

CUSTOM HOMES

4-BEDROOMS
3-BATHS
MEDIA
2-CAR GARAGE



Appendix I
Service Provider Letter from Republic Services
dated January 31, 2022



January 31, 2022

Keith Buisman

Re: Otak, Frog Pond Terrace
Wilsonville, OR 97070

Dear Keith,

Thank you, for sending us the preliminary site plans for this proposed development in Wilsonville.

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

Your proposed plan for a turnaround for both fire and waste hauling between lots 16 and 17 along the new interior street SW Woodbury Loop, and sign(s) posting "NO PARKING AT ANY TIME" is approved. The option of using grasscrete or similar surface that allows for vegetation is approved provided it can support the weight of our collection trucks with a GVW of 58,000 lbs.

Your proposal for Lots 14-19 to require homeowners to locate their receptacles closer to the turnaround as shown on the plan is approved.

Your proposal for Lots 8, 9, 10, and 13 to require homeowners to locate their receptacles closer to SW Woodbury Loop as shown on the plan is approved.

It is understood that the turnaround will be removed, and the easement extinguished upon future extension of interior street to the east where a loop would be created.

All affected lots pickup requirements will be addressed with specific recorded CC&Rs against the lots with compliance and enforcement by the HOA. Any future changes to service to be approved by Republic Services (e.g. interior street is extended east to create full loop).

Thanks Keith, 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 light blue horizontal line.

Kelly Herrod
Operations Supervisor
Republic Services Inc.

Appendix J

Tualatin Valley Fire and Rescue Permit #2022-0009
and Approved Fire Service Plan
dated January 26, 2022

**FIRE CODE / LAND USE / BUILDING REVIEW
APPLICATION**

Item 2.



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

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

REV 6-30-20

Project Information

Applicant Name: West Hills Land Development
Address: 3330 NW Yeon Ave Suite 200 Portland, OR 97210
Phone: (503) 641-7342
Email: dan@westhillsdevelopment.com
Site Address: 7480 and 7500 SW Frog Pond Ln
City: Wilsonville, OR 97070
Map & Tax Lot #: (3S 1W 12D TL 2800 and 2801)
Business Name: N/A
Land Use/Building Jurisdiction: Wilsonville
Land Use/ Building Permit # N/A

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

Project Description

19 12-lot single family detached subdivision

Permit/Review Type (check one):

- Land Use / Building Review - Service Provider Permit
- Emergency Radio Responder Coverage Install/Test
- LPG Tank (Greater than 2,000 gallons)
- Flammable or Combustible Liquid Tank Installation (Greater than 1,000 gallons)
 - * Exception: Underground Storage Tanks (UST) are deferred to DEQ for regulation.
- Explosives Blasting (Blasting plan is required)
- Exterior Toxic, Pyrophoric or Corrosive Gas Installation (in excess of 810 cu.ft.)
- Tents or Temporary Membrane Structures (in excess of 10,000 square feet)
- Temporary Haunted House or similar
- OLCC Cannabis Extraction License Review
- Ceremonial Fire or Bonfire (For gathering, ceremony or other assembly)

For Fire Marshal's Office Use Only

TVFR Permit # 2022-0009
Permit Type: SPP-COW
Submittal Date: 1/26/22
Assigned To: DFM Arn
Due Date: 1/27/22
Fees Due: 0
Fees Paid: 0

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

This section is for application approval only

[Signature] 0430 1/26/2022
Fire Marshal or Designee Date

Conditions: See attached Fire Service Plans.

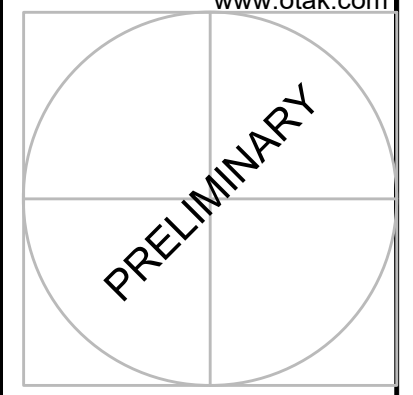
See Attached Conditions: Yes No

Site Inspection Required: Yes No

This section used when site inspection is required

Inspection Comments:

Final TVFR Approval Signature & Emp ID Date



FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

PRELIMINARY SITE PLAN

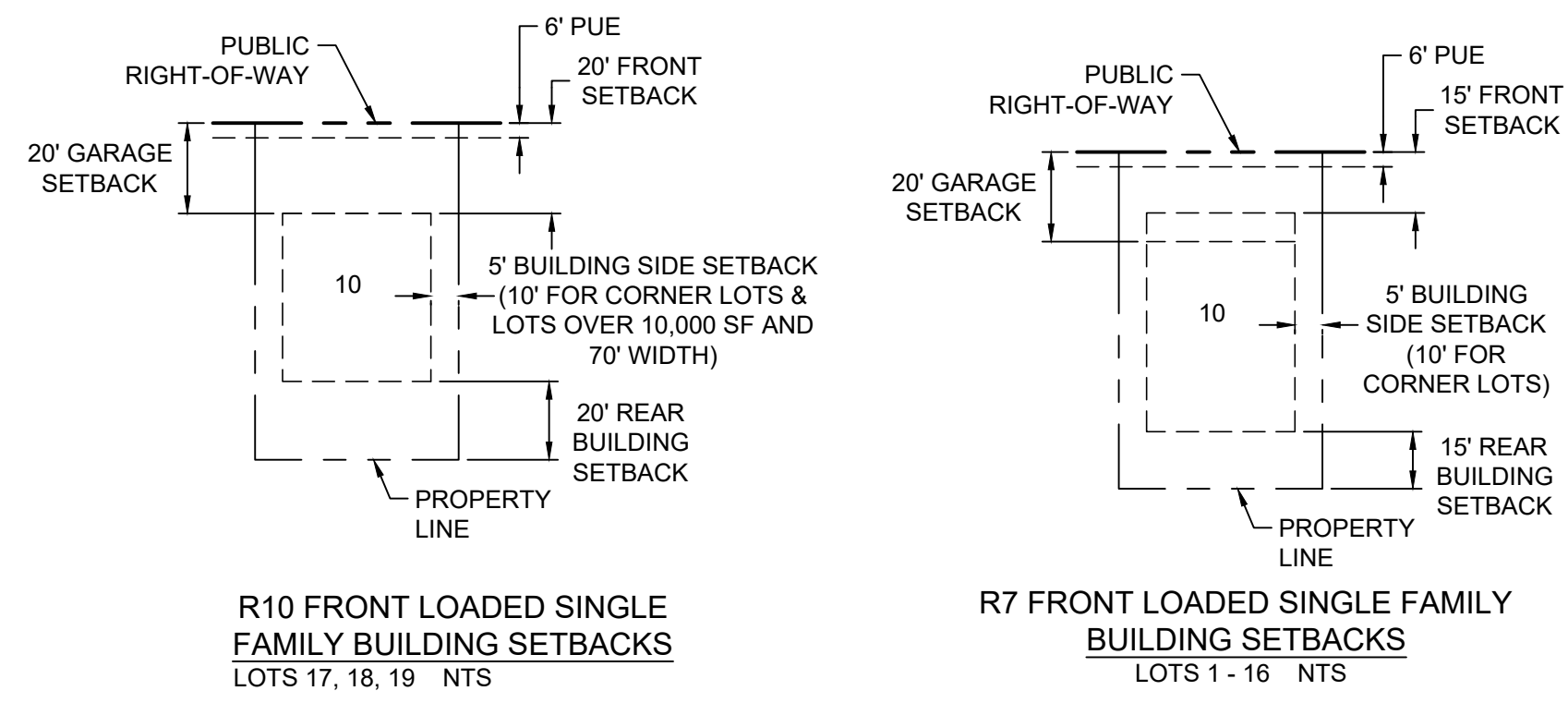
TITLE	#	DATE	DESCRIPTION

REVISIONS
NAVD88 DATUM
OTAK CAD
DRAWN BY
LAND USE SUBMITTAL STATUS
JANUARY 31, 2022
DATE
20015
PROJECT NUMBER

P2.00
© 2021 OTAK, INC.
If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according to drawing.

LEGEND

PROPERTY LINE	---
CENTER LINE	---
LOT LINE	---
LOT SETBACK	---
LOT NUMBER / NAME	16
EASEMENT LINE	---
STANDARD CURB	---
SIDEWALK	---
RETAINING WALL	[X]
INTERSECTION SIGHT DISTANCE	○ x=DESIGN SPEED(MPH)x10/MPH
TYPICAL STREET CROSS SECTION (SEE SHEET P2.10)	A P2.10
LIDA SWALE	---
DRIVEWAY	---
CURB RAMP	---



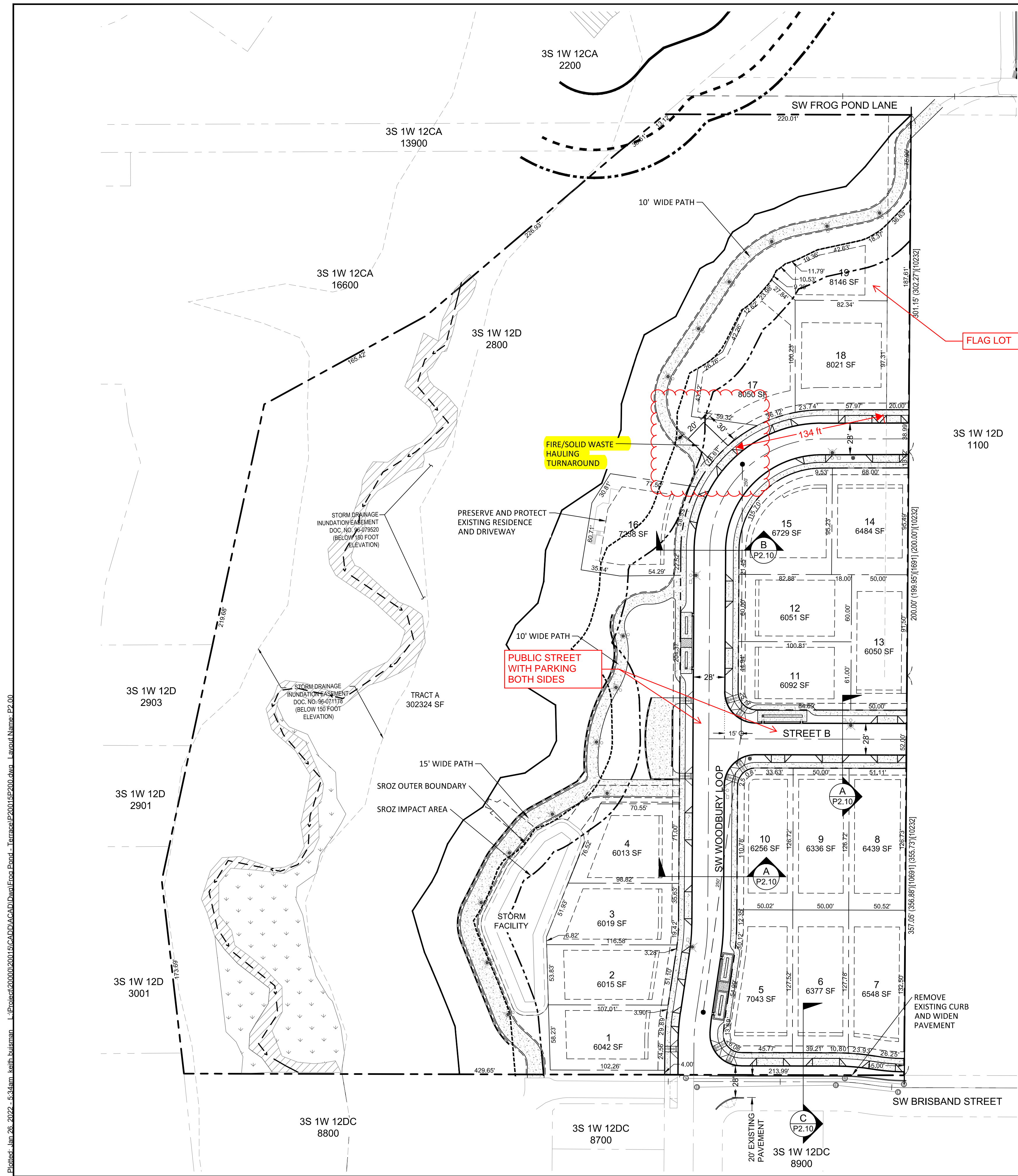
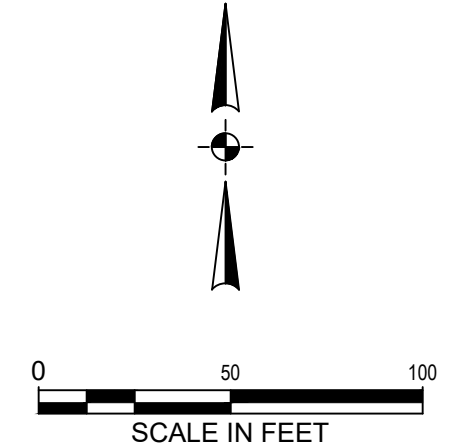
LOT AREA

LOT	AREA
1	6,042 SF
2	6,015 SF
3	6,019 SF
4	6,013 SF
5	7,043 SF
6	6,377 SF
7	6,548 SF
8	6,439 SF
9	6,336 SF
10	6,256 SF
11	6,092 SF
12	6,051 SF
13	6,050 SF
14	6,484 SF
15	6,729 SF
16	7,238 SF
17	8,050 SF
18	8,021 SF
19	8,146 SF

TRACT/ROW AREA

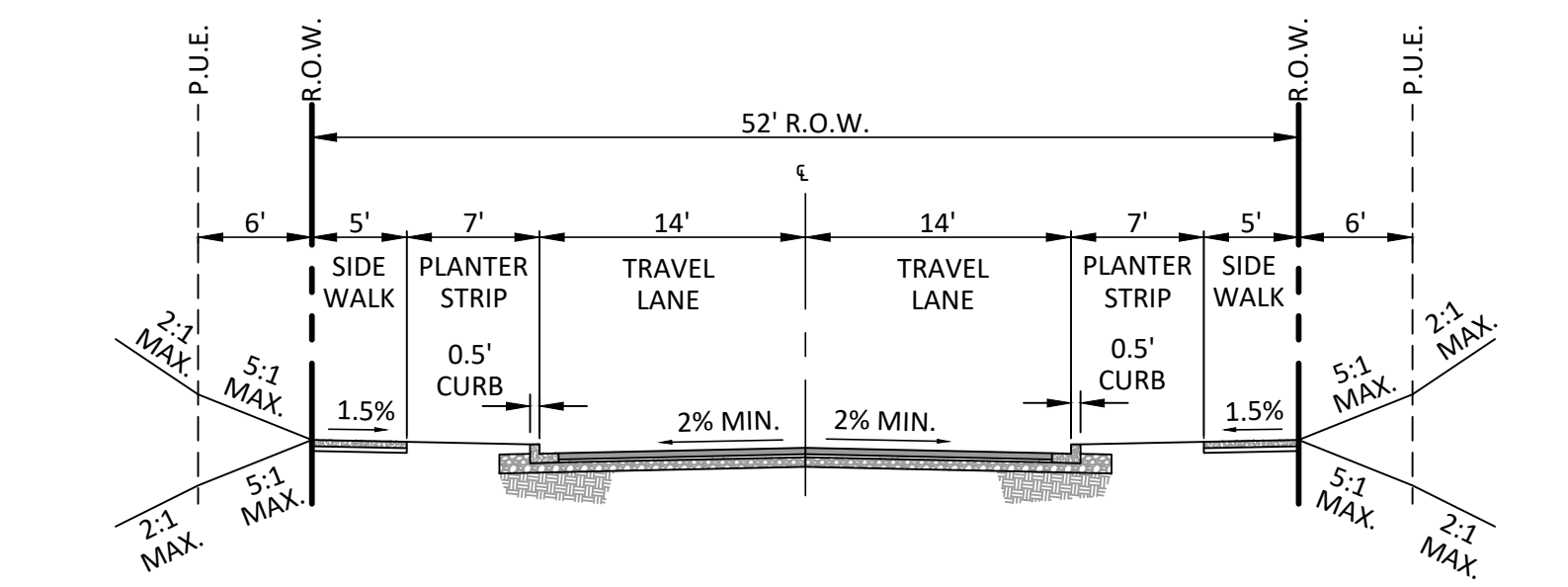
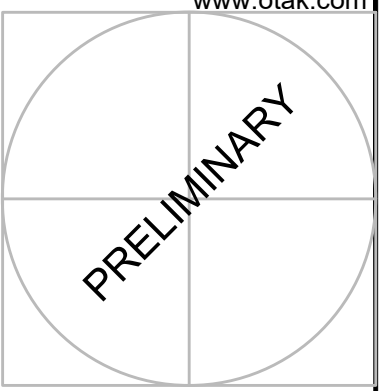
TRACT	AREA
ROW	47,691 SF
TRACT A	302,324 SF

TVP&R
Tualatin Valley Fire & Rescue
APPROVED PLANS
APPROVAL OF PLANS IS NOT AN APPROVAL OF OMISSIONS OR OVERSIGHTS.
Jason Am...
Deputy Fire Marshal II
TVF&R Permit # 2022-0009

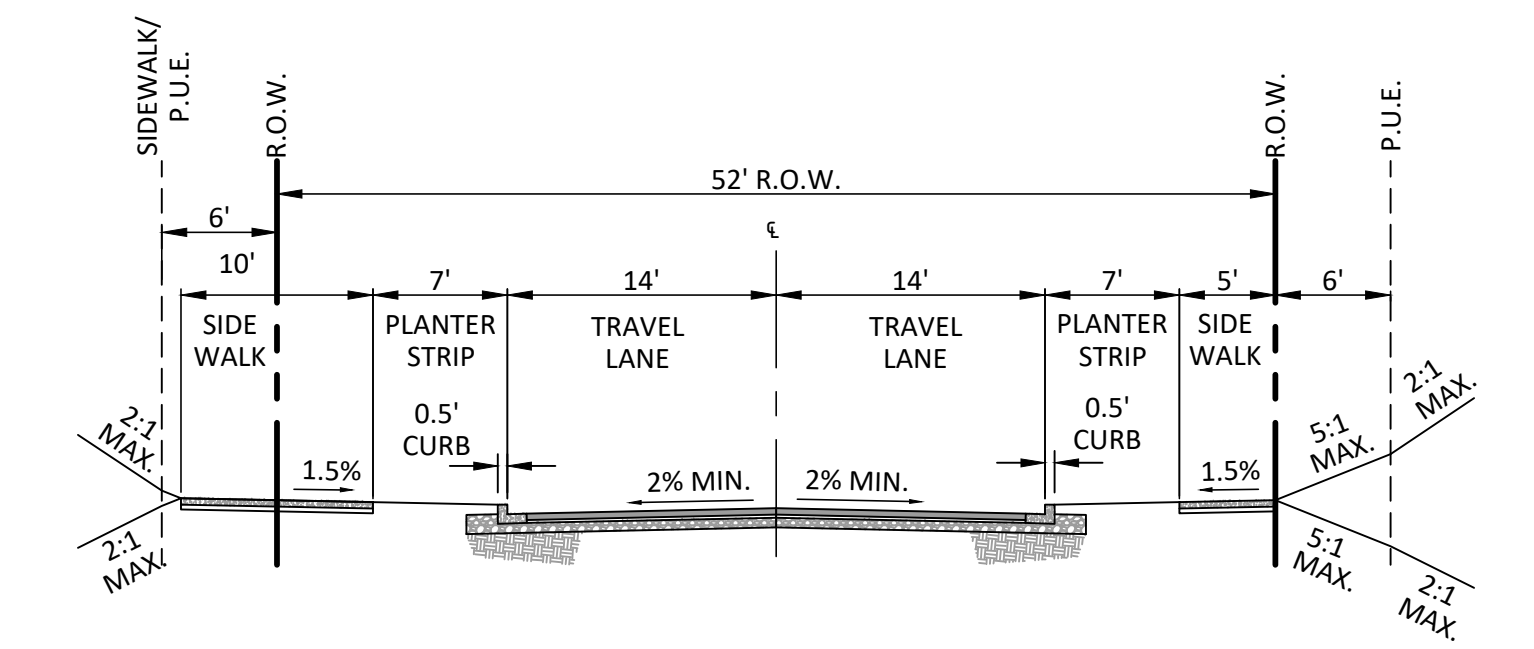


Plotted: Jan. 26, 2022 - 5:34am. Keith Busman - L:\Projects\2000\20015\CADD\CADD\Drawn\From Pond - Terrace\P20015P200.dwg - Layout Name: P2.00

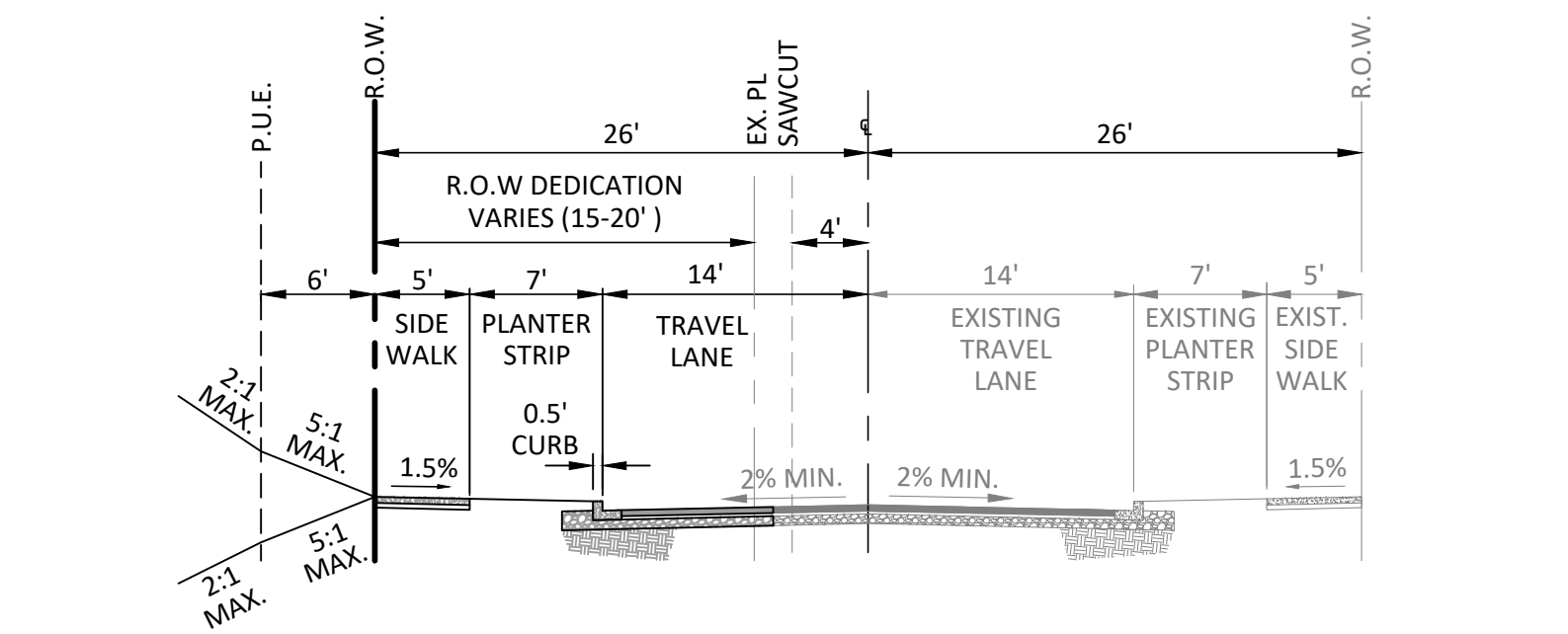
EXHIBIT FP-1



A SW WOODBURY LOOP AND STREET B
(LOCAL STREET - PARKING ON BOTH SIDES)
SCALE: 1" = 10'-0"



B SW WOODBURY LOOP
(LOCAL STREET - PARKING ON BOTH SIDES)
SCALE: 1" = 10'-0"



C SW BRISBAND ST
(LOCAL STREET - PARKING ON BOTH SIDES)
SCALE: 1" = 10'-0"

STREET CROSS SECTIONS
SEE SHEET P2.00 FOR SECTION LOCATIONS

FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

PRELIMINARY STREET CROSS SECTIONS

#	DATE	DESCRIPTION

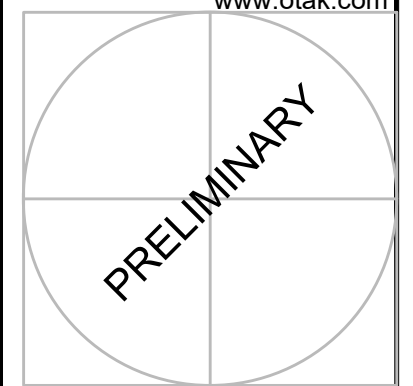
REVISIONS
NAVD88 DATUM
OTAK CAD KJB
DRAWN BY CHECKED BY
LAND USE SUBMITTAL STATUS
JANUARY 31, 2022
DATE
20015
PROJECT NUMBER

P2.10
© 2021 OTAK, INC.
If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according

Plotted: Jan. 26, 2022 - 5:34am. Keith.Buisman - L:\Projects\2000\20015\CADD\CADD\Drawn\Drawn - Terrace\20015P2.10.dwg - Layout Name: P2.10



Otak, Inc.
808 SW Third Avenue, Ste. 800
Portland, OR 97204
503.287.6825
www.otak.com

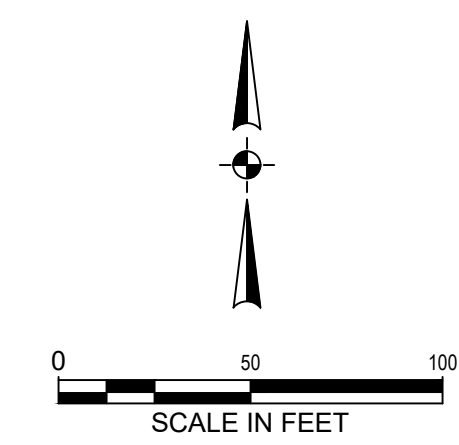
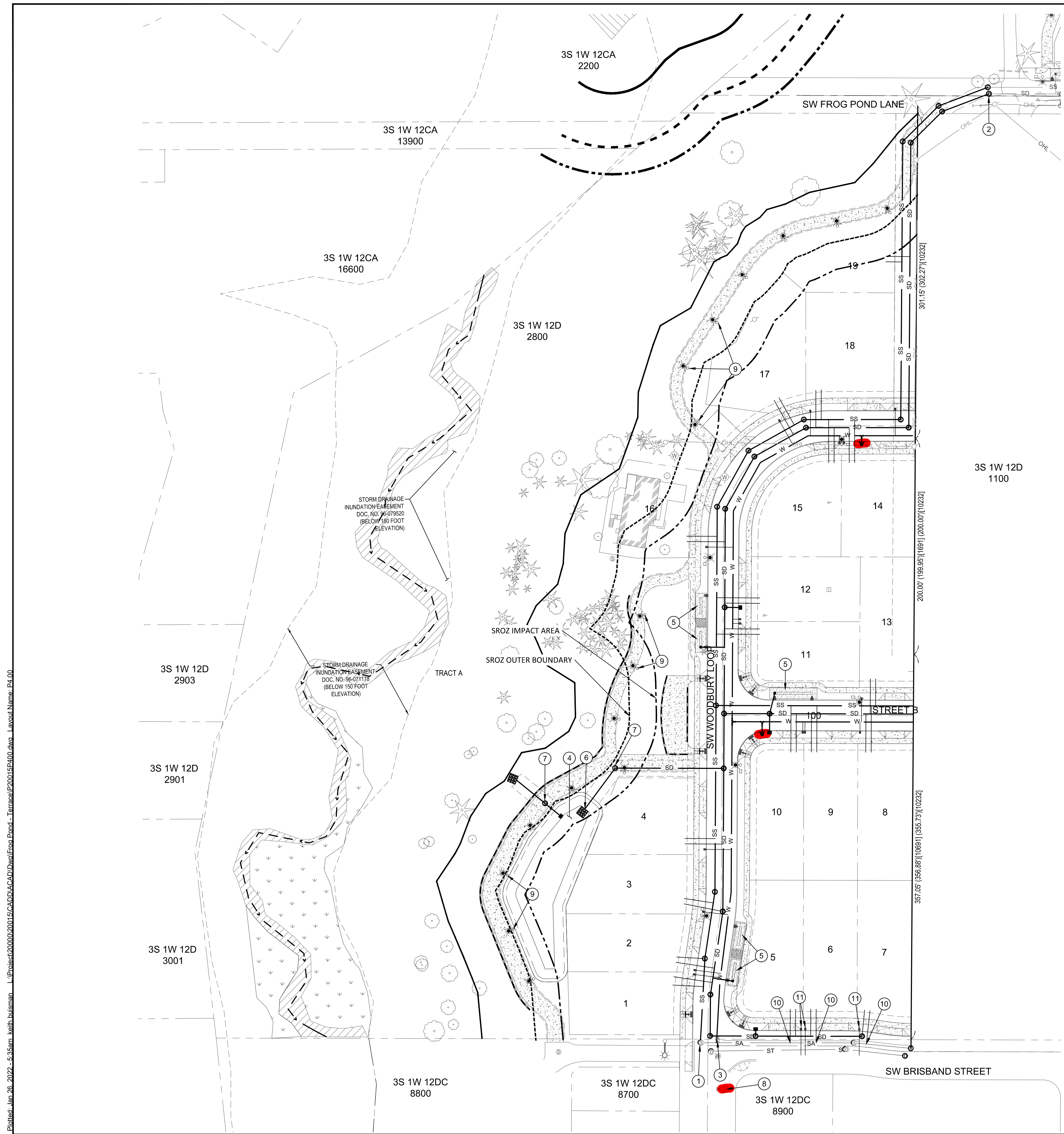


UTILITY KEY NOTES

- ① CONNECT TO EXISTING SANITARY SEWER.
- ② CONNECT TO STORM SEWER TO BE CONSTRUCTED WITH FROG POND OVERLOOK.
- ③ CONNECT TO EXISTING WATER LINE.
- ④ PROPOSED RAIN GARDEN (CITY STD. DWG. ST-6020)
- ⑤ PROPOSED VEGETATED SWALE (CITY STD. DWG. ST-6045 W/ 12' WIDE CONCRETE STEP-OFF WALK ADJACENT TO PAVEMENT.
- ⑥ STORM SEWER OUTFALL TO RAIN GARDEN.
- ⑦ PROPOSED WATER QUALITY MANHOLE.
- ⑧ EXISTING FIRE HYDRANT.
- ⑨ PROPOSED PATHWAY LIGHT POLE (12' POLE HEIGHT WITH HOUSE SIDE SHIELD).
- ⑩ CONNECT TO EXISTING SANITARY SEWER WITH NEW SERVICE LATERAL.
- ⑪ CONNECT TO EXISTING WATER LINE WITH NEW WATER SERVICE.

LEGEND

SITE	PROPOSED
PROJECT BOUNDARY	---
STORM DRAIN MANHOLE	Ⓧ
STORM DRAIN CLEAN OUT	Ⓞ
LIDA FLOW CONTROL STRUCTURE (BEEHIVE: CITY STANDARD DWG. ST-6120)	•
CATCH BASIN	■
STORM DRAIN MAIN	—SD—
STORM DRAIN LATERAL	—SD—
SANITARY SEWER MANHOLE	Ⓢ
SANITARY SEWER CLEAN OUT	Ⓞ
SANITARY SEWER MAIN	—SS—
SANITARY SEWER LATERAL	—SS—
WATER VALVE	⌘
WATER BLOW-OFF	⌘
WATER METER	Ⓜ
WATER FIRE HYDRANT	Ⓜ
WATER MAIN	—W—
WATER LATERAL	—W—
STREET LIGHT PGE OPTION "B" LED WITH WESTBROOKE 35W LED AND 18" DECORATIVE ALUMINUM POLE (20' MOUNTING HEIGHT W/ 4' MAST ARM)	Ⓛ



FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

PRELIMINARY UTILITY PLAN

#	DATE	DESCRIPTION

REVISIONS

NAVD88 DATUM

OTAK CAD KJB

DRAWN BY CHECKED BY

LAND USE SUBMITTAL STATUS

JANUARY 31, 2022 DATE

20015 PROJECT NUMBER

P4.00

© 2021 OTAK, INC.

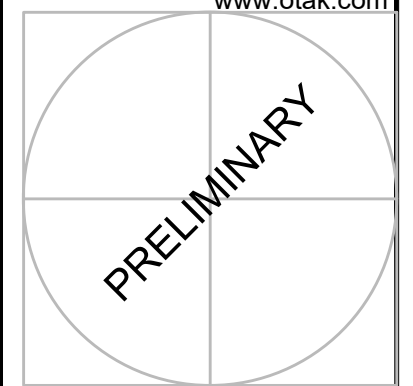
If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according to drawing.

Plotted: Jan 26, 2022 - 5:35am. Keith Buisman - L:\Projects\20015\CADD\ACAD\Drawn\Erron Pond - Terrace\P20015\FP400.dwg - Layout Name: P4.00

EXHIBIT FP-3



Otak, Inc.
808 SW Third Avenue, Ste. 800
Portland, OR 97204
503. 287. 6825
www.otak.com

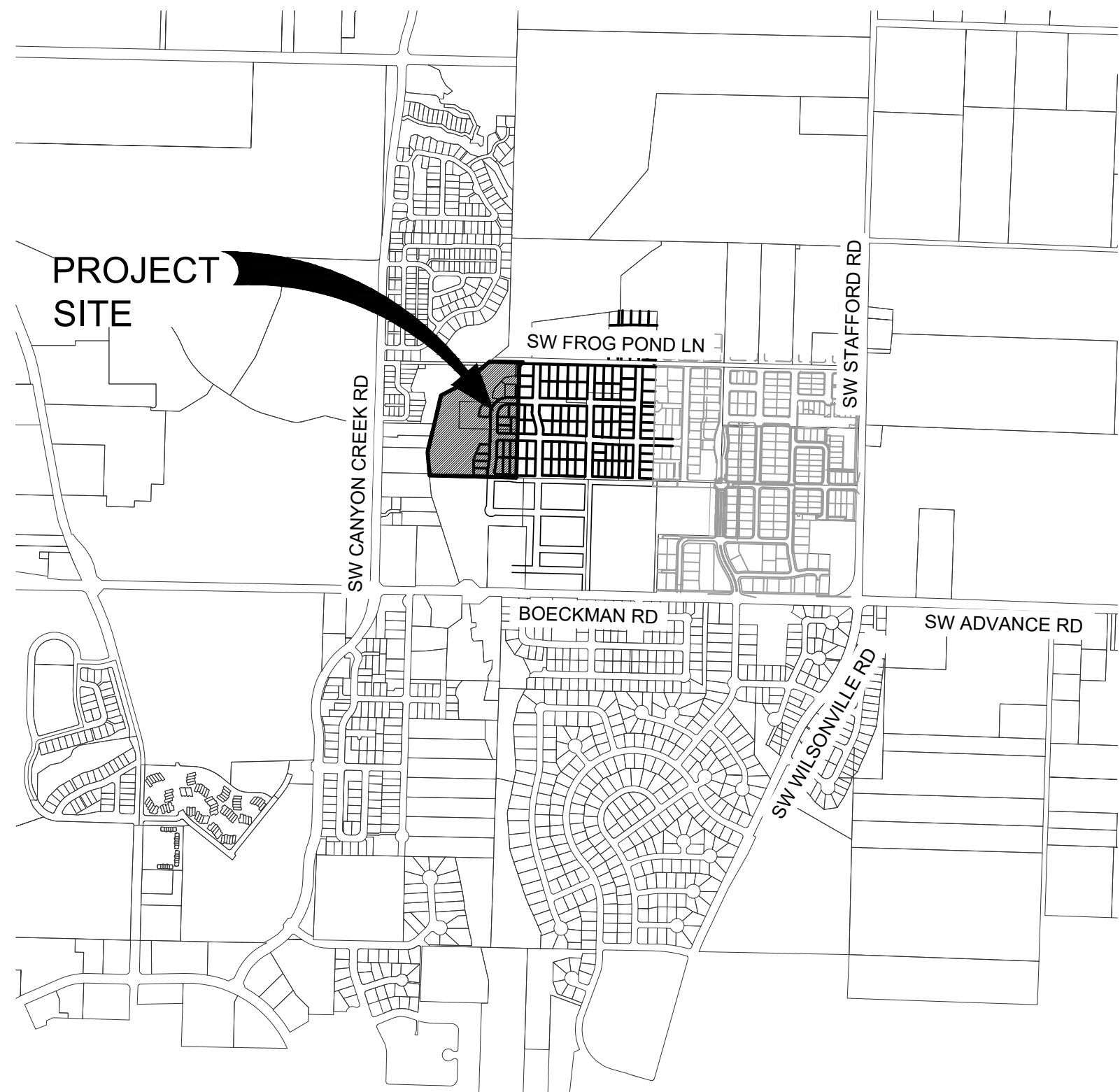


FROG POND TERRACE

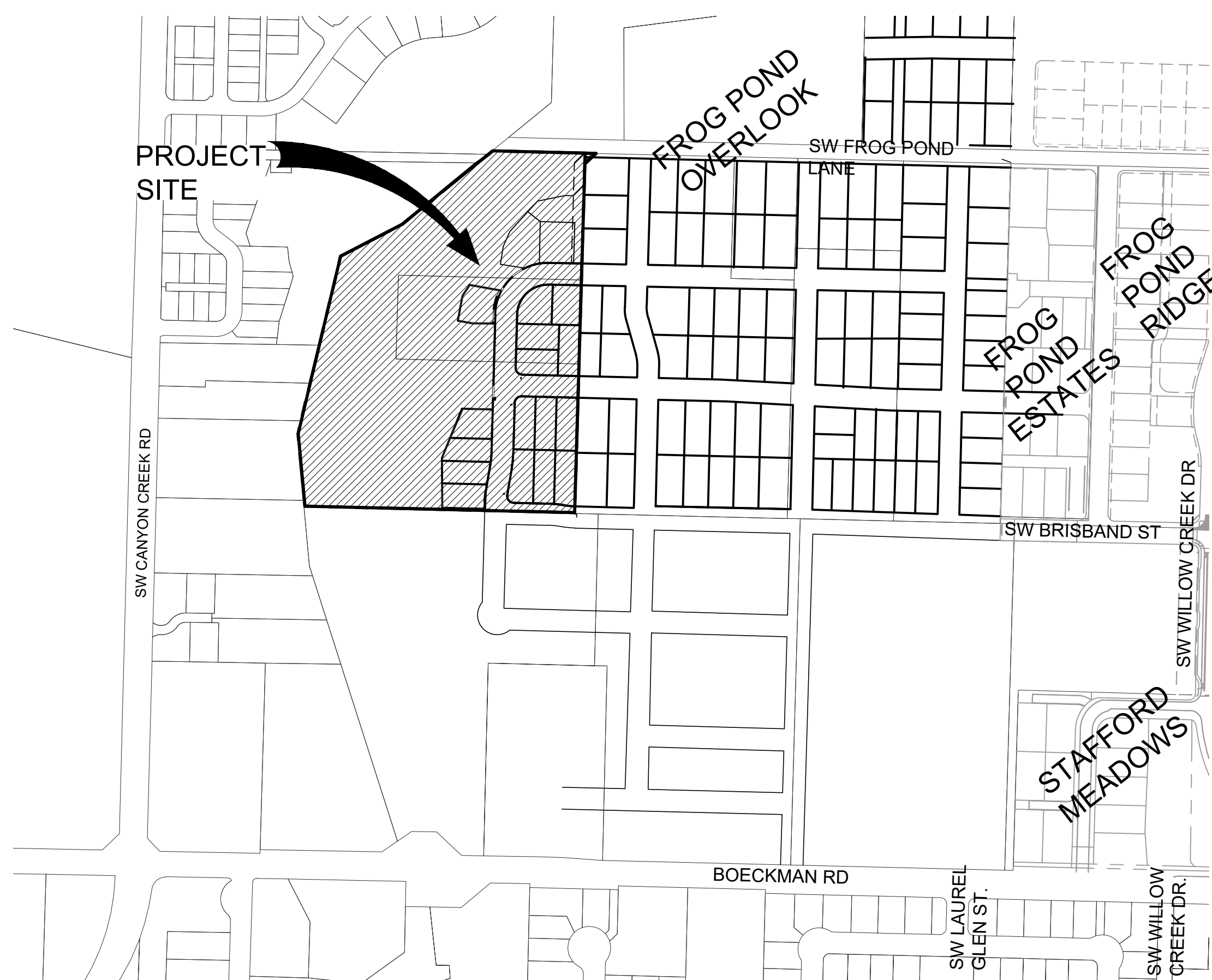
SUBDIVISION

19 DETACHED SINGLE FAMILY LOTS

CITY OF WILSONVILLE, OREGON



VICINITY MAP
N.T.S.



PROJECT MAP
N.T.S.

SHEET INDEX	
Sheet Number	Sheet Title
P0.00	COVER SHEET
P1.00	EXISTING CONDITIONS - AERIAL
P1.10	EXISTING CONDITIONS - SURVEY MAPPING
P2.00	PRELIMINARY SITE PLAN
P2.10	PRELIMINARY STREET CROSS SECTIONS
P3.00	PRELIMINARY PLAT
P4.00	PRELIMINARY UTILITY PLAN
P5.00	PRELIMINARY GRADING PLAN
P6.00	ANNEXATION PLAN
P7.00	ZONING MAP
P8.00	PROPOSED CIRCULATION AND CONNECTIVITY
P9.00	SHADOW PLAT STREET LAYOUT
P10.00	SUBDISTRICTS AND DENSITY
P11.00	SIGHT LINES TO BOECKMAN CREEK CORRIDOR
L1.00	TREE PROTECTION-REMOVAL PLAN
L1.10	TREE INVENTORY
L1.20	TREE INVENTORY
L2.00	OVERALL LANDSCAPE PLANS
L2.10	TRACT LANDSCAPE PLANS
L2.20	RAINGARDEN AND LIDA PLANTING PLANS
L2.30	LANDSCAPE DETAILS
L3.00	LANDSCAPE NOTES AND DETAILS
IL-1	ILLUMINATION NOTES
IL-2	ILLUMINATION DETAILS
IL-3	ILLUMINATION PLAN

APPLICANT/ DEVELOPER

NAME: WEST HILLS LAND DEVELOPMENT
CONTACT: DAN GRIMBERG
ADDRESS: 3330 NW YEON AVENUE, SUITE 200
PORTLAND, OR 97210
PHONE: (503) 641-7342

NATURAL RESOURCES CONSULTANT

NAME: AKS ENGINEERING & FORESTRY, LLC
CONTACT: STACEY REED, PWS
ADDRESS: 12965 SW HERMAN RD, SUITE 100
TUALATIN, OR 97062
PHONE: (503) 563-6151

ARBORIST

NAME: PORTLAND TREE CONSULTING
CONTACT: RYAN NEUMANN
ADDRESS: PO BOX 19042
PORTLAND, OR 97280
PHONE: (503) 421-3883

PLANNER /CIVIL ENGINEER/ SURVEYOR/ LANDSCAPE ARCHITECT

NAME: OTAK INCORPORATED
PLANNER: LI ALLIGOOD, AICP
ENGINEER: KEITH BUISMAN, P.E.
SURVEYOR: MICHAEL SPELTZ, PLS
LANDSCAPE ARCHITECT: GABRIEL KRUSE, PLS
ADDRESS: 808 SW THIRD AVENUE, SUITE 800
PORTLAND, OR 97204
PHONE: (503) 287-6825

GEOTECHNICAL ENGINEER

NAME: HARDMAN GEOTECHNICAL SERVICES, INC.
CONTACT: SCOTT HARDMAN, P.E.
ADDRESS: 10110 SW NIMBUS AVENUE, SUITE B-5
PORTLAND, OR 97223
PHONE: (503) 530-8076

STREET LIGHTING

NAME: KITTELSON & ASSOCIATES
CONTACT: ANTHONY YI, P.E.
ADDRESS: 851 SW SIXTH AVE, SUITE 600
PORTLAND, OR 97204
PHONE: (503) 228-5230

SITE INFORMATION

CLACKAMAS COUNTY
CITY OF WILSONVILLE, OREGON, 97070

TAXLOT	AREA (AC)
3S 1W 12D 2800 (7480 SW FROG POND LANE)	9.30
3S 1W 12D 2801 (7500 SW FROG POND LANE)	2.00
3S 1W 12D 3500	0.01

FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

COVER SHEET

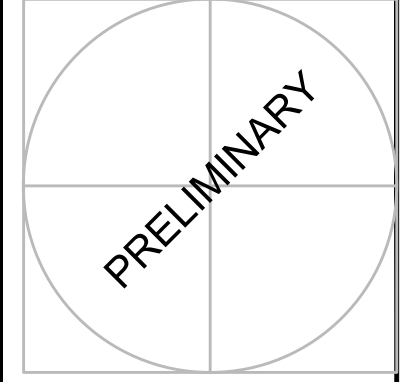
#	DATE	DESCRIPTION

NAVD88 DATUM
OTAK CAD DRAWN BY KJB
CHECKED BY
LAND USE SUBMITTAL STATUS
MAY 17, 2022 DATE
20015 PROJECT NUMBER

P0.00



Otak, Inc.
808 SW Third Avenue, Ste. 800
Portland, OR 97204
503.287.6825
www.otak.com

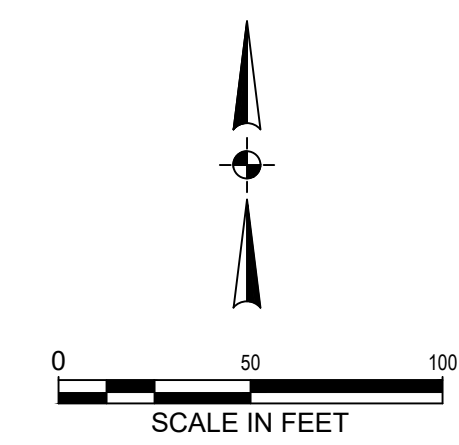
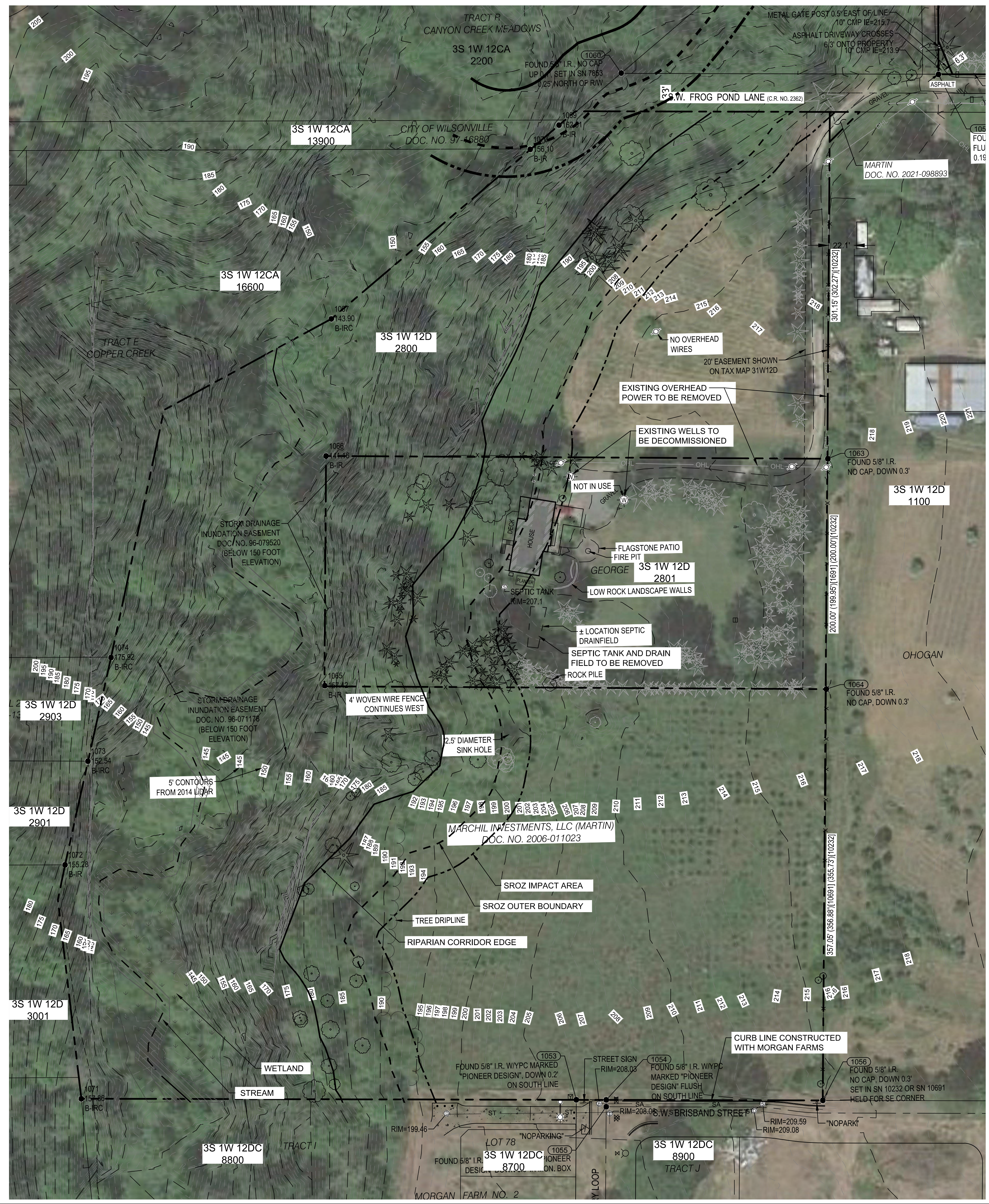


FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

EXISTING CONDITIONS - AERIAL

EXISTING LEGEND

- PROPERTY LINE
- PROJECT LIMITS
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- OVERHEAD LINE
- COM. CABLE LINE
- GAS LINE
- WATER LINE
- ELECTRIC LINE
- SANITARY SEWER LINE
- STORM DRAIN LINE
- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- WETLANDS
- TREES

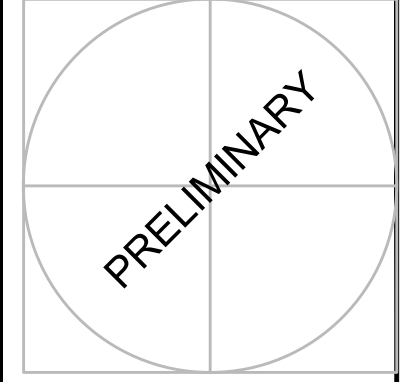


Plotted: May 17, 2022, 2:00pm. Keith Buisman - L:\Projects\2000\20015\5\CADD\DWG\Aerial\Aerial.dwg - Layer: P1.00 - Layout Name: P1.00

#	DATE	DESCRIPTION

REVISIONS	

NAV/D88
DATUM
OTAK CAD KJB
DRAWN BY CHECKED BY
LAND USE SUBMITTAL STATUS
MAY 17, 2022
DATE
20015
PROJECT NUMBER
P1.00
© 2021 OTAK, INC.
If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according

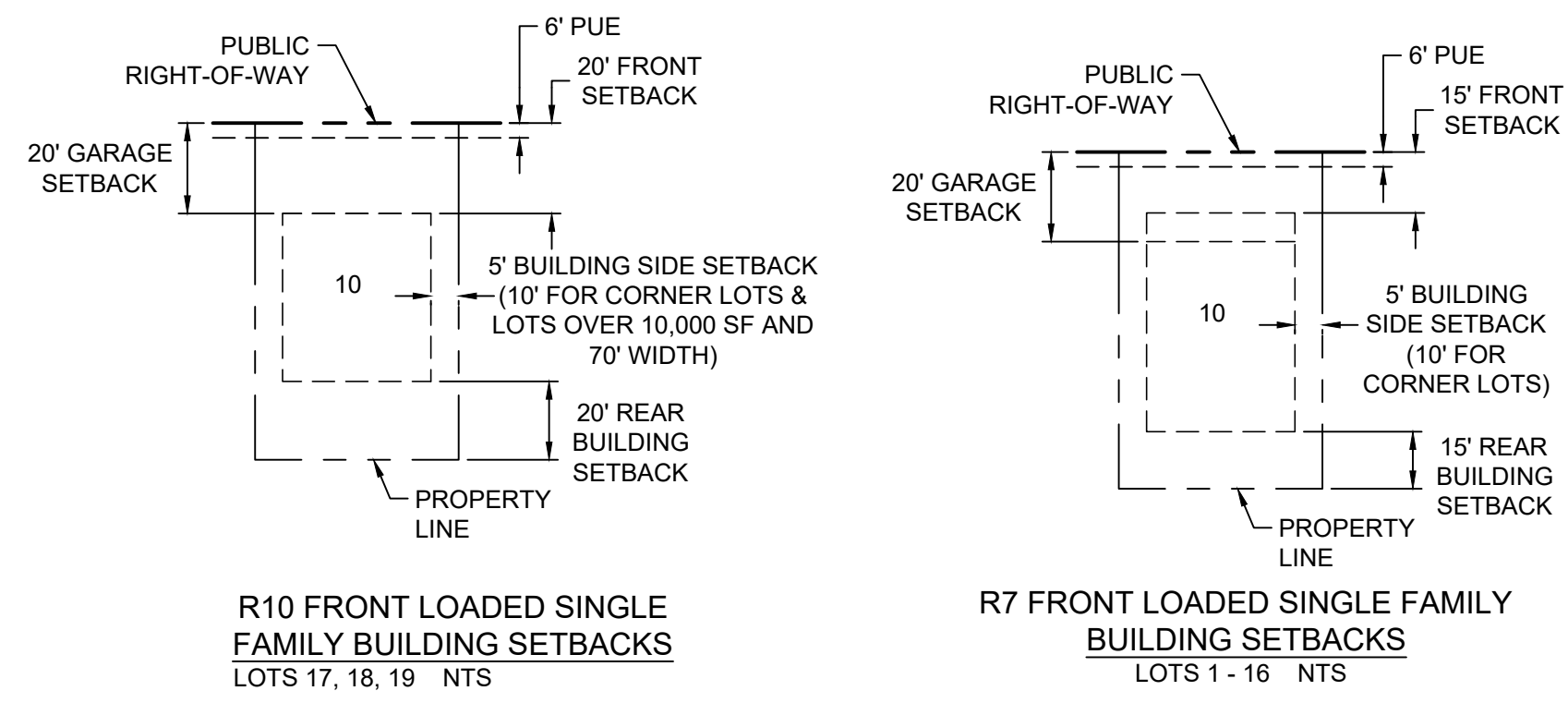


FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

PRELIMINARY SITE PLAN

LEGEND

- PROPERTY LINE
- CENTER LINE
- LOT LINE
- LOT SETBACK
- LOT NUMBER / NAME
- EASEMENT LINE
- STANDARD CURB
- SIDEWALK
- RETAINING WALL
- INTERSECTION SIGHT DISTANCE
- TYPICAL STREET CROSS SECTION (SEE SHEET P2.10)
- LIDA SWALE
- DRIVEWAY
- CURB RAMP



LOT AREA	
LOT	AREA
1	6,042 SF
2	6,015 SF
3	6,019 SF
4	6,013 SF
5	7,043 SF
6	6,377 SF
7	6,541 SF
8	6,433 SF
9	6,336 SF
10	6,256 SF
11	6,092 SF
12	6,051 SF
13	6,044 SF
14	6,479 SF
15	6,729 SF
16	6,830 SF
17	9,076 SF
18	8,021 SF
19	9,262 SF

TRACT/ROW AREA	
TRACT	AREA
TRACT A	300,220 SF
ROW	48,101 SF

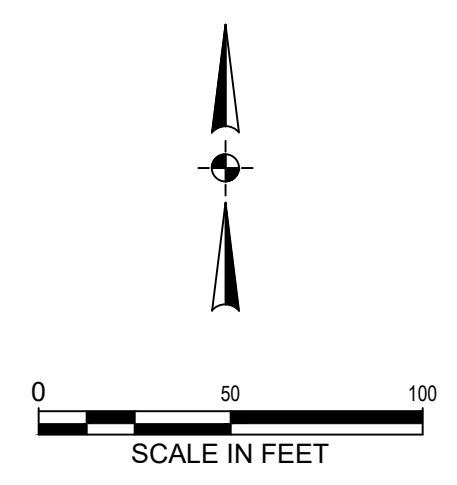
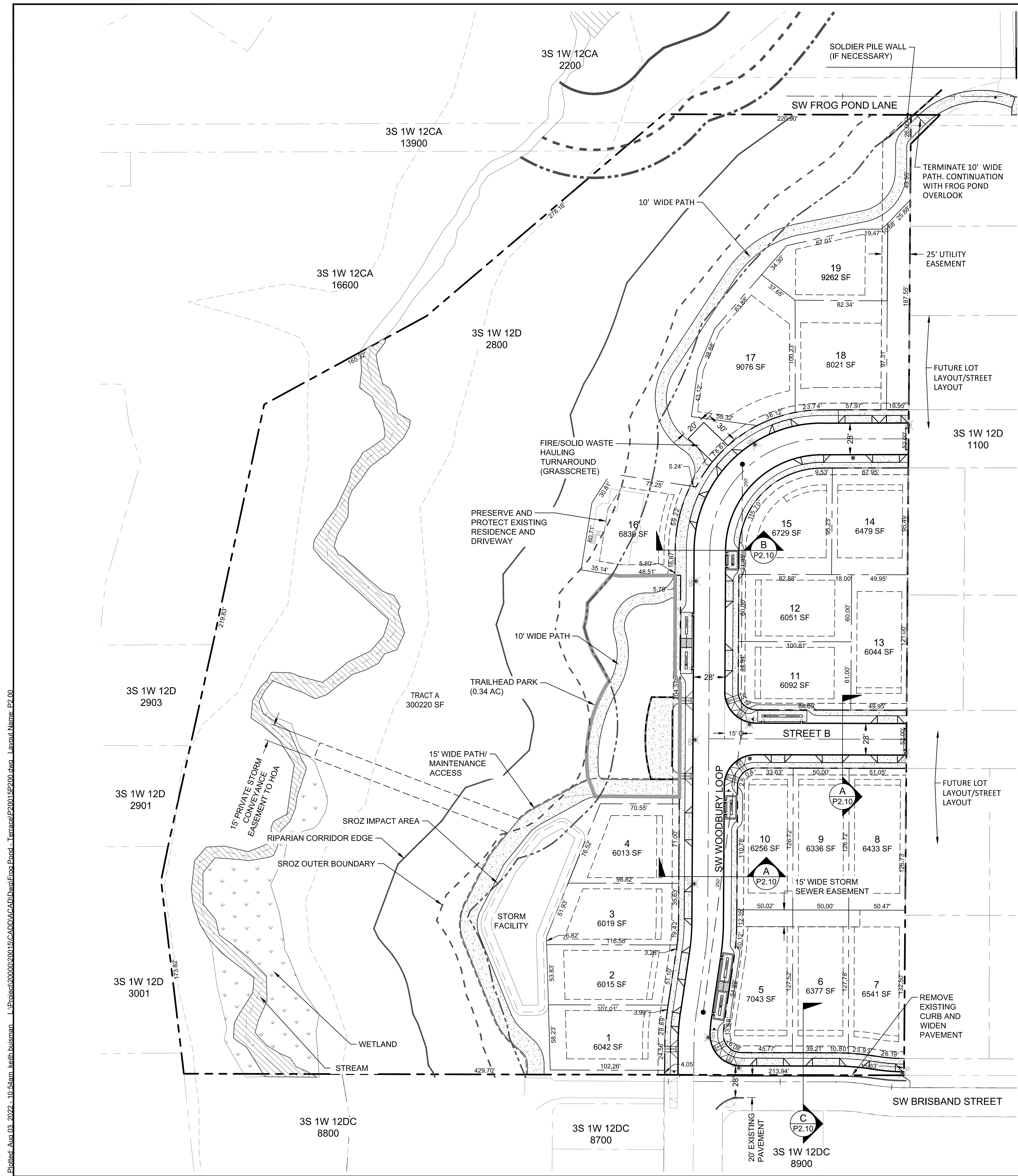
Development Summary

	Area	Percentage
Residential	475,980	100.00%
lot Area	127,659	26.82%
Open space	300,220	63.07%
Right of way	48,101	10.11%
Total site area	475,980	100.00%
Minimum Lot Size	6,013 s.f.	
Average Lot size	6,719 s.f.	

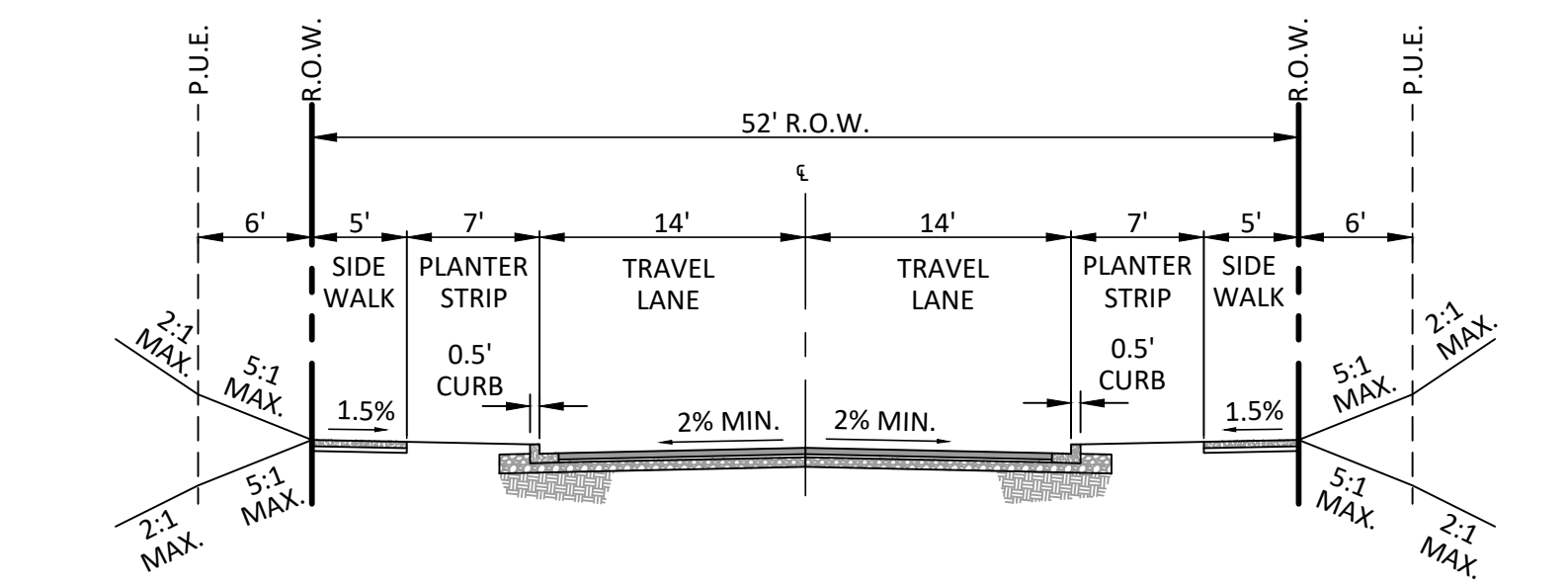
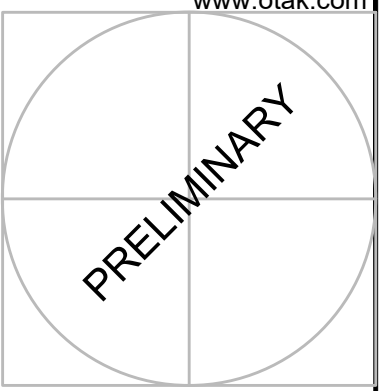
REVISIONS		
#	DATE	DESCRIPTION

NAVDB8 DATUM
OTAK CAD KJB
DRAWN BY CHECKED BY
LAND USE SUBMITTAL STATUS
MAY 17, 2022
DATE
20015
PROJECT NUMBER

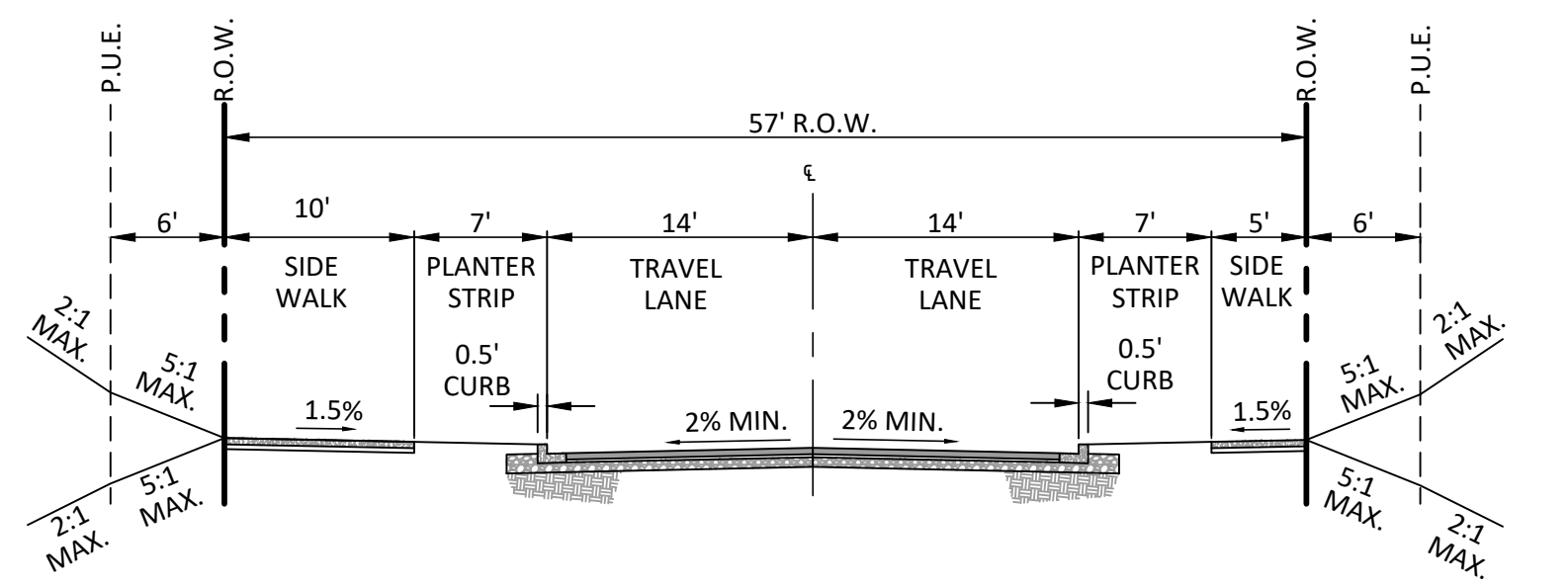
P2.00
© 2021 OTAK, INC.
If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according to drawing.



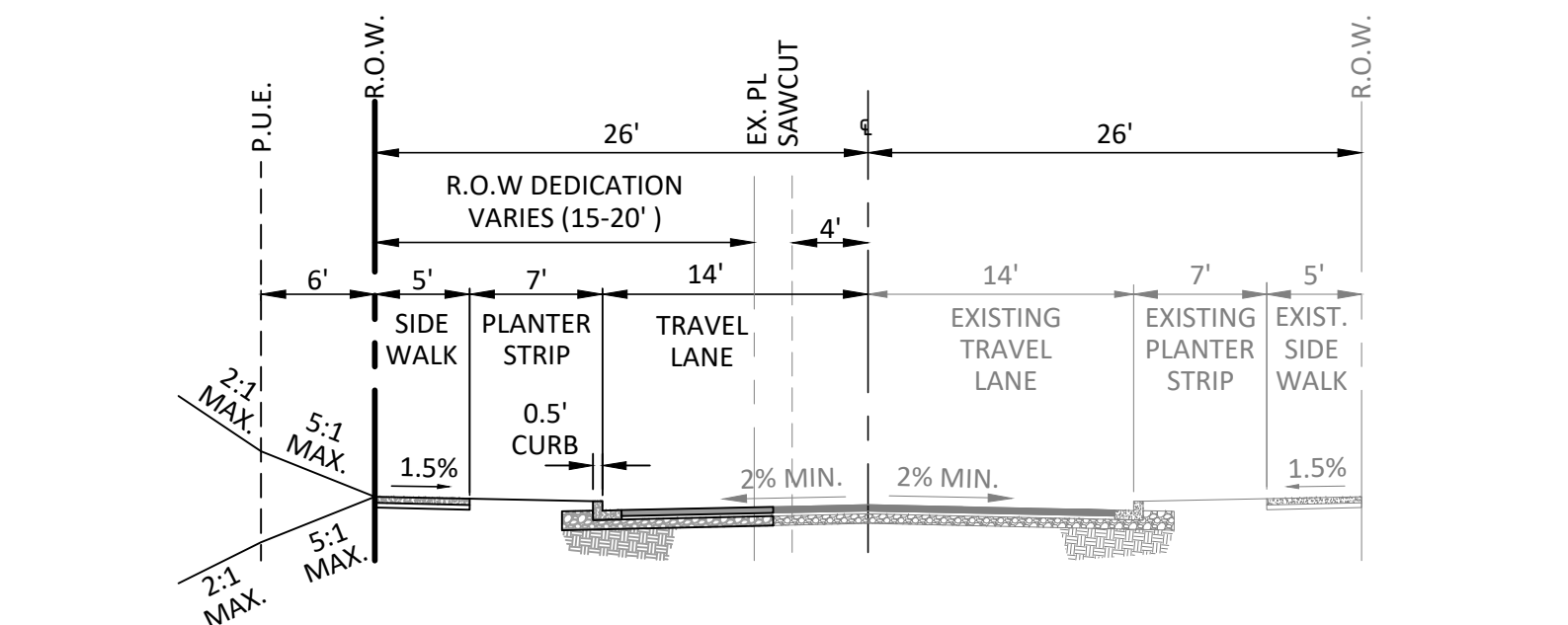
Plotted: Aug. 03, 2022 - 10:54am. Leith Buismam. L:\Project\2000020015\CADD\DWG\Frog Pond_Terrace\P2.00.dwg - Layout Name: P2.00



A SW WOODBURY LOOP AND STREET B
(LOCAL STREET - PARKING ON BOTH SIDES)
SCALE: 1" = 10'-0"



B SW WOODBURY LOOP
(LOCAL STREET - PARKING ON BOTH SIDES)
SCALE: 1" = 10'-0"



C SW BRISBAND ST
(LOCAL STREET - PARKING ON BOTH SIDES)
SCALE: 1" = 10'-0"

STREET CROSS SECTIONS
SEE SHEET P2.00 FOR SECTION LOCATIONS

FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

PRELIMINARY STREET CROSS SECTIONS

#	DATE	DESCRIPTION

REVISIONS

NAV/D88
DATUM

OTAK CAD KJB
DRAWN BY CHECKED BY

LAND USE SUBMITTAL
STATUS

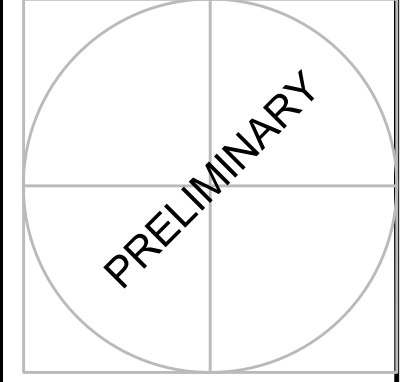
MAY 17, 2022
DATE

20015
PROJECT NUMBER

P2.10



Otak, Inc.
808 SW Third Avenue, Ste. 800
Portland, OR 97204
503.287.6825
www.otak.com

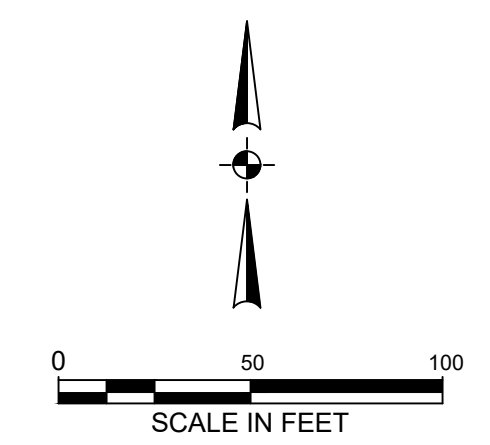
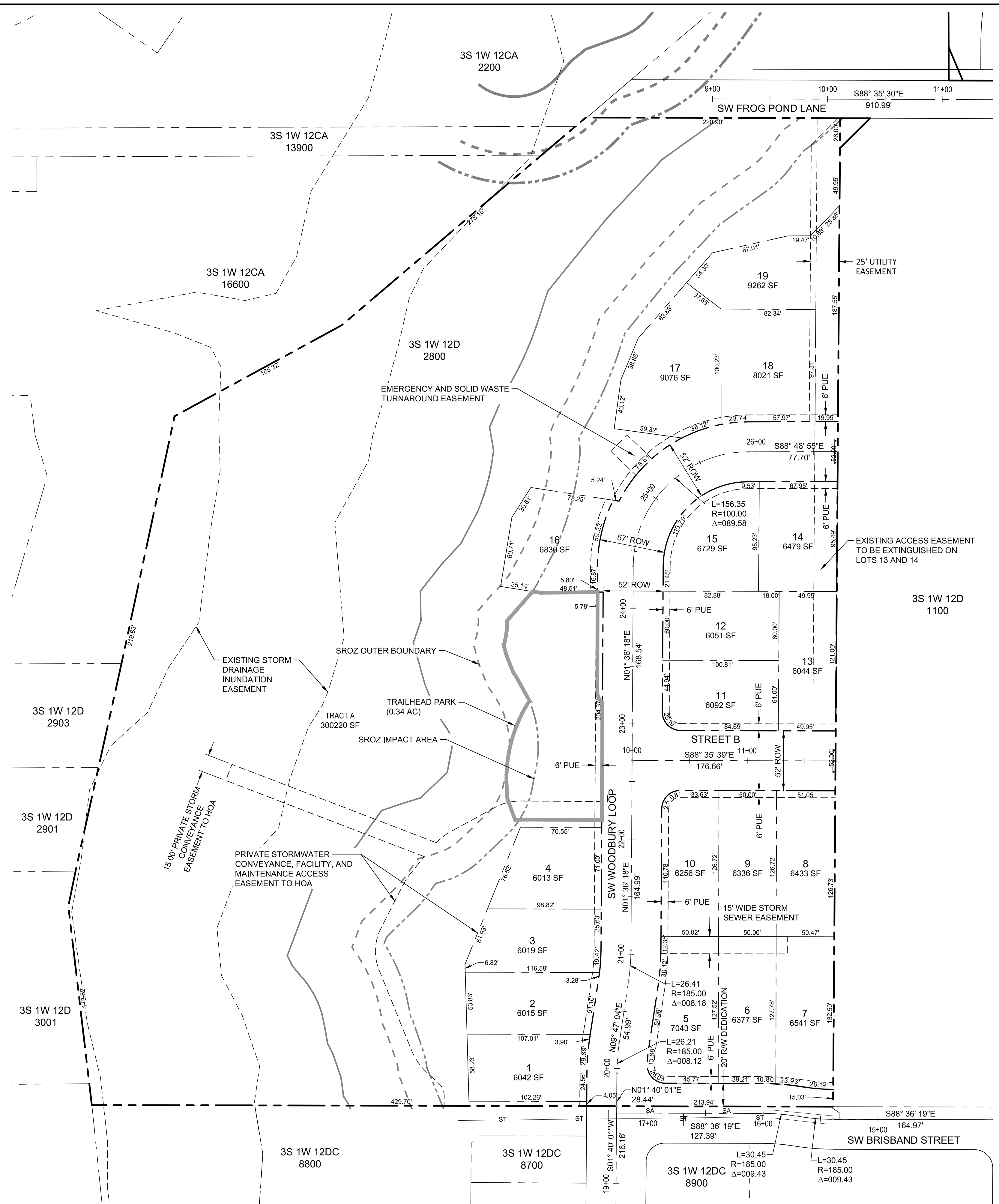


GENERAL NOTES:

- TRACT A IS FOR NATURAL RESOURCE, RECREATION, AND STORMWATER PURPOSES. TRACT A OWNERSHIP TO BE CONVEYED TO CITY OF WILSONVILLE AT PLAT RECORDING.

LEGEND

	PROPOSED
PROJECT BOUNDARY	— — — — —
RIGHT OF WAY	— — — — —
CENTER LINE	— — — — —
LOT LINE	— — — — —
EASEMENT LINE	— — — — —
LOT NUMBER / NAME	2



FROG POND TERRACE

19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

PRELIMINARY PLAT

#	DATE	DESCRIPTION

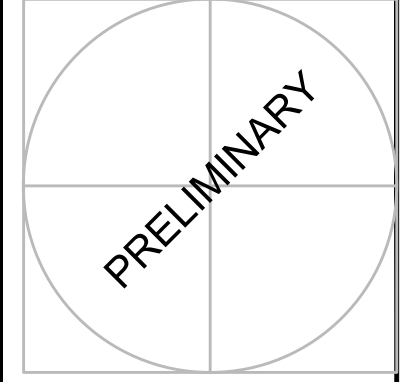
REVISIONS
NAV/D88
DATUM
OTAK CAD
DRAWN BY
LAND USE SUBMITTAL
STATUS
MAY 17, 2022
DATE
20015
PROJECT NUMBER

P3.00

© 2021 OTAK, INC.

If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according to drawing.

Plotted: Aug. 03, 2022, 10:56am, Keith Buismann, L:\Project\2000020015\CADD\DWG\Frog Pond_Terrace\20015P300.dwg, Layout Name: P3.00

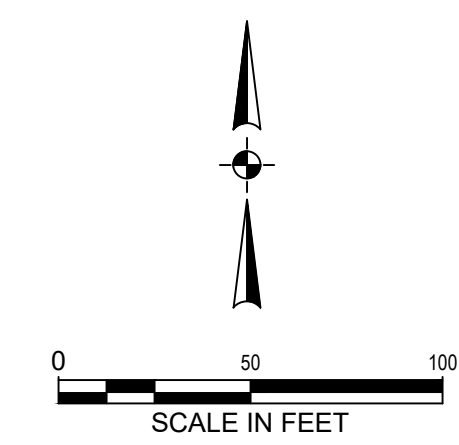
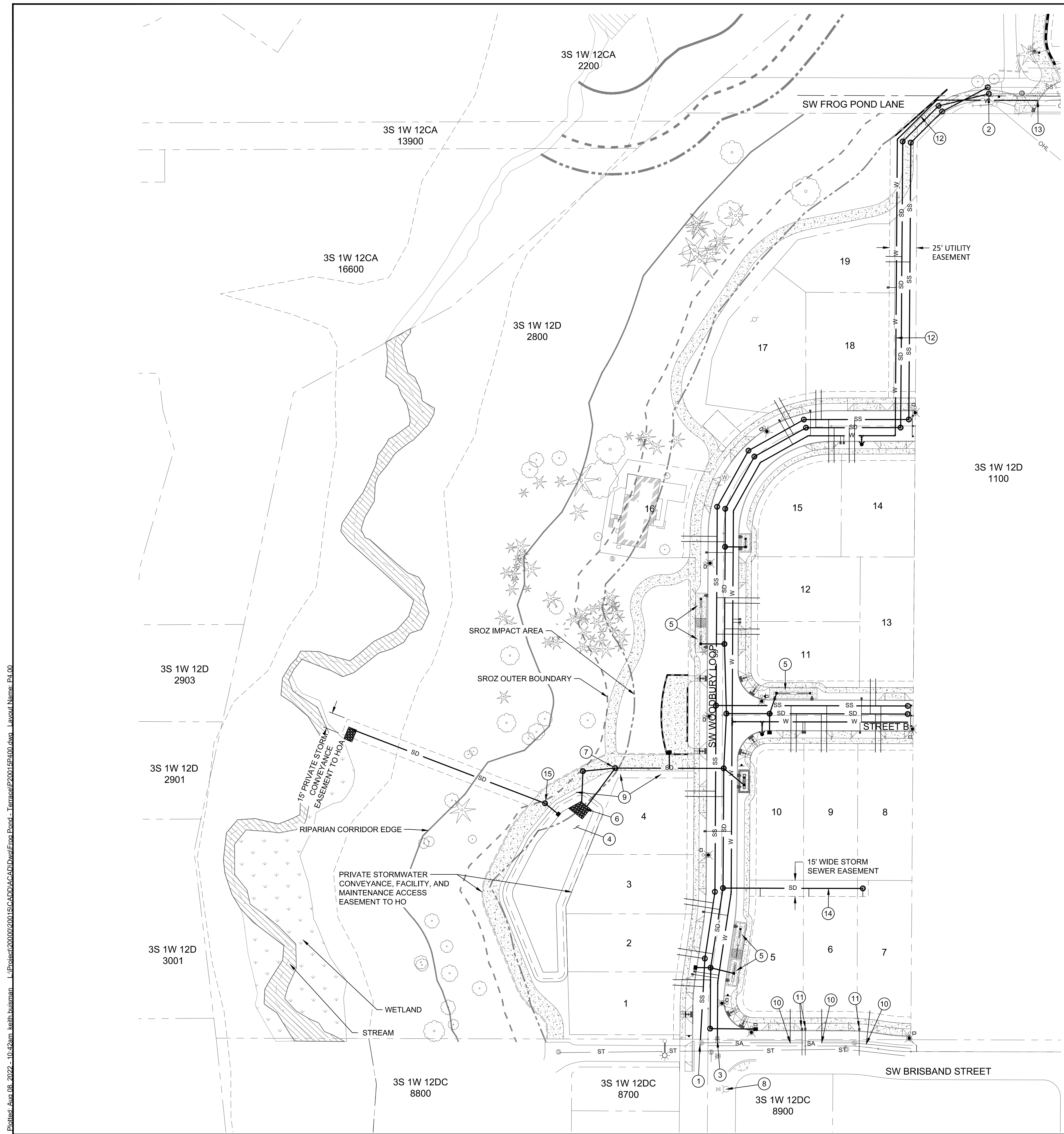


UTILITY KEY NOTES

- 1 CONNECT TO EXISTING SANITARY SEWER.
- 2 CONNECT TO STORM SEWER TO BE CONSTRUCTED WITH FROG POND OVERLOOK.
- 3 CONNECT TO EXISTING WATER LINE.
- 4 PROPOSED DETENTION POND (CITY STD. DWG. ST-6060).
- 5 PROPOSED VEGETATED SWALE (CITY STD. DWG. ST-6045 W/ 12" WIDE CONCRETE STEP-OFF WALK ADJACENT TO PAVEMENT).
- 6 STORM SEWER OUTFALL TO DETENTION POND.
- 7 PROPOSED WATER QUALITY MANHOLE.
- 8 EXISTING FIRE HYDRANT.
- 9 NOT USED.
- 10 CONNECT TO EXISTING SANITARY SEWER WITH NEW SERVICE LATERAL.
- 11 CONNECT TO EXISTING WATER LINE WITH NEW WATER SERVICE.
- 12 PROPOSED 8-INCH WATERLINE CONNECTION TO FROG POND LANE. WATERLINE TO BE TEMPORARY UNTIL 12-INCH LINE IS CONSTRUCTED IN STREET WITH DEVELOPMENT EAST OF SITE.
- 13 CONNECT TO WATER LINE TO BE CONSTRUCTED WITH FROG POND OVERLOOK.
- 14 CONSTRUCT PUBLIC BACKYARD STORM SEWER FOR LOTS 6 AND 7 STORM DRAINAGE.
- 15 PROPOSED FLOW CONTROL STRUCTURE (CITY STD. DWG. ST-6110).

LEGEND

SITE	PROPOSED
PROJECT BOUNDARY	---
STORM DRAIN MANHOLE	⊕
STORM DRAIN CLEAN OUT	⊙
LIDA FLOW CONTROL STRUCTURE (BEEHIVE: CITY STANDARD DWG. ST-6120)	•
CATCH BASIN	■
STORM DRAIN MAIN	— SD —
STORM DRAIN LATERAL	— SD —
SANITARY SEWER MANHOLE	⊕
SANITARY SEWER CLEAN OUT	⊙
SANITARY SEWER MAIN	— SS —
SANITARY SEWER LATERAL	— SS —
WATER VALVE	⊕
WATER BLOW-OFF	⊕
WATER METER	⊕
WATER FIRE HYDRANT	⊕
WATER MAIN	— W —
WATER LATERAL	— W —
STREET LIGHT PGE OPTION "B" LED WITH WESTBROOKE 35W LED AND 18" DECORATIVE ALUMINUM POLE (20' MOUNTING HEIGHT W/ 4' MAST ARM)	⊕



FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

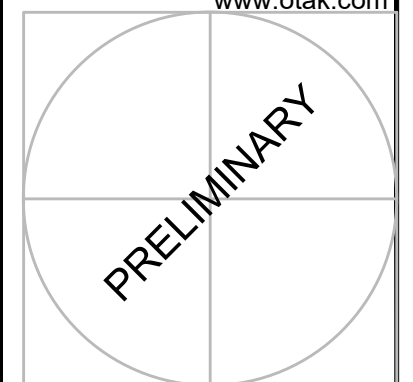
PRELIMINARY UTILITY PLAN

#	DATE	DESCRIPTION

REVISIONS	
NAV/D88	
DATUM	
OTAK CAD	KJB
DRAWN BY	CHECKED BY
LAND USE SUBMITTAL STATUS	
MAY 17, 2022	
DATE	
20015	
PROJECT NUMBER	

P4.00
© 2021 OTAK, INC.
If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according to drawing.

Plotted: Aug. 08, 2022 - 10:42am. Leith Buismann. L:\Project\20015\ACAD\Draw\Frog Pond - Terrace\20015P4.00.dwg. Layout Name: P4.00



FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

PRELIMINARY GRADING PLAN

#	DATE	DESCRIPTION

REVISIONS

NAV/D88
DATUM

OTAK CAD KJB
DRAWN BY CHECKED BY

LAND USE SUBMITTAL
STATUS

MAY 17, 2022
DATE

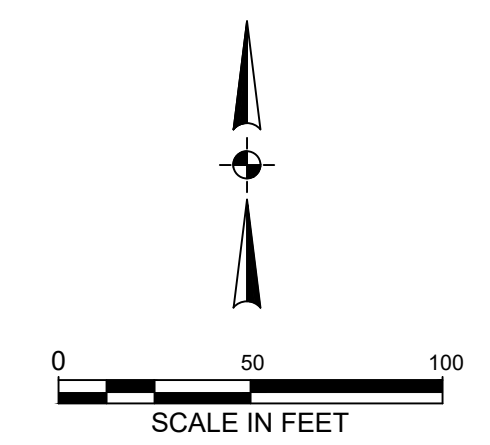
20015
PROJECT NUMBER

P5.00

© 2021 OTAK, INC.

LEGEND

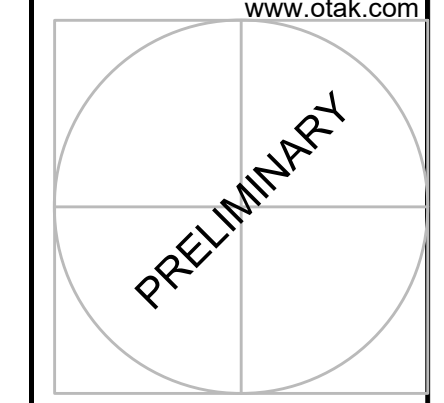
- EXISTING 1' CONTOUR 276
- EXISTING 5' CONTOUR 280
- PROPOSED 1' CONTOUR 276
- PROPOSED 5' CONTOUR 280
- RETAINING WALL
- LOT FLOW ARROW
- EXISTING TREES TO REMAIN
- EXISTING TREES TO BE REMOVED
- APPROXIMATE WALL HEIGHT



Plotted: May 17, 2022, 2:47pm, Keith Buisman, L:\Process\20000\20015\CADD\CADD\WetEroa\Bord - Terrace\20015P500.dwg, Layout Name: P5.00



Otak, Inc.
808 SW Third Avenue, Ste. 800
Portland, OR 97204
503.287.6825
www.otak.com

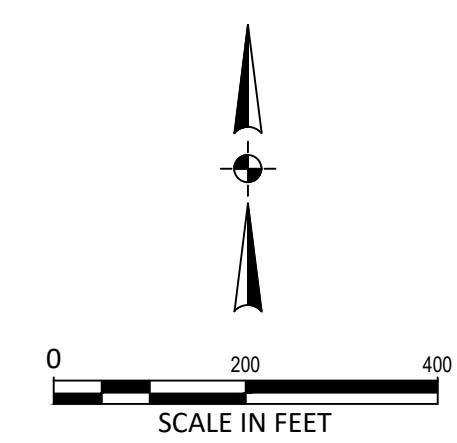
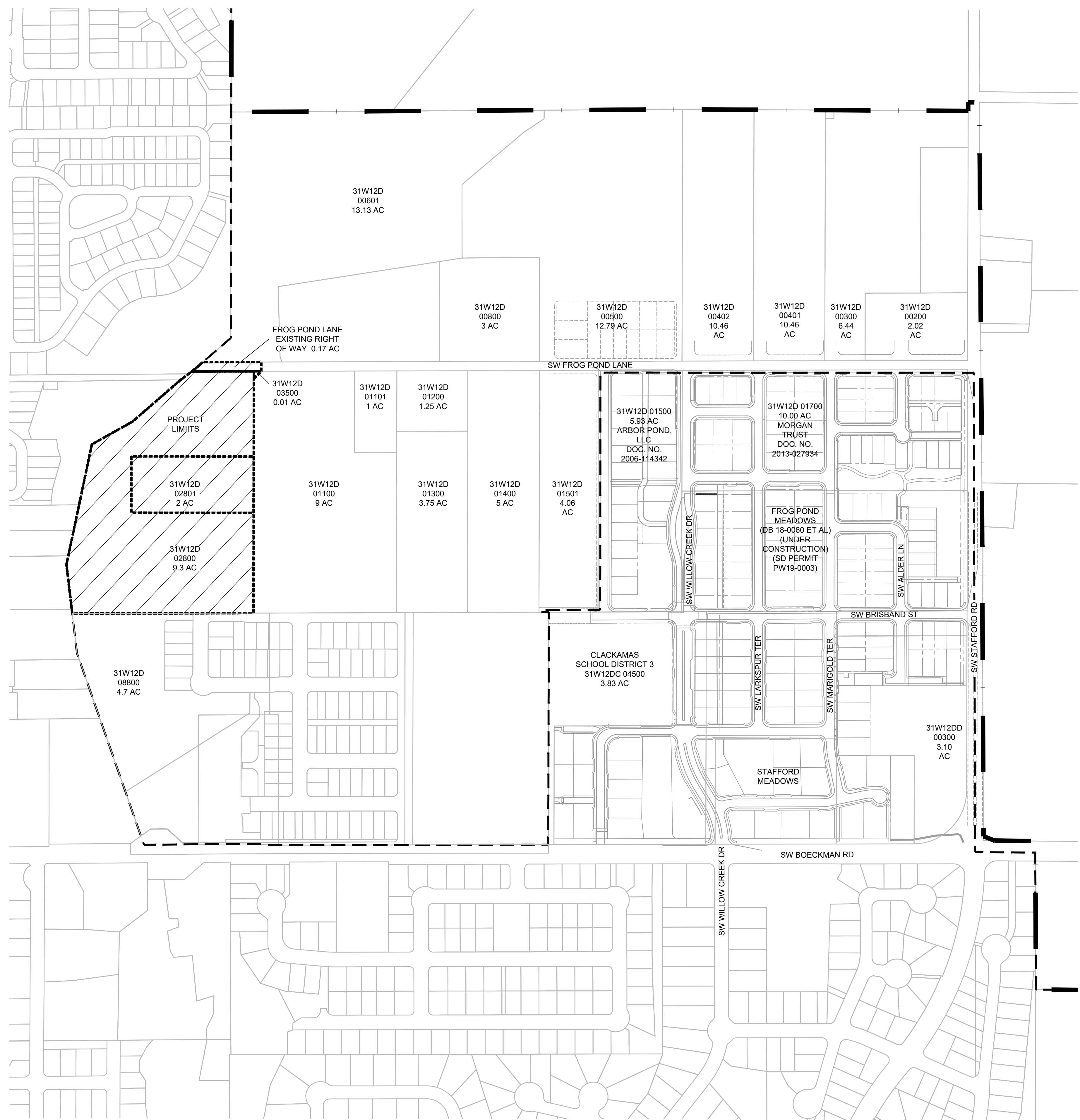


STAMP

WEST HILLS
LAND DEVELOPMENT
CONSULTANT

FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

ANNEXATION PLAN



LEGEND

- PROJECT LIMITS: Dashed line
- EXISTING CITY LIMITS: Long dashed line
- EXISTING URBAN GROWTH BOUNDARY: Thick solid line
- PROPOSED AREA TO BE ANNEXED TO THE CITY OF WILSONVILLE: Hatched area

TITLE	#	DATE	DESCRIPTION

REVISIONS	
NAV/D88 DATUM	
OTAK CAD DRAWN BY	KJB CHECKED BY
LAND USE SUBMITTAL STATUS	
MAY 17, 2022 DATE	
20015 PROJECT NUMBER	

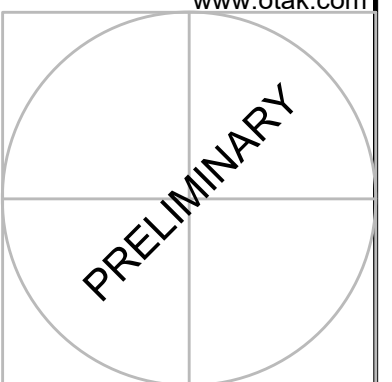
P6.00

© 2021 OTAK, INC.
If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according

Plotted: May 17, 2022 - 11:00am - Mike Haynes - L:\Projects\20000\20015\CAD\DWG\Frog Pond - Terrace\20015P600.dwg - Layout Name: P6.00



Otak, Inc.
808 SW Third Avenue, Ste. 800
Portland, OR 97204
503.287.6825
www.otak.com



STAMP



WEST HILLS
LAND DEVELOPMENT
CONSULTANT

FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

ZONING MAP

TITLE

#	DATE	DESCRIPTION

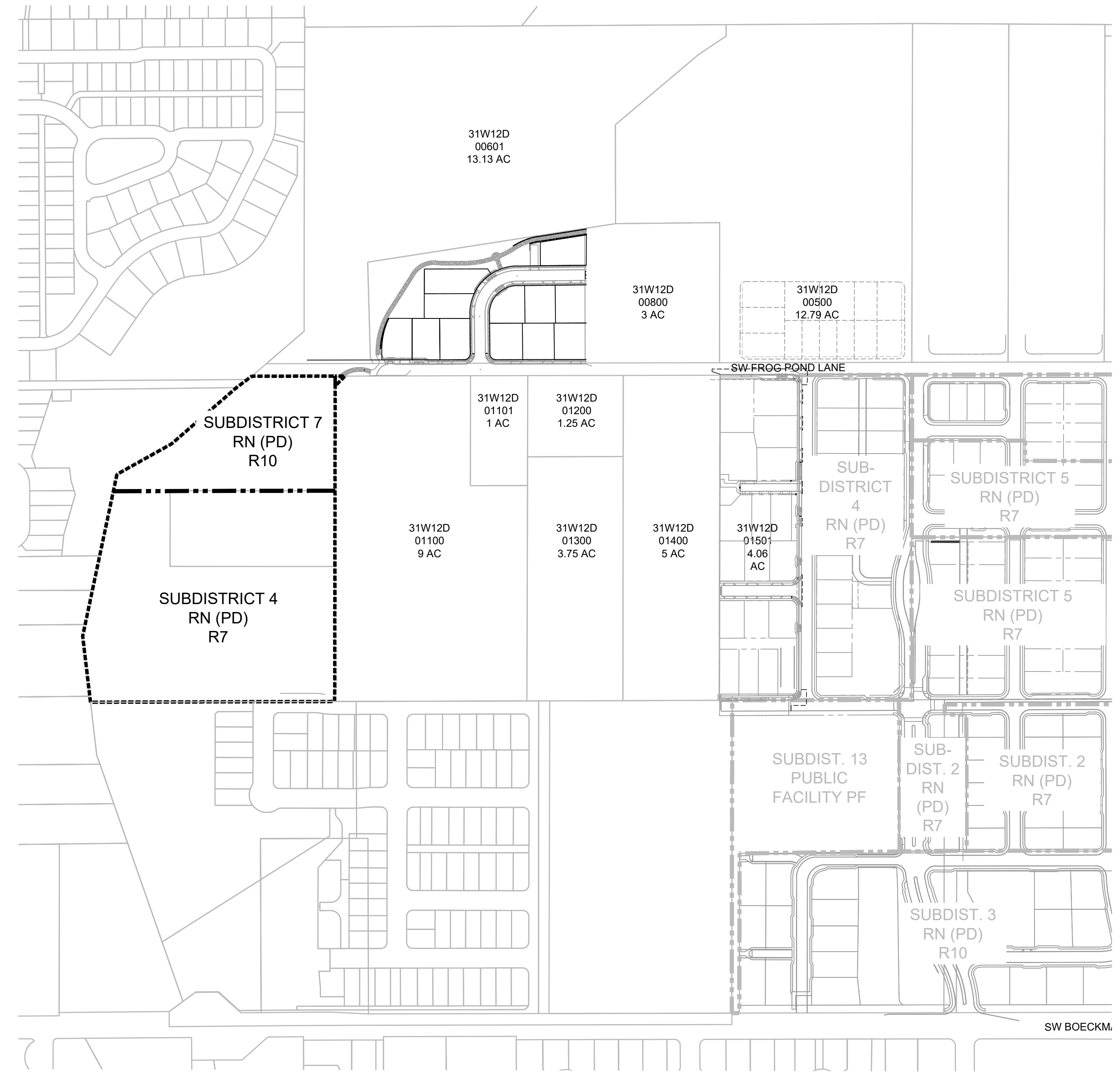
REVISIONS

NAV/D88	DATUM
OTAK CAD	KJB
DRAWN BY	CHECKED BY
LAND USE SUBMITTAL	STATUS
MAY 17, 2022	DATE
20015	PROJECT NUMBER

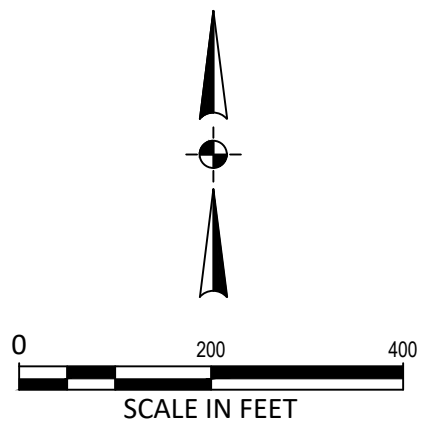
P7.00

© 2021 OTAK, INC.

If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according to drawing.

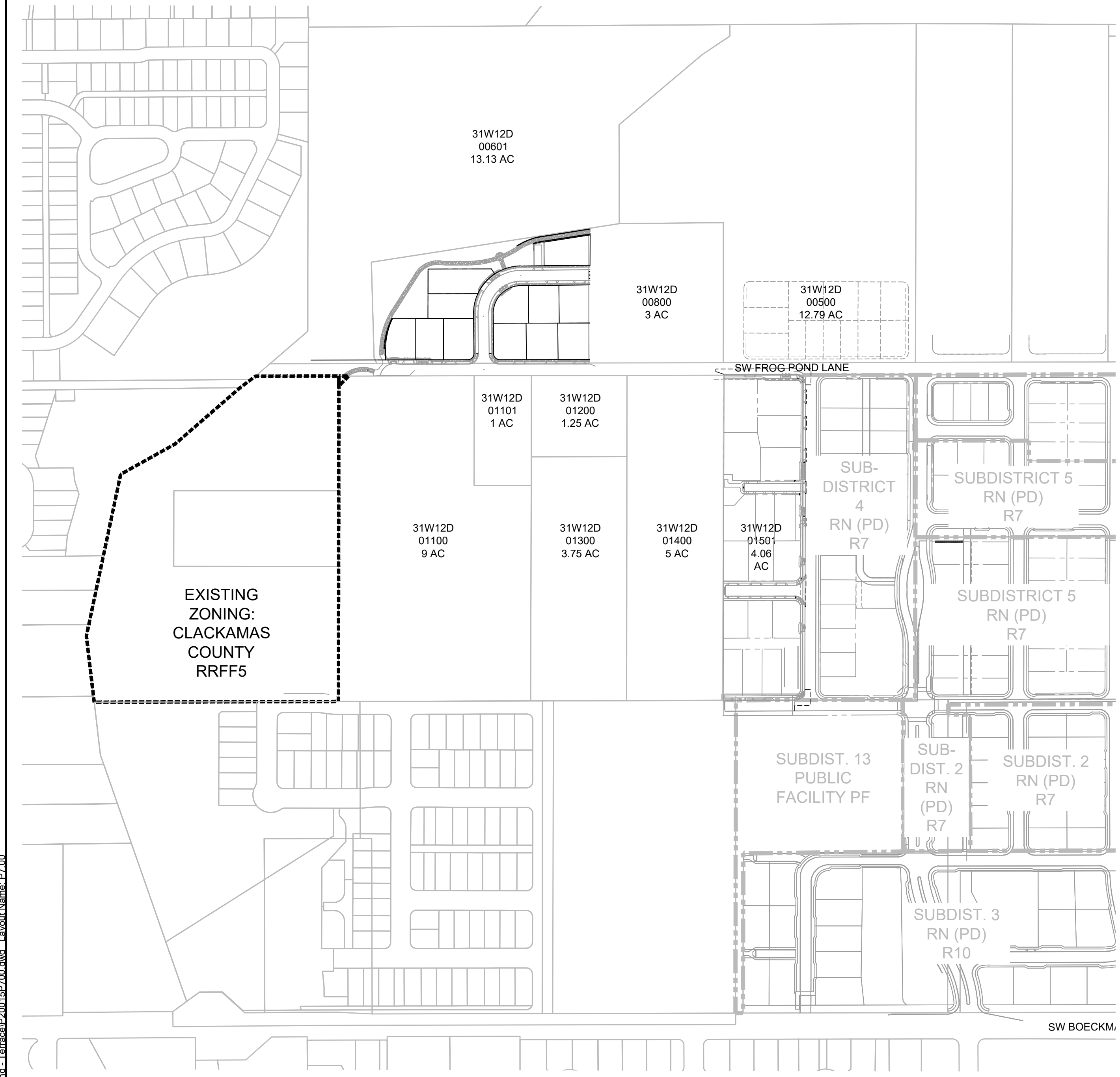


PROPOSED ZONING MAP
 PROPOSED ZONING: CITY OF WILSONVILLE RESIDENTIAL NEIGHBORHOOD RN WITH PLANNED DEVELOPMENT PD OVERLAY



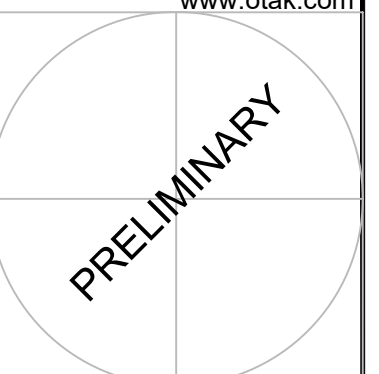
LEGEND

- PROJECT LIMITS: - - - - -
- SUBDISTRICT LINE: - - - - -



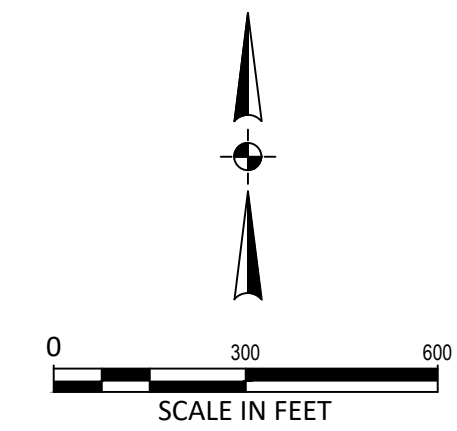
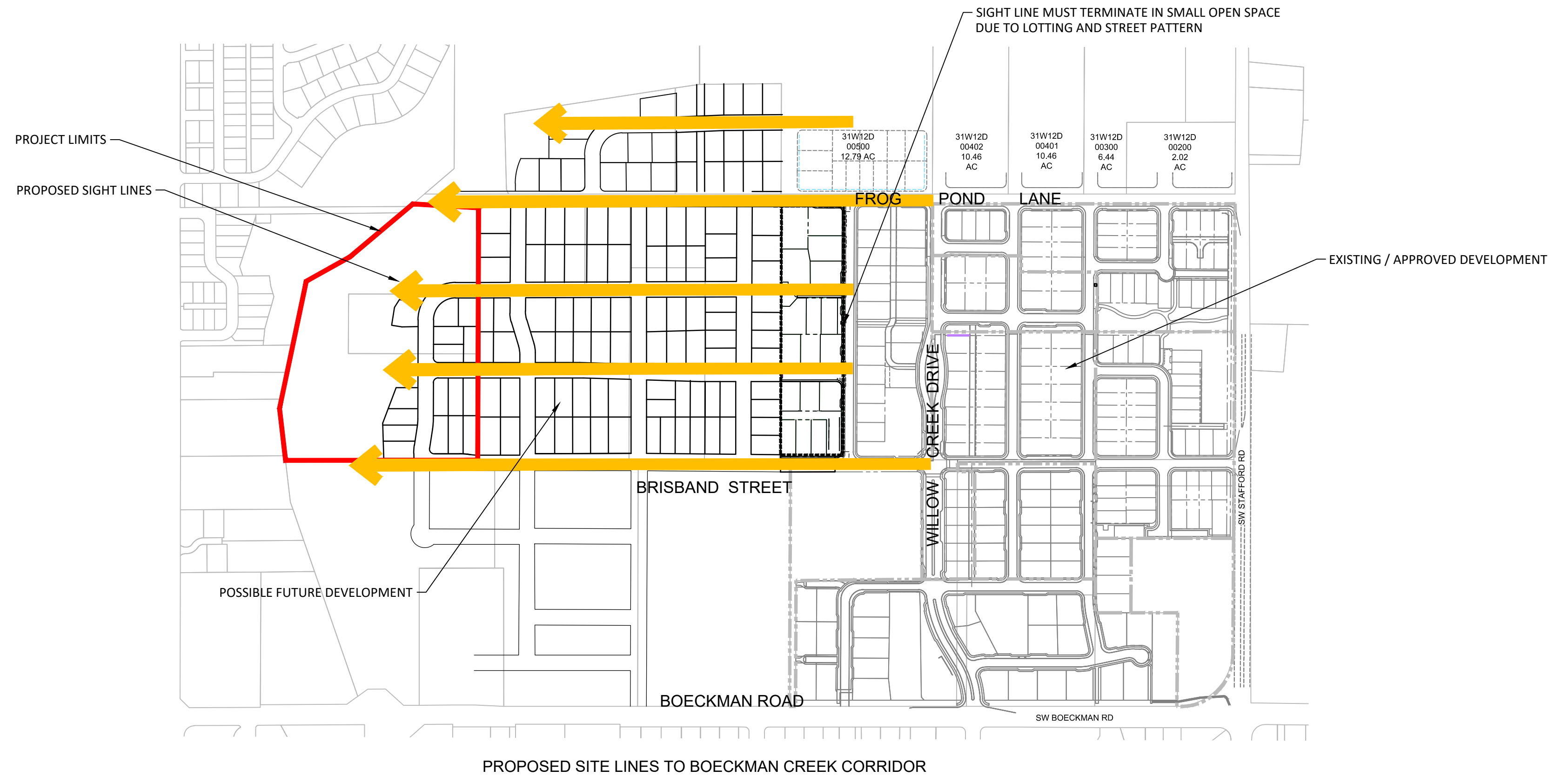
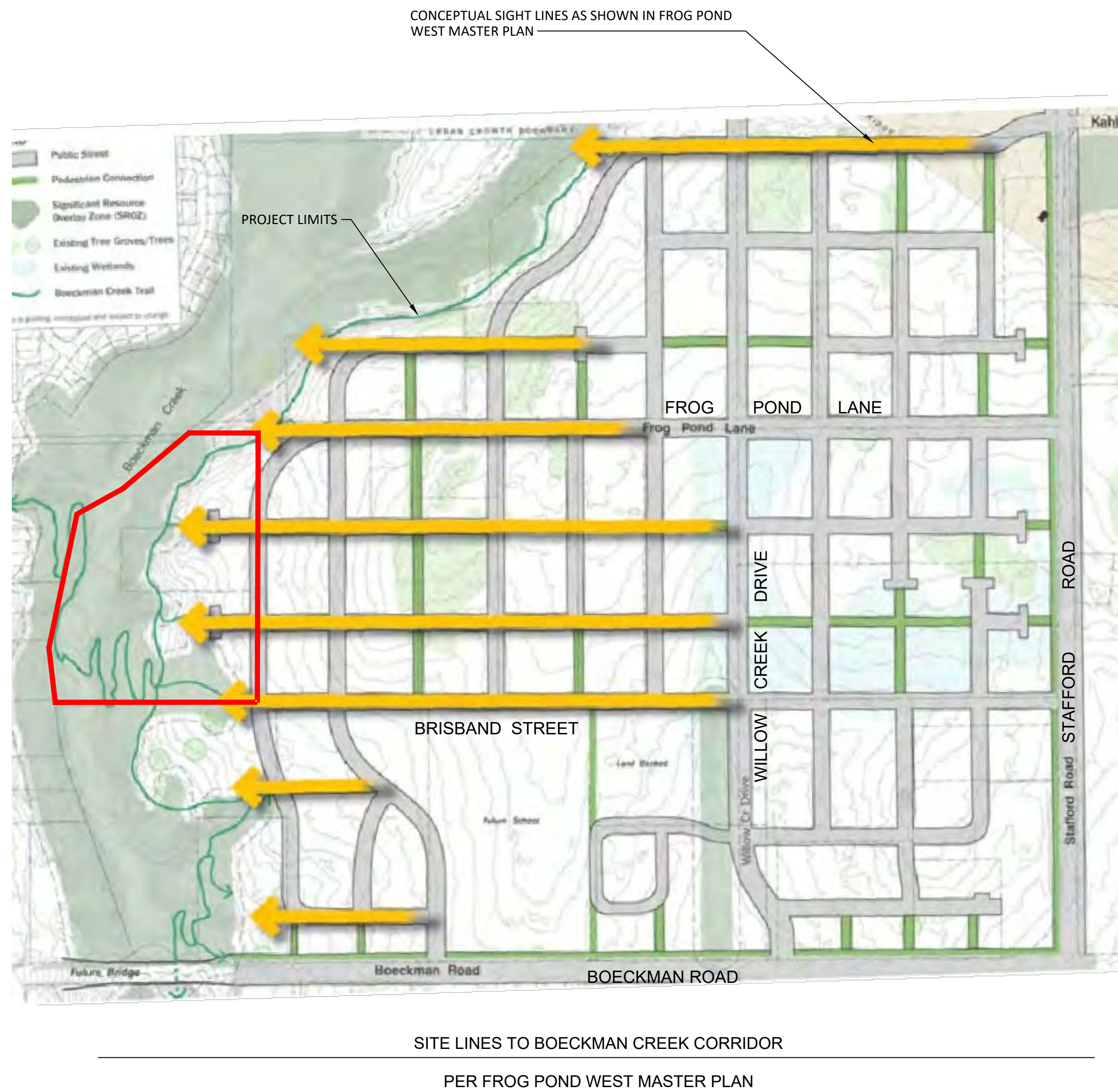
EXISTING ZONING MAP
 EXISTING ZONING: CLACKAMAS COUNTY RRF5

Plotted: May 17, 2022 - 11:01am - Mike Haynes - L:\Projects\20015\20015\CADD\Drawings\Frog Pond Terrace\20015P700.dwg - Layout Name: P7.00



FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

SIGHT LINES TO BOECKMAN CREEK CORRIDOR



Plotted: May 17, 2022, 12:42pm, Mike Haynes, L:\Projects\20010015\CAD\DWG\Frog_Terrace\20015P1100.dwg, Layout Name: P11.00

#	DATE	DESCRIPTION

REVISIONS	
NAVDB8 DATUM	
OTAK CAD DRAWN BY	KJB CHECKED BY
LAND USE SUBMITTAL STATUS	
MAY 17, 2022 DATE	
20015 PROJECT NUMBER	

P11.00



Frog Pond Terrace (Martin and George Properties) Page 1 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30007	bigleaf maple	20"	18	2	in ravine	0	protect
30008	Oregon ash	10"	12	2	in ravine	0	protect
30009	Oregon ash	14"	15	2	in ravine	0	protect
30014	red alder	12"	0	2	in ravine	0	protect
30015	red alder	13"	0	2	in ravine	0	protect
30017	Oregon ash	16"	24	2	in ravine	0	protect
30019	Scouler willow	4X4"-14"	18	2	in ravine	0	protect
30027	bigleaf maple	4X8"-12"	15	2	in ravine	0	remove
30028	Oregon ash	12"	15	2	in ravine	0	protect
30029	bigleaf maple	2X12"-14"	18	2	in ravine	0	protect
30033	Scouler willow	3X8"-10"	18	2	in ravine	0	remove
30042	Oregon ash	2X6"-8"	15	2	in ravine	0	protect
30045	bigleaf maple	10"	12	2	in ravine	0	protect
30046	bigleaf maple	10"	12	2	in ravine	0	protect
30053	Douglas-fir	26"	24	2	in ravine	0	protect
30054	red alder	2X11"-14"	12	1	terminal decline	0	protect
30062	bigleaf maple	8"	12	2	in ravine	0	protect
30063	bigleaf maple	8"	18	2	in ravine	0	protect
30076	bigleaf maple	18"	18	2	in ravine	0	protect
30090	Douglas-fir	14"	12	2	in ravine	0	protect
30099	bigleaf maple	14"	15	2	in ravine	0	protect
30100	bigleaf maple	16"	18	2	in ravine	0	protect
30101	red alder	12"	0	2	dead	0	protect
30117	red alder	4X13"-18"	0	2	dead	0	protect

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 4 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30738	yellow pine	14"	12	2	one-sided	0	protect
30739	yellow pine	14"	12	2	one-sided	0	protect
30740	Douglas-fir	16"	15	2	assymetrical crown	0	protect
30741	yellow pine	15"	15	2	assymetrical crown	0	protect
30772	quaking aspen	8"	9	2	assymetrical crown	0	protect
30773	Sato cherry	2X6"-8"	15	2	assymetrical crown	0	protect
30774	quaking aspen	8"	12	2	assymetrical crown	0	protect
30775	quaking aspen	12"	15	2	assymetrical crown	0	protect
30776	Douglas-fir	18"	18	2	assymetrical crown	0	protect
30777	Douglas-fir	15"	18	2	assymetrical crown	0	protect
30778	Douglas-fir	10"	15	2	assymetrical crown	0	protect
30779	Douglas-fir	16"	18	2	assymetrical crown	0	protect
30780	Douglas-fir	12"	12	2	assymetrical crown	0	protect
30781	Douglas-fir	12"	12	2	assymetrical crown	0	protect
30782	yellow pine	18"	21	2	assymetrical crown	0	protect
30783	yellow pine	12"	15	2	assymetrical crown	0	protect
30784	yellow pine	14"	18	2	assymetrical crown	0	protect
30785	Douglas-fir	13"	12	2	assymetrical crown	0	protect
30786	Douglas-fir	14"	9	2	assymetrical crown	0	protect
30787	Douglas-fir	10"	12	2	assymetrical crown	0	protect
30788	Douglas-fir	16"	18	2	assymetrical crown	0	remove
30789	yellow pine	16"	18	2	assymetrical crown	0	protect
30790	Douglas-fir	10"	12	2	viable	0	protect
30791	Douglas-fir	13"	12	2	assymetrical crown	0	protect

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 2 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30482	Douglas-fir	36"	36	2	in ravine	0	protect
30497	Alder	22"	24	2	in ravine	0	protect
30507	bigleaf maple	3X8"-28"	24	2	in ravine	0	protect
30513	Douglas-fir	24"	30	2	in ravine	0	protect
30514	bigleaf maple	2X14"-24"	12	2	the 24" stem is a Douglas-fir tree	0	protect
30516	Douglas-fir	24"	24	2	in ravine	0	protect
30517	Douglas-fir	20"	21	2	in ravine	0	protect
30518	Douglas-fir	20"	21	2	in ravine	0	protect
30519	Douglas-fir	28"	24	2	in ravine	0	protect
30520	Douglas-fir	24"	24	2	in ravine	0	protect
30534	bigleaf maple	16"	21	2	in ravine	0	protect
30535	Douglas-fir	34"	30	2	in ravine	0	protect
30536	Douglas-fir	20"	24	2	in ravine	0	protect
30537	Douglas-fir	40"	33	2	in ravine	0	protect
30599	Douglas-fir	12"	12	2	in ravine	0	protect
30600	Douglas-fir	18"	18	2	two tops	0	protect
30601	Douglas-fir	8"	18	2	at utility pole	0	protect
30602	Douglas-fir	16"	18	2	topped at 20 ft.	0	protect
30603	Japanese maple	6"	9	2	at house	0	protect
30709	Douglas-fir	9"	9	2	in ravine	0	protect
30710	Douglas-fir	9"	9	2	in ravine	0	protect
30711	bigleaf maple	28"	30	2	in ravine	0	protect
30712	Gary oak	36"	90	2	leans over house to remain and one-sided	24	protect
30713	Douglas-fir	32"	30	2	must preserve to protect 30712 Gary oak; two tops, one-sided	24	protect

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 5 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30792	yellow pine	9"	9	2	assymetrical crown	0	protect
30793	yellow pine	12"	12	2	assymetrical crown	0	protect
30794	yellow pine	9"	9	2	assymetrical crown	0	protect
30795	yellow pine	14"	12	2	assymetrical crown	0	protect
30796	yellow pine	14"	12	2	assymetrical crown	0	protect
30797	yellow pine	14"	12	2	assymetrical crown	0	protect
30798	yellow pine	18"	15	2	assymetrical crown	0	protect
30799	missing	0	0	2	missing from behind house	0	protect
30822	quaking aspen	10"	12	2	viable	0	protect
31353	Douglas-fir	20"	15	2	on berm, shallow-rooted	0	remove
31354	Douglas-fir	14"	12	2	on berm, shallow-rooted	0	remove
31356	Douglas-fir	14"	12	2	on berm, shallow-rooted	0	remove
31357	Douglas-fir	18"	12	2	on berm, shallow-rooted	0	remove
31358	Douglas-fir	12"	12	2	on berm, shallow-rooted	0	remove
31359	Douglas-fir	2X10"-13"	12	2	poor structure	0	remove
31360	Douglas-fir	12"	12	2	on berm, shallow-rooted	0	remove
31361	Douglas-fir	8"	12	2	on berm, shallow-rooted	0	remove
31362	Douglas-fir	10"	12	2	on berm, shallow-rooted	0	remove
31363	Douglas-fir	13"	15	2	on berm, shallow-rooted	0	remove
31364	Douglas-fir	20"	21	2	on berm, shallow-rooted	0	remove
31367	Douglas-fir	20"	24	2	on berm, shallow-rooted	0	remove
31368	Douglas-fir	14"	15	2	on berm, shallow-rooted	0	remove
31369	yellow pine	31"	30	2	crowded	0	remove
31370	yellow pine	18"	15	2	crowded	0	remove

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 3 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
30714	red alder	14"	9	2	terminal decline	0	protect
30715	Douglas-fir	12"	9	2	in ravine	0	protect
30716	Douglas-fir	14"	0	2	in ravine	0	protect
30717	red alder	14"	0	2	in ravine	0	protect
30718	red alder	16"	12	2	in ravine	0	protect
30719	Douglas-fir	10"	9	2	in ravine	0	protect
30720	Douglas-fir	11"	12	2	in ravine	0	protect
30721	Douglas-fir	18"	12	2	in ravine	0	protect
30722	Douglas-fir	12"	12	2	in ravine	0	protect
30723	Douglas-fir	9"	9	2	viable	0	protect
30724	Douglas-fir	13"	12	2	in ravine	0	protect
30725	Douglas-fir	7"	12	2	in ravine	0	protect
30726	Douglas-fir	12"	12	2	in ravine	0	protect
30727	Douglas-fir	8"	9	2	in ravine	0	protect
30728	Douglas-fir	13"	12	2	in ravine	0	protect
30729	yellow pine	18"	18	2	in ravine	0	protect
30730	yellow pine	8"	9	2	in ravine	0	protect
30731	Douglas-fir	13"	12	2	in ravine	0	protect
30732	Douglas-fir	16"	15	2	in ravine	0	protect
30733	Douglas-fir	14"	12	2	in ravine	0	protect
30734	Douglas-fir	6"	9	2	in ravine	0	protect
30735	yellow pine	18"	18	2	in ravine	0	protect
30736	sweet cherry	14"	15	2	in ravine	0	protect
30737	yellow pine	12"	15	2	viable	0	protect

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 6 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31371	yellow pine	14"	24	2	crowded	0	remove
31372	yellow pine	13"	18	2	crowded	0	remove
31373	yellow pine	14"	18	2	crowded	0	remove
31374	yellow pine	14"	18	2	crowded	0	remove
31375	yellow pine	18"	24	2	assymetrical crown	0	remove
31376	Douglas-fir	12"	12	2	assymetrical crown	0	remove
31377	yellow pine	16"	15	2	assymetrical crown	0	remove
31378	yellow pine	10"	12	2	assymetrical crown	0	remove
31379	yellow pine	12"	12	2	assymetrical crown	0	remove
31380	yellow pine	14"	12	2	assymetrical crown	0	remove
31381	yellow pine	7"	9	2	assymetrical crown	0	remove
31382	yellow pine	14"	15	2	assymetrical crown	0	remove
31383	yellow pine	19"	24	2	assymetrical crown	0	remove
31384	yellow pine	18"	18	2	assymetrical crown	0	remove
31385	bigleaf maple	24"	24	2	viable	0	remove
31386	Douglas-fir	17"	24	2	one-sided	0	remove
31387	Douglas-fir	12"	18	2	assymetrical crown	0	remove
31388	yellow pine	13"	15	2	assymetrical crown	0	remove
31389	yellow pine	20"	21	2	assymetrical crown	0	remove
31390	yellow pine	16"	18	2	assymetrical crown	0	remove
31391	yellow pine	12"	12	2	assymetrical crown	0	remove
31392	yellow pine	14"	12	2	assymetrical crown	0	remove
31393	yellow pine	10"	12	2	assymetrical crown	0	remove
31394	yellow pine	16"	18	2	assymetrical crown	0	remove

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

FROG POND TERRACE
 19 DETACHED SINGLE FAMILY LOTS
 CITY OF WILSONVILLE, OREGON

TREE INVENTORY

TITLE	#	DATE	DESCRIPTION

REVISIONS
NAVD88
DATUM
OTAK CAD KJB
DRAWN BY CHECKED BY
LAND USE SUBMITTAL STATUS
MAY 17, 2022
DATE
20015
PROJECT NUMBER

L1.10



Frog Pond Terrace (Martin and George Properties) Page 7 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31395	yellow pine	11"	9	2	topped at 20 ft.	0	remove
31396	yellow pine	13"	21	2	assymetrical crown	0	remove
31397	yellow pine	14"	15	2	assymetrical crown	0	remove
31398	yellow pine	16"	15	2	assymetrical crown	0	remove
31399	yellow pine	11"	15	2	assymetrical crown	0	remove
31400	yellow pine	16"	12	2	assymetrical crown	0	remove
31401	yellow pine	13"	15	2	assymetrical crown	0	remove
31402	yellow pine	18"	12	2	assymetrical crown	0	remove
31403	yellow pine	24"	18	2	assymetrical crown	0	remove
31404	yellow pine	18"	15	2	assymetrical crown	0	remove
31405	yellow pine	15"	12	2	assymetrical crown	0	remove
31406	yellow pine	24"	24	2	assymetrical crown	0	remove
31407	yellow pine	16"	18	2	assymetrical crown	0	remove
31408	yellow pine	20"	9	2	codominant trunks	0	remove
31409	yellow pine	6"	9	2	suppressed	0	remove
31410	yellow pine	14"	12	2	assymetrical crown	0	remove
31411	yellow pine	8"	9	2	assymetrical crown	0	remove
31412	yellow pine	12"	12	2	assymetrical crown	0	remove
31413	yellow pine	10"	12	2	assymetrical crown	0	remove
31414	yellow pine	17"	18	2	assymetrical crown	0	remove
31415	yellow pine	10"	12	2	assymetrical crown	0	remove
31416	yellow pine	6"	9	2	assymetrical crown	0	remove
31417	yellow pine	8"	9	2	assymetrical crown	0	remove
31418	yellow pine	12"	12	2	assymetrical crown	0	remove

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 10 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31468	yellow pine	16"	15	2	assymetrical crown	0	remove
31469	yellow pine	8"	12	2	assymetrical crown	0	remove
31470	yellow pine	13"	12	2	assymetrical crown	0	remove
31471	yellow pine	14"	15	2	assymetrical crown	0	remove
31472	cottonwood	10"	12	2	assymetrical crown	0	remove
31473	yellow pine	16"	18	2	assymetrical crown	0	remove
31474	yellow pine	9"	9	2	assymetrical crown	0	remove
31475	yellow pine	8"	9	2	assymetrical crown	0	remove
31476	yellow pine	14"	15	2	assymetrical crown	0	remove
31477	yellow pine	16"	18	2	assymetrical crown	0	remove
31478	yellow pine	9"	9	2	assymetrical crown	0	remove
31479	yellow pine	11"	9	2	assymetrical crown	0	remove
31480	Douglas-fir	12"	12	2	assymetrical crown	0	remove
31481	Douglas-fir	14"	15	2	assymetrical crown	0	remove
31482	yellow pine	12"	15	2	assymetrical crown	0	remove
31483	yellow pine	12"	12	2	assymetrical crown	0	remove
31484	Douglas-fir	9"	9	2	assymetrical crown	0	remove
31485	yellow pine	16"	15	2	assymetrical crown	0	remove
31486	Douglas-fir	12"	12	2	assymetrical crown	0	remove
31487	yellow pine	14"	15	2	assymetrical crown	0	remove
31488	Douglas-fir	9"	9	2	assymetrical crown	0	remove
31489	Douglas-fir	10"	12	2	assymetrical crown	0	remove
31490	Douglas-fir	10"	9	2	viable	0	protect
31491	Douglas-fir	18"	18	2	assymetrical crown	0	protect

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 8 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31419	Douglas-fir	12"	12	2	assymetrical crown	0	remove
31420	Douglas-fir	14"	12	2	assymetrical crown	0	remove
31421	yellow pine	12"	12	2	assymetrical crown	0	remove
31422	yellow pine	16"	15	2	assymetrical crown	0	remove
31423	yellow pine	8"	9	2	assymetrical crown	0	remove
31424	yellow pine	12"	15	2	assymetrical crown	0	remove
31425	yellow pine	7"	9	2	assymetrical crown	0	remove
31426	yellow pine	14"	12	2	assymetrical crown	0	remove
31427	Douglas-fir	8"	9	2	assymetrical crown	0	remove
31428	Douglas-fir	18"	18	2	assymetrical crown	0	remove
31429	Douglas-fir	14"	18	2	assymetrical crown	0	remove
31430	yellow pine	16"	18	2	assymetrical crown	0	remove
31431	yellow pine	17"	18	2	assymetrical crown	0	remove
31432	yellow pine	22"	24	2	assymetrical crown	0	remove
31433	yellow pine	14"	18	2	assymetrical crown	0	remove
31434	Douglas-fir	18"	18	2	assymetrical crown	0	remove
31435	yellow pine	16"	15	2	assymetrical crown	0	remove
31436	yellow pine	22"	24	2	assymetrical crown	0	remove
31437	Douglas-fir	13"	12	2	assymetrical crown	0	remove
31438	Douglas-fir	17"	18	2	assymetrical crown	0	remove
31439	Douglas-fir	16"	15	2	assymetrical crown	0	remove
31440	yellow pine	13"	12	2	assymetrical crown	0	remove
31441	Douglas-fir	16"	15	2	assymetrical crown	0	remove
31442	yellow pine	17"	18	2	assymetrical crown	0	remove

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 11 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31492	Douglas-fir	16"	18	2	assymetrical crown	0	protect
31493	Douglas-fir	20"	24	2	assymetrical crown	0	protect
31496	red alder	15"	15	0	dead	0	remove
31497	red alder	14"	12	1	terminal decline	0	remove
31498	bigleaf maple	2X14"	15	2	viable	0	remove
31499	red alder	8"	9	1	terminal decline	0	remove
31500	bigleaf maple	8"	9	1	terminal decline	0	remove
31501	red alder	20"	0	0	dead	0	remove
33453	cherry	6"	6	2	viable	0	remove
33455	cherry	6"	6	2	viable	0	remove
33456	cherry	6"	6	2	viable	0	remove

Rating: 0/dead or hazardous, 1/decline, 2/average, 3/excellent health and structure
 RPZ mean root protection zone. This is a radius from the trunk measured in feet.
 Dripline is average Crown Diameter or Canopy Spread
 Trees tied and DBH measurements taken by Otak licensed surveyors for at various times.

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 9 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action
31443	Douglas-fir	13"	12	2	assymetrical crown	0	remove
31444	Douglas-fir	16"	24	2	assymetrical crown	0	remove
31445	yellow pine	11"	12	2	assymetrical crown	0	remove
31446	yellow pine	8"	12	2	assymetrical crown	0	remove
31447	yellow pine	18"	18	2	assymetrical crown	0	remove
31448	yellow pine	14"	15	2	assymetrical crown	0	remove
31449	Douglas-fir	12"	12	2	assymetrical crown	0	remove
31450	Douglas-fir	12"	12	2	assymetrical crown	0	remove
31451	yellow pine	12"	12	2	assymetrical crown	0	remove
31452	Douglas-fir	14"	15	2	assymetrical crown	0	remove
31453	Douglas-fir	18"	18	2	assymetrical crown	0	remove
31454	yellow pine	12"	12	2	assymetrical crown	0	remove
31455	yellow pine	16"	18	2	assymetrical crown	0	remove
31456	Douglas-fir	2X4"-6"	9	2	assymetrical crown	0	remove
31457	yellow pine	14"	12	2	assymetrical crown	0	remove
31458	yellow pine	16"	15	2	assymetrical crown	0	remove
31459	yellow pine	10"	12	2	assymetrical crown	0	remove
31460	yellow pine	16"	12	2	assymetrical crown	0	remove
31461	yellow pine	21"	21	2	assymetrical crown	0	remove
31463	yellow pine	12"	12	2	assymetrical crown	0	remove
31464	Douglas-fir	14"	15	2	assymetrical crown	0	remove
31465	yellow pine	15"	15	2	assymetrical crown	0	remove
31466	yellow pine	2X10"-16"	18	2	assymetrical crown	0	remove
31467	yellow pine	16"	18	2	assymetrical crown	0	remove

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

Frog Pond Terrace (Martin and George Properties) Page 12 Compiled for West Hills Development, LLC

Tag	Species	DBH	Dripline	Rating	Health & Structure	RPZ	Action

Species
 apple- *Maus sylvestris*
 bigleaf maple- *Acer macrophyllum*
 black oak- *Quercus velutina*
 blue spruce- *Picea pungens*
 Cottonwood- *Populus tricarpa*
 Deodar cedar- *Cedrus deodara*
 Douglas fir- *Pseudotsuga menziesii*
 European birch- *Betula pendula*
 Gary oak- *Quercus garryana*
 giant sequoia- *Sequoia giganteum*
 ginkgo- *Ginkgo biloba*
 grand fir- *Abies grandis*
 incense-cedar- *Calocedrus decurrens*
 Japanese maple- *Acer japonica*
 limber pine- *Pinus flexilis*
 Lombardy poplar- *Populus nigra*
 Norway maple- *Acer platanoides*
 paperbark maple- *Acer glabrum*
 Portuguese laurel- *Prunus lusitanica*
 red alder- *Alnus rubra*
 red spruce- *Picea rubens*
 Sato Cherry- *Prunus* sp.
 Scouler willow- *Salix scouleriana*
 Sitka spruce- *Picea sitchensis*
 sweet cherry- *Prunus avium*
 western redcedar- *Thuja plicata*
 yellow pine- *Pinus ponderosa* var. *scopolorum*

Portland Tree Consulting Fieldwork by Peter Torres, PN-0650B, on 1/14/2022

FROG POND TERRACE
 19 DETACHED SINGLE FAMILY LOTS
 CITY OF WILSONVILLE, OREGON
TREE INVENTORY

TITLE	#	DATE	DESCRIPTION

REVISIONS

NAV/D88	
DATUM	
OTAK CAD	KJB
DRAWN BY	CHECKED BY
LAND USE SUBMITTAL	
STATUS	
MAY 17, 2022	
DATE	
20015	
PROJECT NUMBER	

TITLE

#	DATE	DESCRIPTION

REVISIONS

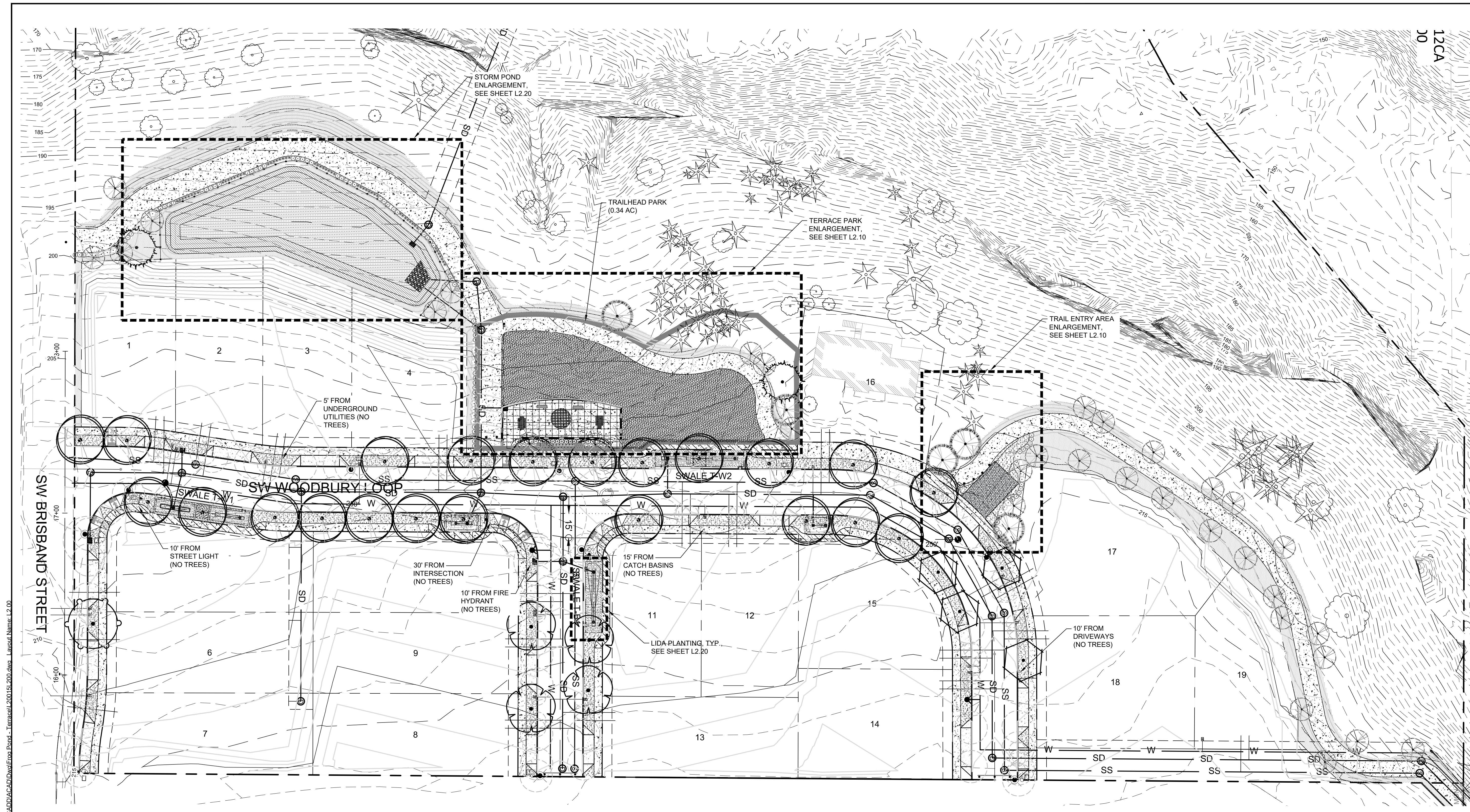
NAVDB8
DATUM

OTAK CAD KJB
DRAWN BY CHECKED BY

LAND USE SUBMITTAL
STATUS

MAY 17, 2022
DATE

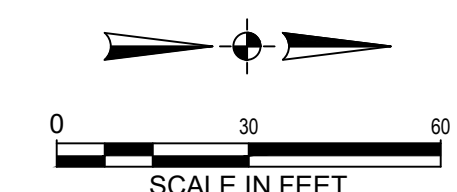
20015
PROJECT NUMBER

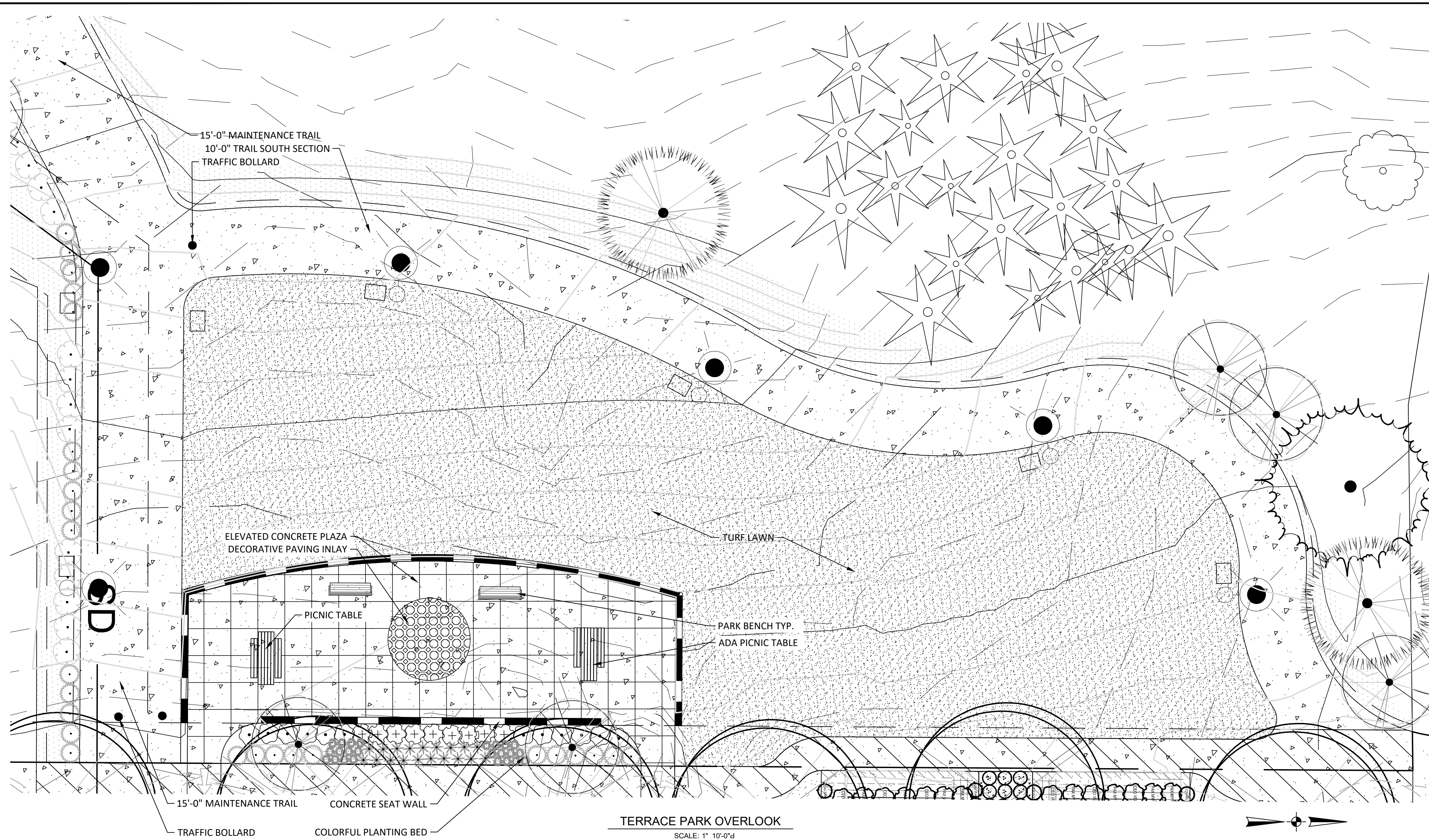


Plotted: Aug. 03, 2022 - 10:58am - Keith Buismann - L:\Project\2000020015\CADD\DWG\Frog Pond_Terrace\200151200.dwg - Layout Name: L2.00

TREES AND LAWN AREA LEGEND: *CLASSIFIED AS A MODERATE WATER USAGE AREA (+/- ONE (1) INCH PER WEEK).

TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL	REMARKS
	33	CARPINUS BETULUS 'FASTIGIATA' / PYRAMIDAL EUROPEAN HORNBEAN	B&B	2"	
	22	CLADRASTIS KENTUCKEA / AMERICAN YELLOWWOOD	B&B	2"	NEIGHBORHOOD STREET TREE
	2	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' TM / SKYLINE THORNLESS HONEY LOCUST	B&B	2"	NEIGHBORHOOD STREET
	2	PINUS PONDEROSA / PONDEROSA PINE	B&B	6'-8' HT.	
	5	PSEUDOTSUGA MENZIESII / DOUGLAS FIR	B&B	6'-8' HT.	
	1	TILIA AMERICANA / AMERICAN LINDEN	B&B	2"	PRIMARY STREET
	4	TILIA CORDATA 'GLENLEVEN' / GLENLEVEN LITTLELEAF LINDEN	B&B	2"	
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	CONT		
	14,765 SF	NATIVE SEED SUNMARK SEEDS / ECO-PRAIRIE TURF	SEED		





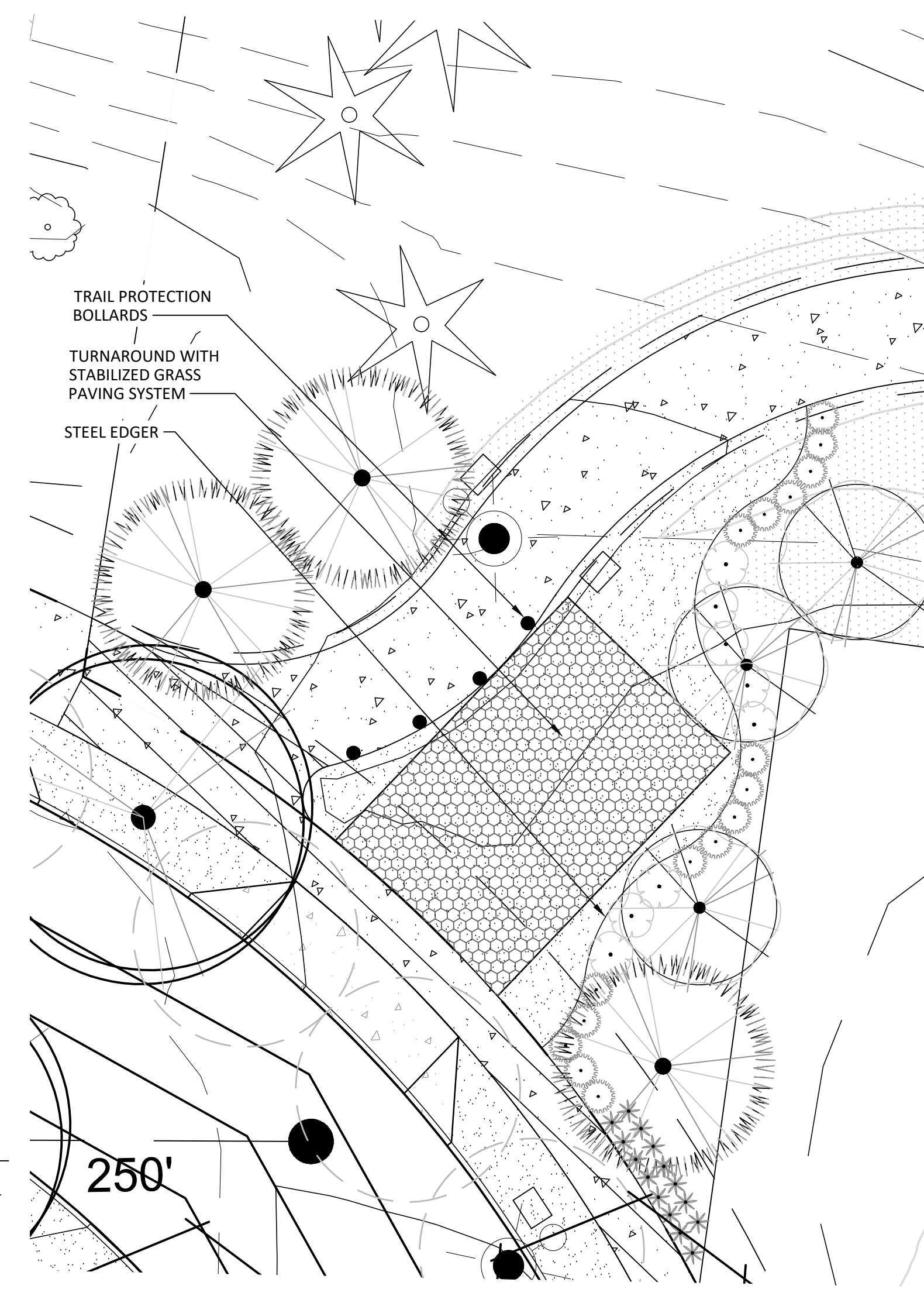
TERRACE PARK OVERLOOK
SCALE: 1" = 10'-0"

PLANT SCHEDULE TERRACE PLANTING

SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
	24	DESCHAMPSIA CESPITOSA / TUFTED HAIR GRASS	1 GAL.	18" o.c.
	19	HEMEROCALLIS X 'STELLA DE ORO' / STELLA DE ORO DAYLILY	1 GAL.	24" o.c.
	11	LIRIOPE GIGANTEA / GIANT LIRIOPE	3 GAL.	36" o.c.
	12	NANDINA DOMESTICA 'MOYERS RED' / MOYERS RED HEAVENLY BAMBOO	3 GAL.	36" o.c.
	9	ROSA X 'FLOWER CARPET PINK' / ROSE	3 GAL.	36" o.c.
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
	6,693 SF	TURF SEED DIAMOND GREEN - SUNMARK SEEDS / EXTREME LOW MAINTENANCE TURF	SEED	

PLANT SCHEDULE TRAILHEAD

SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
	15	HEMEROCALLIS X 'STELLA DE ORO' / STELLA DE ORO DAYLILY	1 GAL.	24" o.c.
	16	LIRIOPE GIGANTEA / GIANT LIRIOPE	3 GAL.	36" o.c.
	8	MAHONIA AQUIFOLIUM / OREGON GRAPE	3 GAL.	48" o.c.
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
	987 SF	TURF SEED DIAMOND GREEN - SUNMARK SEEDS / EXTREME LOW MAINTENANCE TURF	SEED	



TRAIL ENTRY AREA
SCALE: 1" = 10'-0"

FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

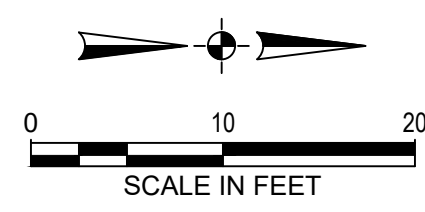
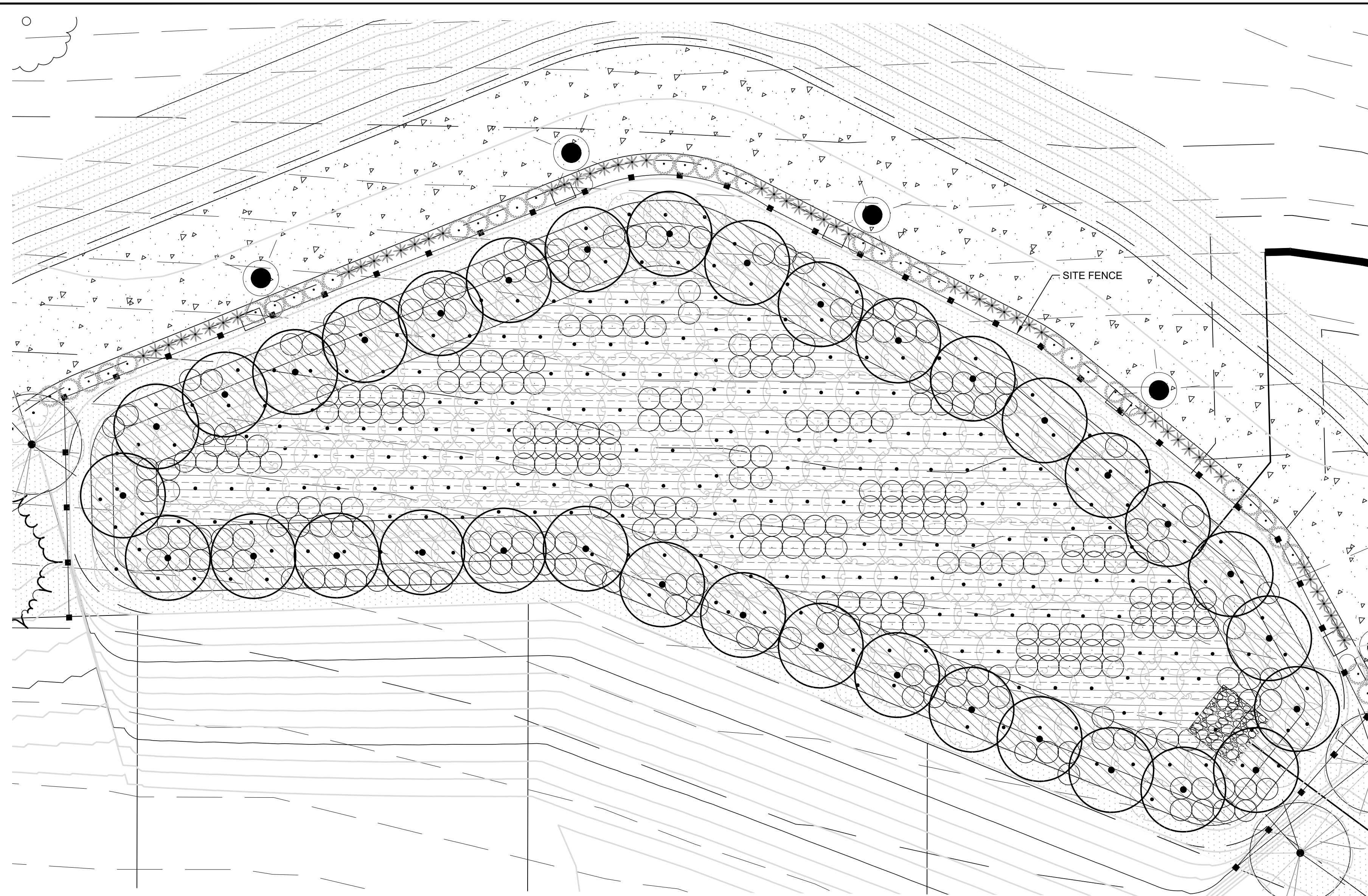
TRACT LANDSCAPE PLANS

TITLE	#	DATE	DESCRIPTION

REVISIONS	
NAV/D88	
DATUM	
OTAK CAD	KJB
DRAWN BY	CHECKED BY
LAND USE SUBMITTAL	
STATUS	
MAY 17, 2022	
DATE	
20015	
PROJECT NUMBER	

L2.10

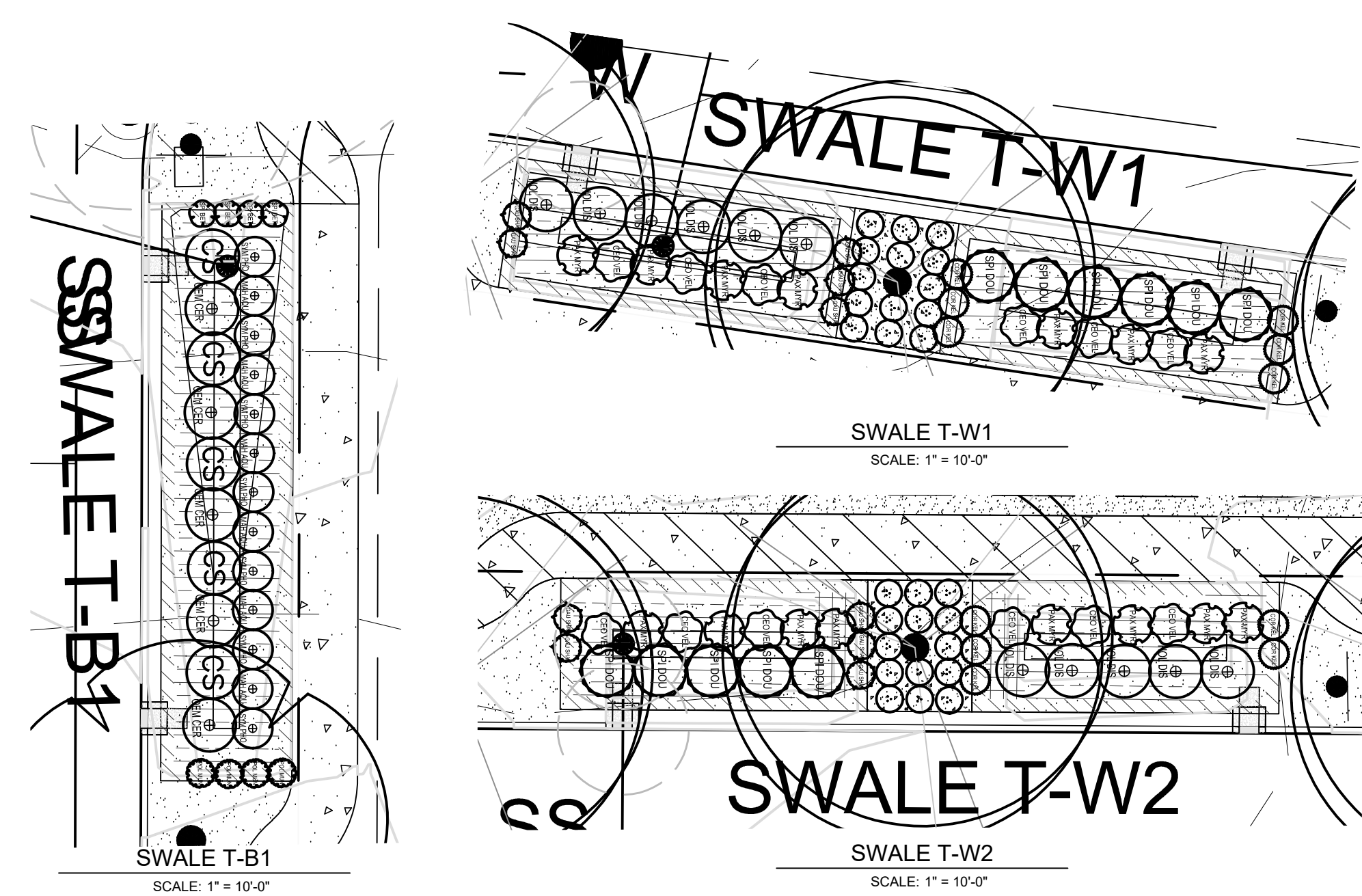
© 2021 OTAK, INC.
If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according to drawing.



RAIN GARDEN
 SCALE: 1" = 10'-0"

TRACT A RAIN GARDEN PLANT QUANTITIES																		
ZONE A																		
TREATMENT AREA	HERBACEOUS Plugs					SHRUBS 3 Gal.												
	REQUIRED HERBACEOUS 1.15 per 100sf	Carex testacea	Juncus patens	Juncus ensifolius	Scirpus microcarpus	PROVIDED HERBACEOUS	REQ'D SMALL SHRUBS (4/100 SF)	Symphoricarpos albus	Spiraea betulifolia	Elymus glaucus	Mahonia aquifolium	TOTAL SMALL SHRUBS PROVIDED	REQ'D LARGE SHRUBS (3/100 SF)	TOTAL LARGE SHRUBS PROVIDED				
4119	4737	1184	1184	1184	1481	5033	165	41	41	41	41	165	124	31	39	38	38	146
ZONE B																		
AREA	HERBACEOUS Plugs				GROUND COVER Plugs				TREES 2" Cal.									
	REQUIRED HERBACEOUS 1.15 per 100sf X 0.5	Carex testacea	Juncus patens	Juncus ensifolius	Scirpus microcarpus	TOTAL PROVIDED HERBACEOUS 1.15 per 100sf X 0.5	Carex testacea	Juncus patens	Juncus ensifolius	Scirpus microcarpus	TOTAL PROVIDED HERBACEOUS	REQ'D TREES (1/100 SF)	Symphoricarpos albus	Spiraea betulifolia	Elymus glaucus	Mahonia aquifolium	TOTAL TREES PROVIDED	
3396	1953	488	488	488	489	1953	1953	488	488	488	489	1953	34	9	8	8	34	
SHRUBS 3 Gal.																		
REQ'D SMALL SHRUBS (4/100 SF)	Symphoricarpos albus	Spiraea betulifolia	Elymus glaucus	Mahonia aquifolium	TOTAL SMALL SHRUBS PROVIDED	REQ'D LARGE SHRUBS (3/100 SF)	Holodiscus discolor	Ribes sanguineum	Rosa nutkana	Spiraea douglasii	TOTAL LARGE SHRUBS PROVIDED							
0	488	488	488	34	1498	0	488	26	25	25	564							

*CLASSIFIED AS LOW WATER USAGE AREA (LESS THAN ONE (1) INCH PER WEEK).



FROG POND TERRACE VEGETATED SWALE PLANT QUANTITIES															
ZONE A															
SWALE ID	STREET	TREATMENT AREA	HERBACEOUS = TREATMENT AREA/2				GROUND COVER = TREATMENT AREA/2		SHRUBS		SHRUBS		GROUND COVER		
			REQUIRED HERBACEOUS 1.15 per 100sf	Carex testacea	Juncus patens	Juncus ensifolius	Scirpus microcarpus	PROVIDED HERBACEOUS	REQ'D GROUND COVER 1.15 per 100sf	Fragaria chiloensis	REQ'D SMALL SHRUBS (4/100 SF)	REQ'D LARGE SHRUBS (3/100 SF)	AREA (SF)	REQ'D SMALL (8/100 SF)	Arctostaphylos uva-ursi (1.15/100 SF)
T-W1	WOODBURY	384	221	0	0	111	110	221	221	15	12	136	11	156	
T-W2	WOODBURY	342	197	0	0	98	99	197	197	14	10	126	10	145	
T-B1	STREET B	336	193	97	96	0	0	193	193	13	10	104	8	120	
TOTALS:			611	97	96	209	209	611	611	611	42	32	366	29	421

*CLASSIFIED AS LOW WATER USAGE AREA (LESS THAN ONE (1) INCH PER WEEK).

NORTH/SOUTH SWALE SHRUB LEGEND						EAST/WEST SWALE SHRUB LEGEND					
SYMBOL	QTY	COMMON NAME / Botanical name	Size	Spacing		SYMBOL	QTY	COMMON NAME / Botanical name	Size	Spacing	
	10	SALAL / Gaultheria shallon	1 GAL.	1' o.c.			4	BIRCHLEAF SPIRAEA / Spiraea betulifolia	1 GAL.	1' o.c.	
	11	KELSEY DOGWOOD / Cornus sericea 'Kelsey'	1 GAL.	1' o.c.			4	SWORD FERN / Polystichum minus	1 GAL.	1' o.c.	
	15	OREGON BOXLEAF / Paxistima myrsinites	1 GAL.	1' o.c.			6	OREGON GRAPE HOLLY / Mahonia aquifolium	1 GAL.	1' o.c.	
	13	SNOWBRUSH / Ceanothus velutinus	1 GAL.	1' o.c.			7	SNOWBERRY / Symphoricarpos alba	1 GAL.	1' o.c.	
	11	DOUGLAS SPIRAEA / Spiraea douglasii	30" HT.	3' o.c.			5	INDIAN PLUM / Omleria cerasiformis	30" HT.	3' o.c.	
	11	WESTERN SERVICEBERRY / Holodiscus discolor	30" HT.	3' O.C.			5	RED-TWIG DOGWOOD / Cornus sericea	30" HT.	3' o.c.	

*CLASSIFIED AS LOW WATER USAGE AREA (LESS THAN ONE (1) INCH PER WEEK).

SWALE AREA KEY

SYMBOL	DESCRIPTION
	ZONE A - TREATMENT AREA
	ZONE B - FREEBOARD AREA

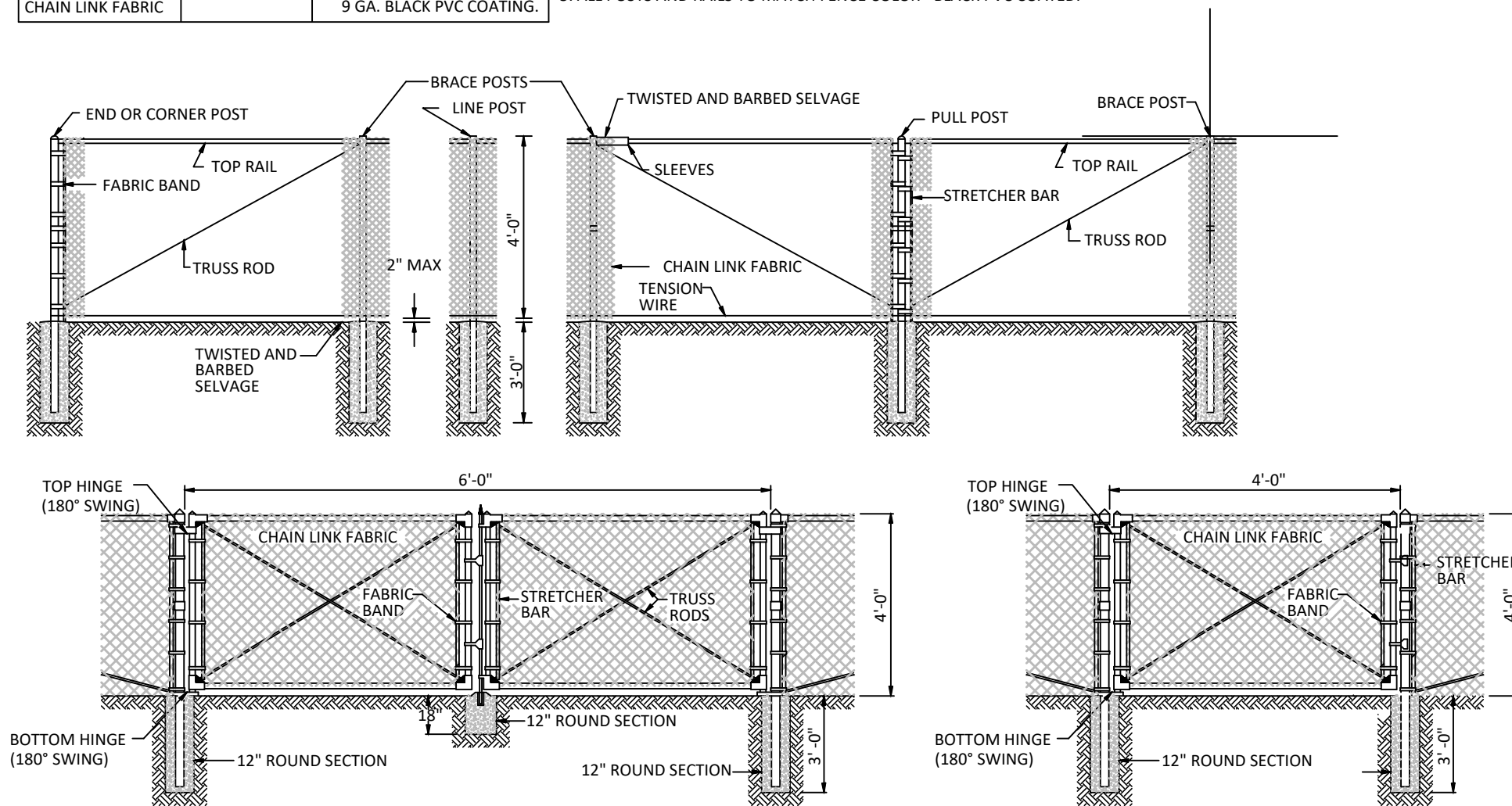
- NOTES:
 1. HERBACEOUS/GROUNDCOVERS NOT SHOWN. PLANT IN QUANTITIES INDICATED ON SPREADSHEET THIS SHEET.
 2. HERBACEOUS PLANTS INSTALLED AT SP#4 SIZE.
 3. GROUND COVER INSTALLED AT #1 CONT. SIZE

STREET TREE MOUND SHRUBS

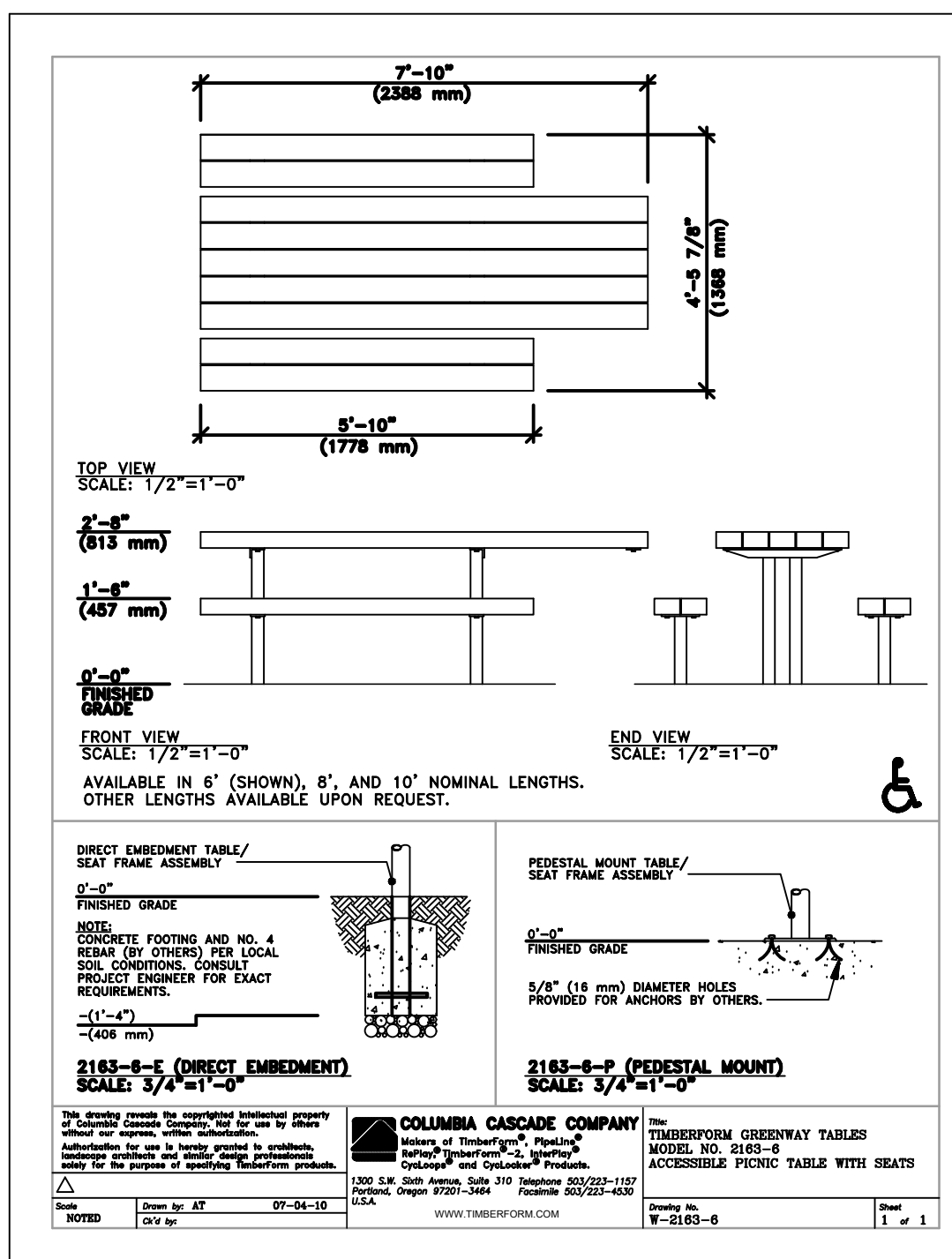
QTY	COMMON NAME / Botanical name	Size
28	GOLD NUGGET BARBERRY / Berberis thunbergii 'Gold Nugget'	#1 CONT. AS SHOWN

MEMBER	NOMINAL DIA (IN)	MATERIAL
BRACE RAIL	1.660	GALV TUBULAR STL
GATE FRAME	2.00	GALV TUBULAR STL
LINE POSTS	2.375	GALV TUBULAR STL
END & CORNER POST	2.875	GALV TUBULAR STL
CHAIN LINK FABRIC		9 GA. BLACK PVC COATING.

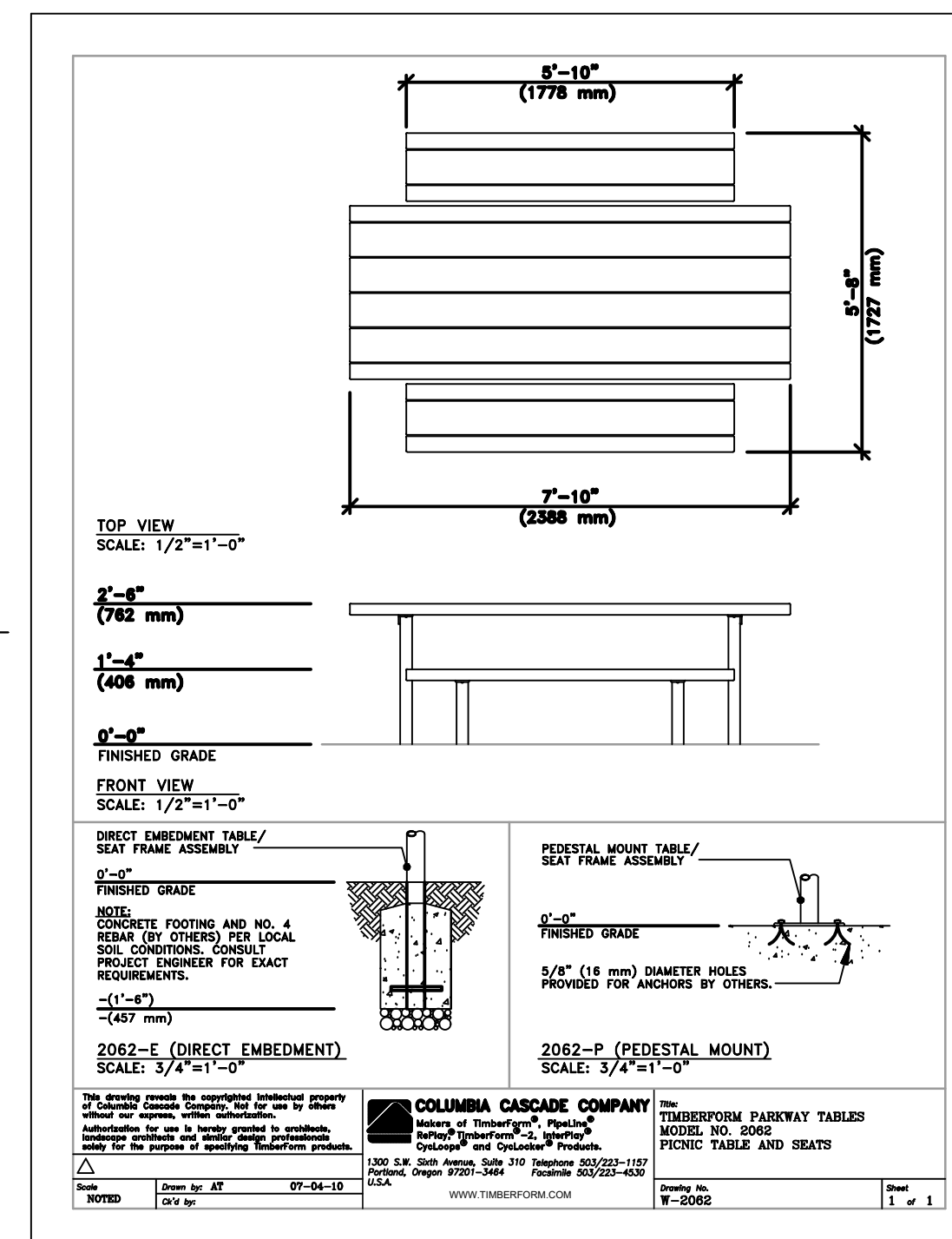
- NOTES:
 1. ALL FITTINGS, FASTENERS, & AND FABRIC TIES SHALL BE HOT DIP GALV.
 2. CONIC SHALL BE MIN 2500 PSI @ 28 DAYS.
 3. PROVIDE BRACE RAIL BETWEEN END POSTS AND LINE POSTS. LENGTHS AS REQ'D.
 4. PROVIDE EXTENSION ARMS ON LINE, END AND CORNER POSTS AS REQ'D.
 5. ALL POSTS AND RAILS TO MATCH FENCE COLOR - BLACK PVC COATED.



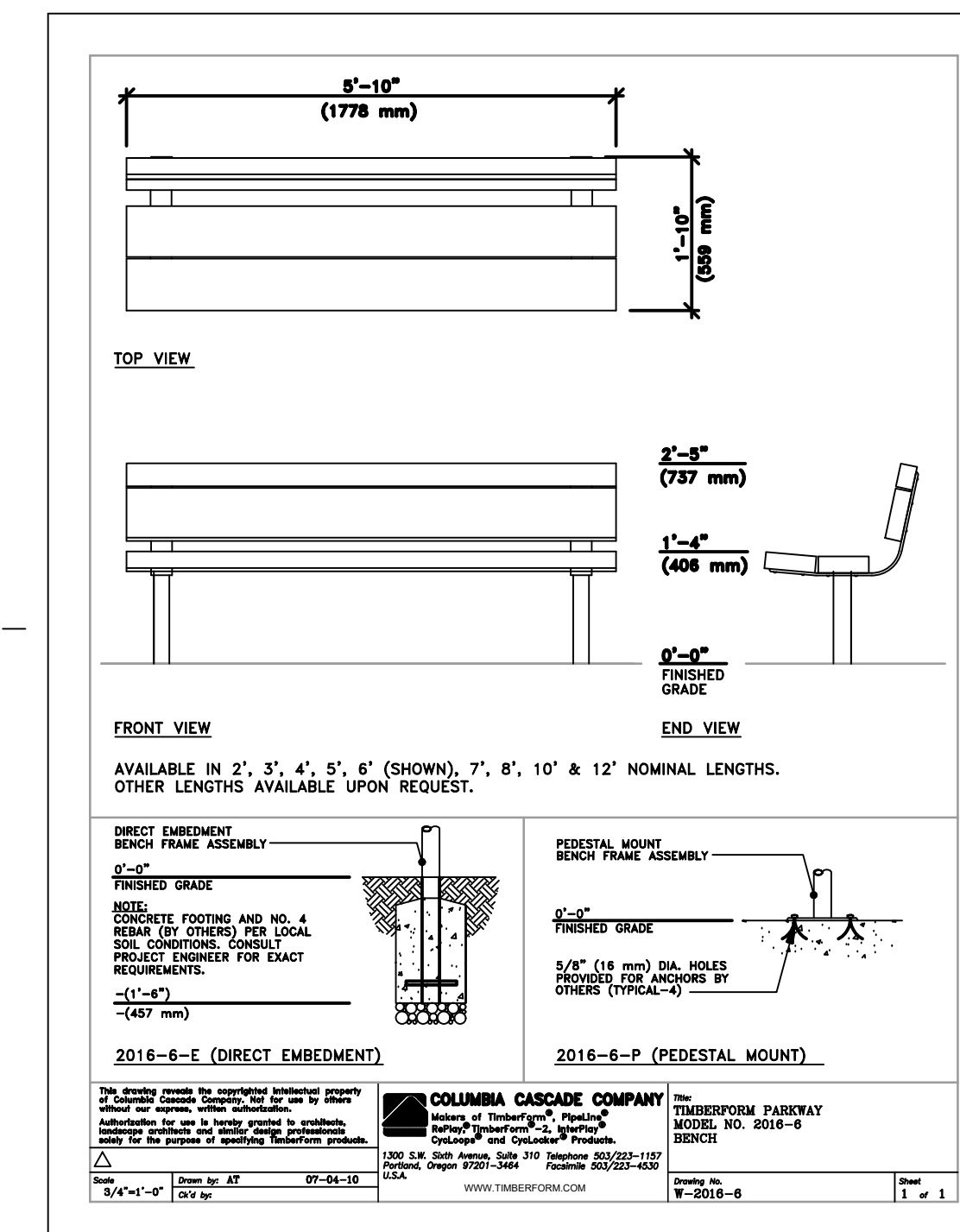
STORMWATER TREATMENT AREA CHAIN LINK FENCE
 SCALE: NOT TO SCALE



ADA PICNIC TABLE
 SCALE: NTS



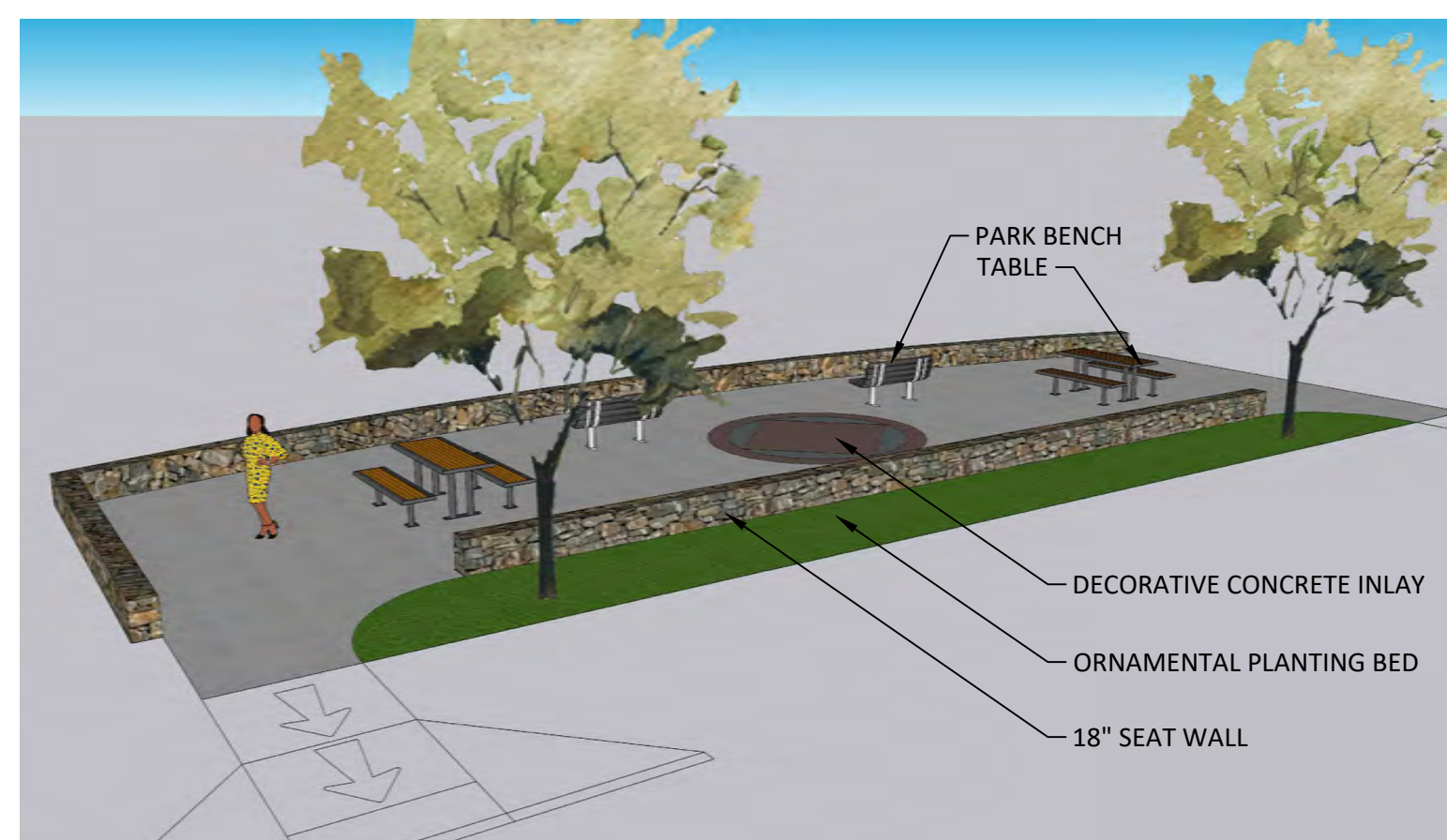
PICNIC TABLE
 SCALE: NTS



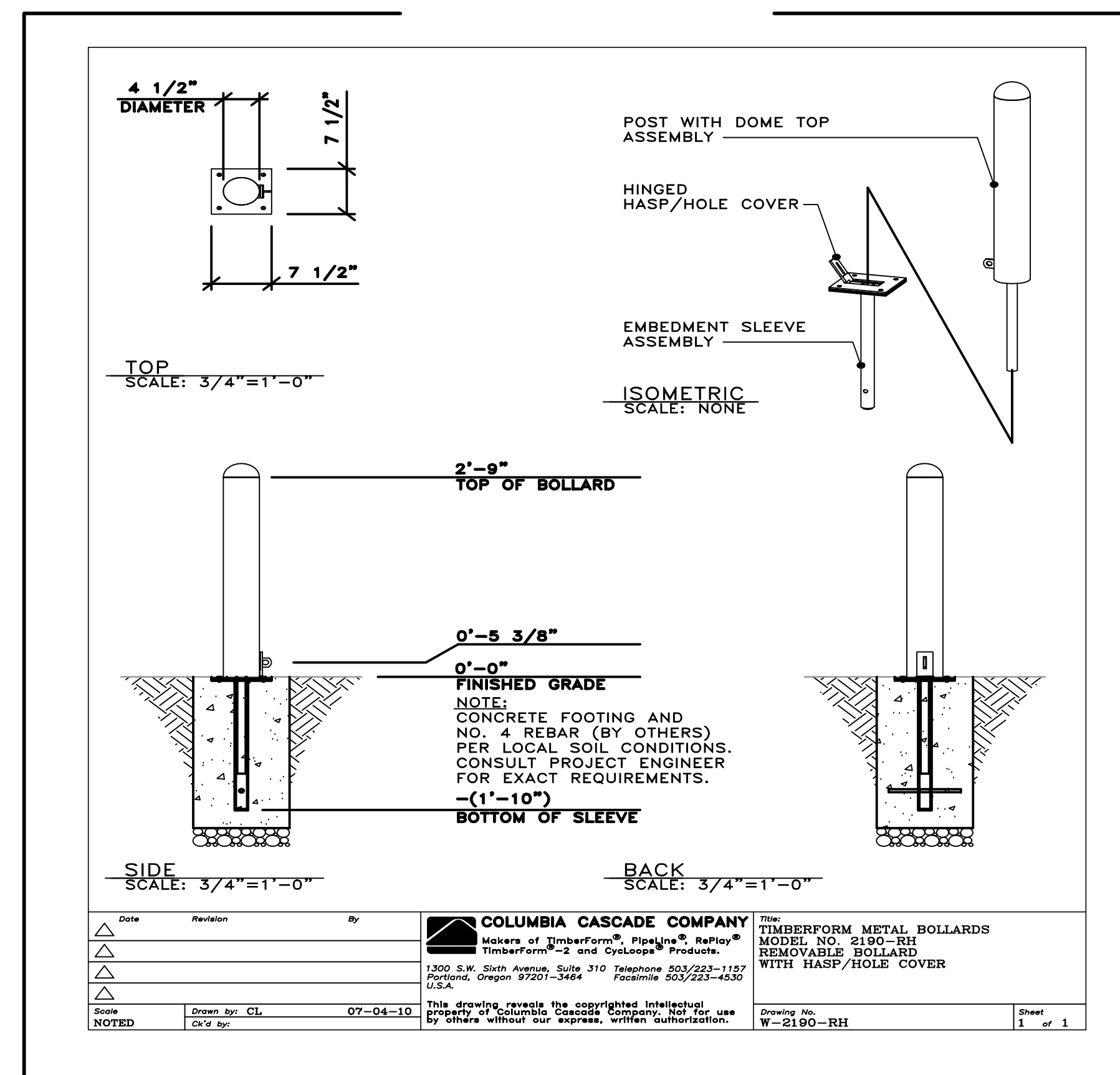
PARK BENCH
 SCALE: NTS



EXAMPLE OF STAMPED CONCRETE
 SCALE: NTS



TERRACE VIEW
 SCALE: NTS



REMOVABLE BOLLARD
 SCALE: NTS

FROG POND TERRACE
 19 DETACHED SINGLE FAMILY LOTS
 CITY OF WILSONVILLE, OREGON

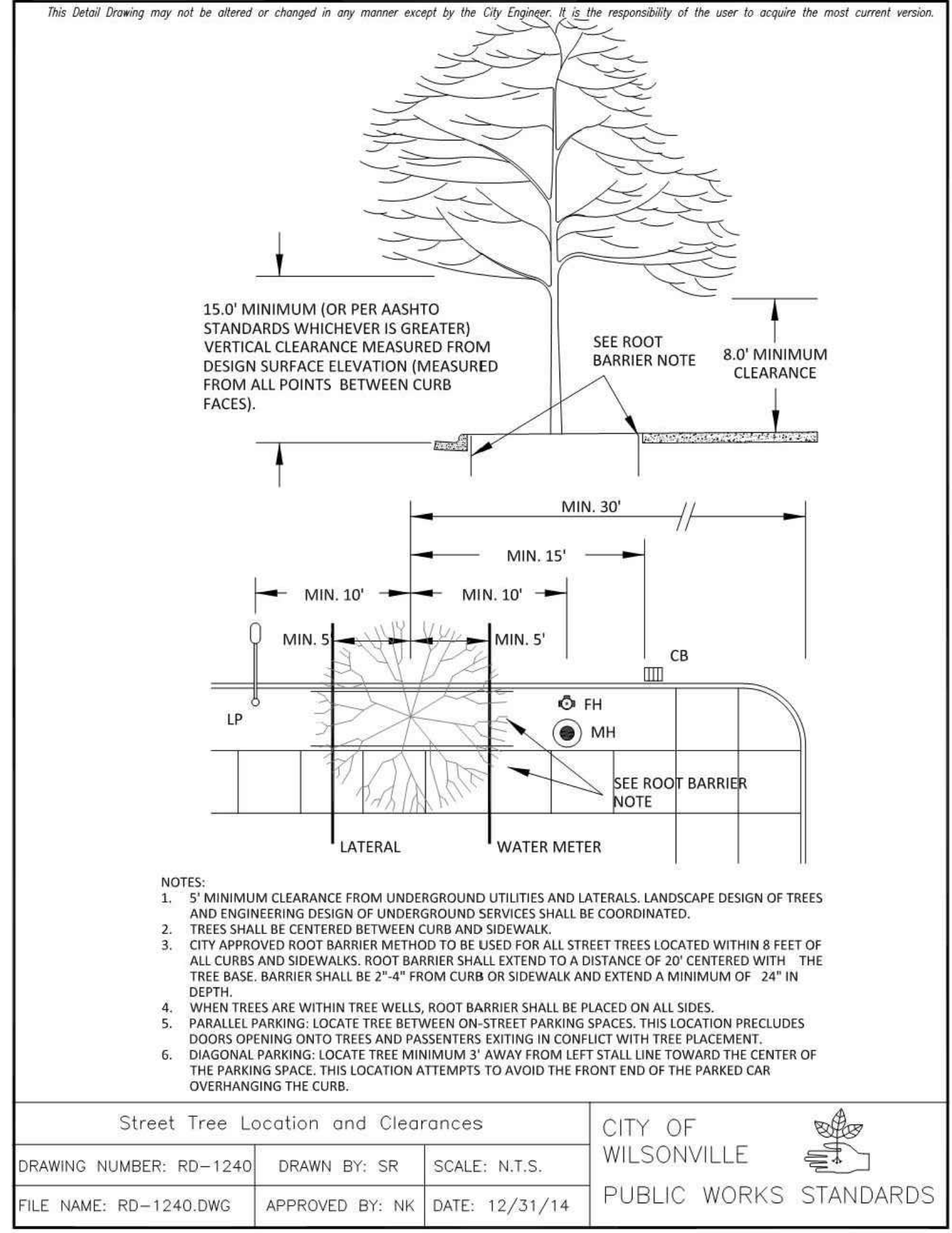
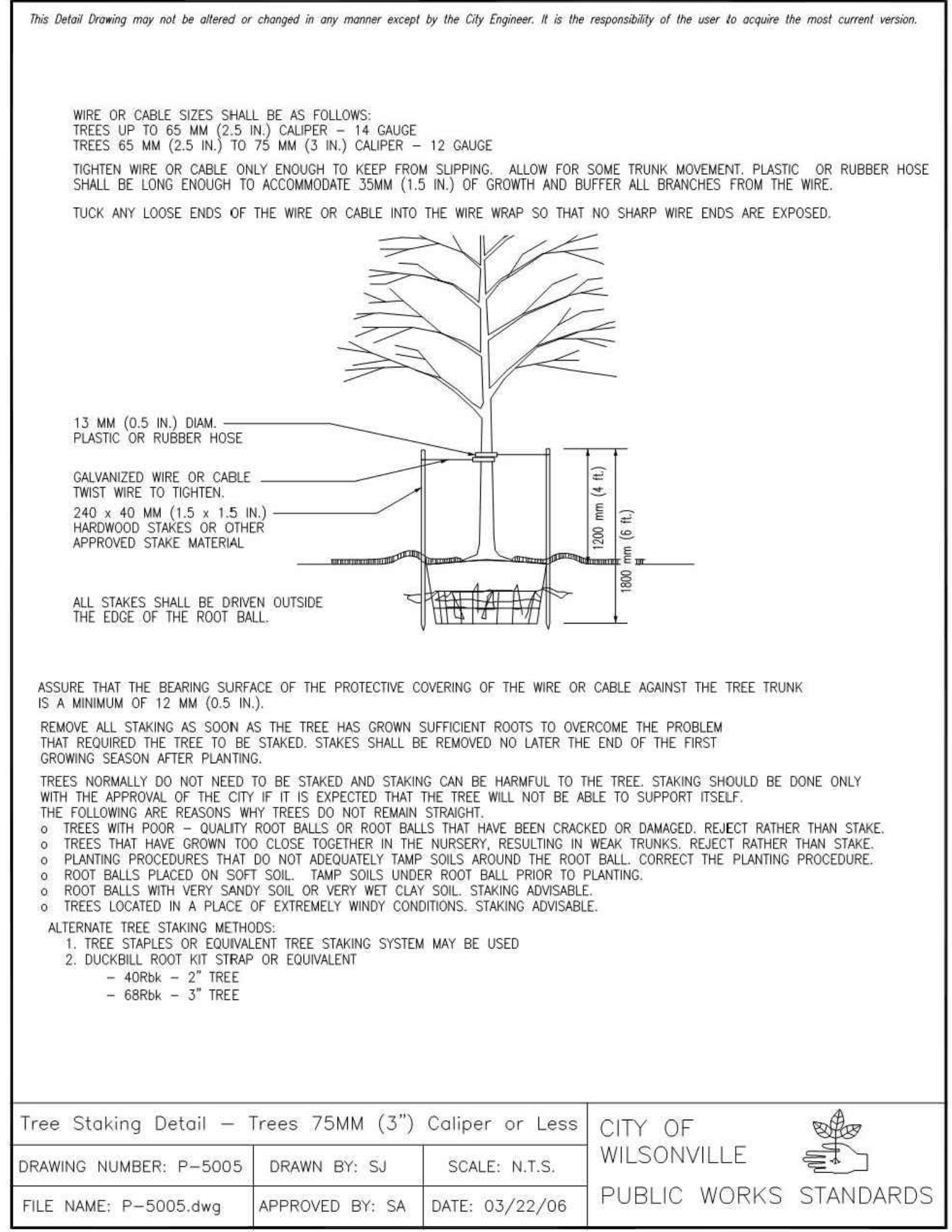
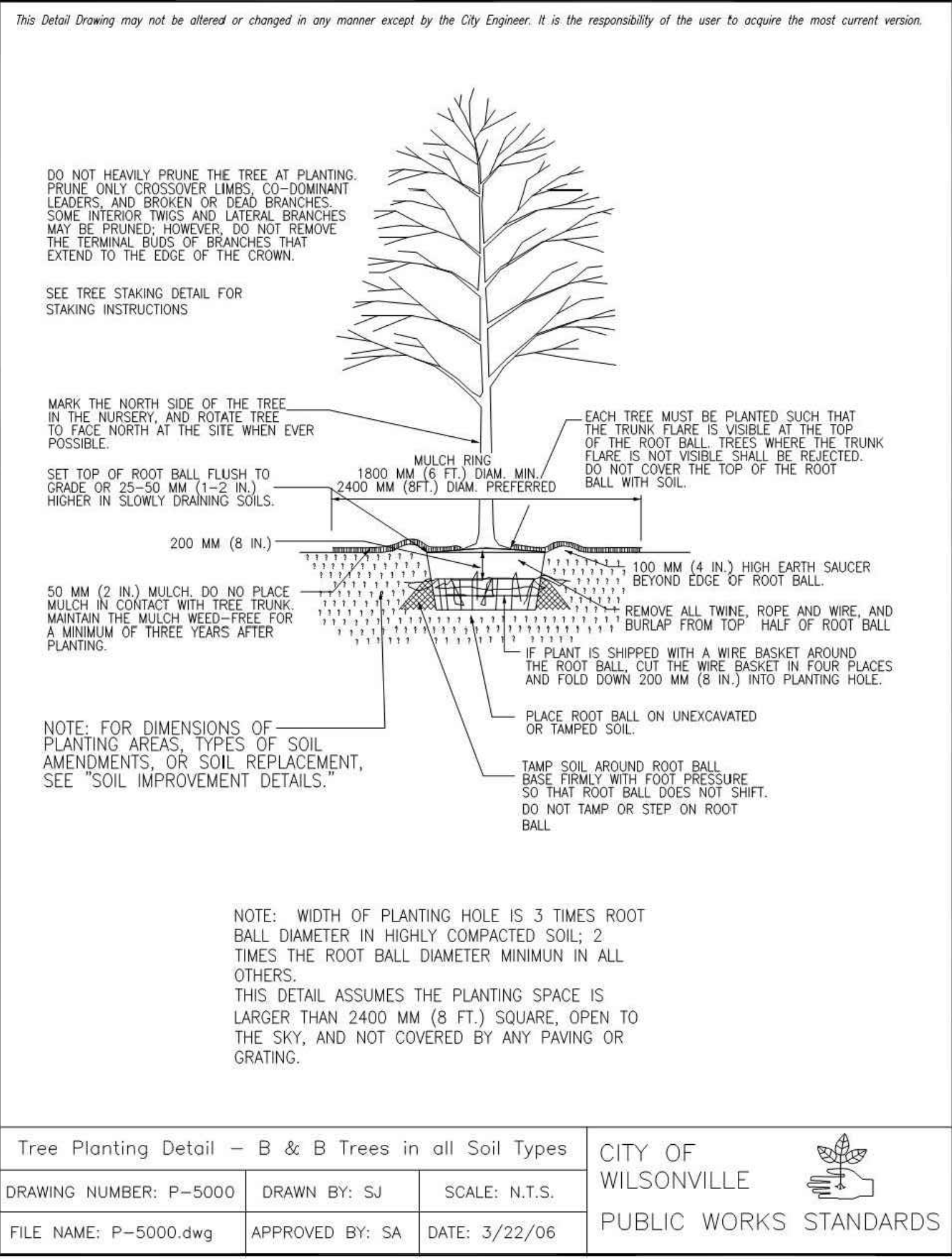
LANDSCAPE DETAILS

TITLE	#	DATE	DESCRIPTION

REVISIONS	
NAV/D88	
DATUM	
OTAK CAD	KJB
DRAWN BY	CHECKED BY
LAND USE SUBMITTAL	
STATUS	
MAY 17, 2022	
DATE	
20015	
PROJECT NUMBER	

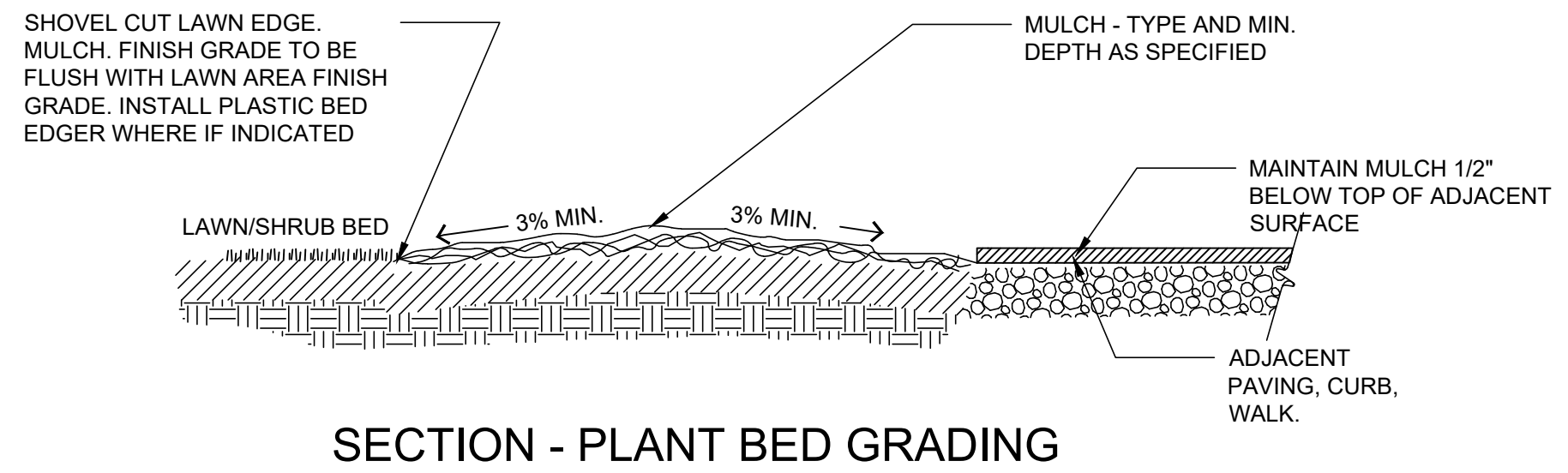
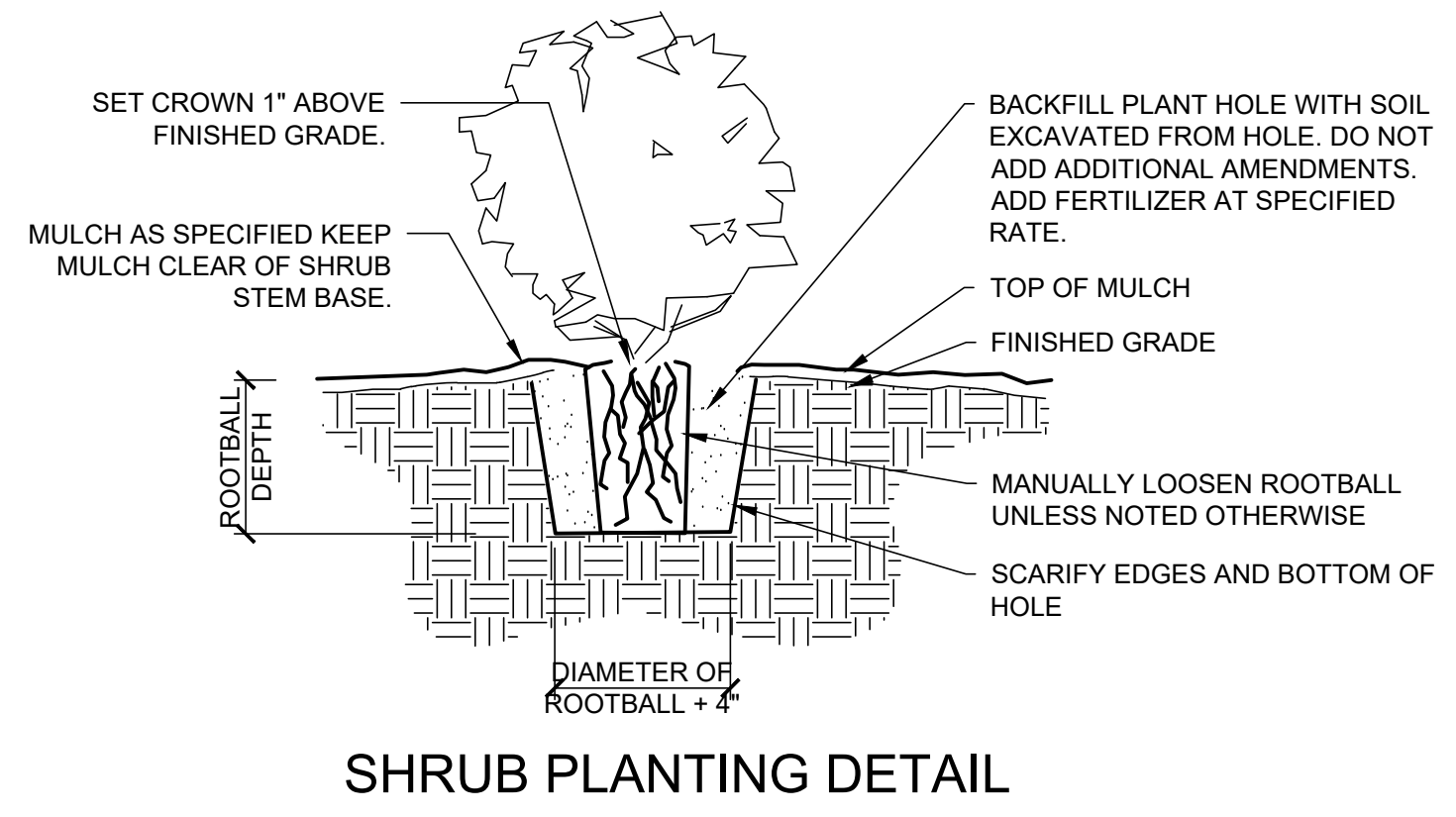
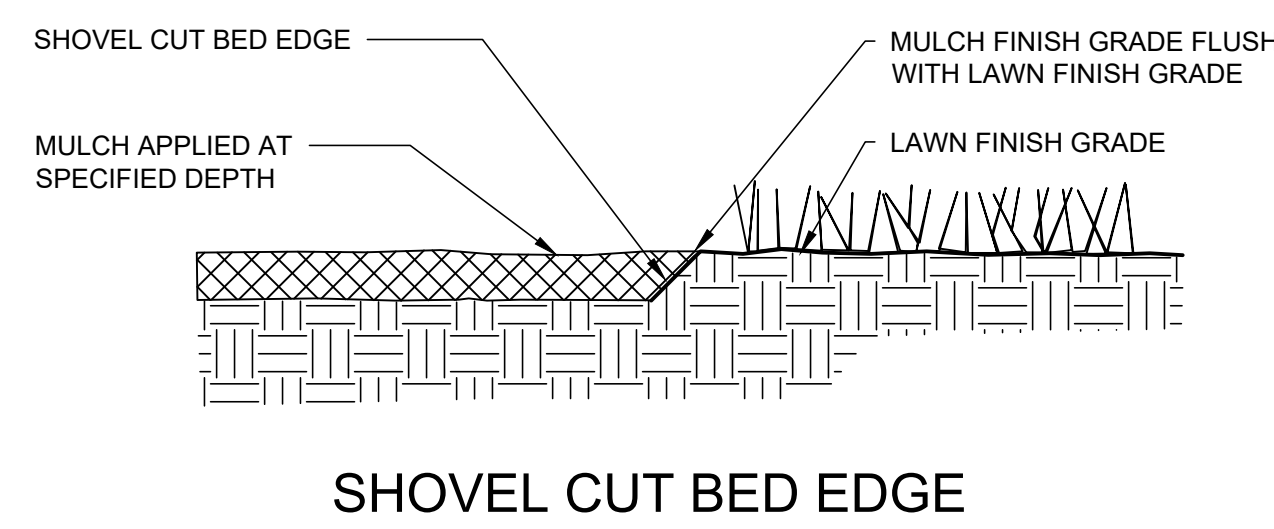
L2.30
 © 2021 OTAK, INC.

If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according to drawing.



CONTRACTOR IS CAUTIONED THAT EXISTING UNDERGROUND FACILITIES OCCUR THROUGHOUT THE WORK AREAS INCLUDING BUT NOT LIMITED TO POWER, GAS, TELEPHONE, WATER SUPPLY, AND IRRIGATION. CONTRACTOR SHALL MARK THE FACILITIES BEFORE WORK, POTHOLE WHERE NECESSARY, AND PROTECT DURING CONSTRUCTION. IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE IF ANY CONFLICTS ARE FOUND.

- GENERAL: SEVERAL OF THE FOLLOWING NOTES SUMMARIZE THE PROJECT SPECIFICATIONS FOR THE CONTRACTORS CONVENIENCE. IF A DISCREPANCY EXISTS BETWEEN THESE NOTES AND THE PROJECT SPECIFICATIONS THE SPECIFICATIONS SHALL OVERRIDE.
- THE LANDSCAPE CONTRACTOR IS TO THOROUGHLY REVIEW THE SITE. IF THERE ARE ANY DISCREPANCIES BETWEEN THE PLAN AND THE EXISTING CONDITIONS THE OWNERS REPRESENTATIVE IS TO BE NOTIFIED IMMEDIATELY.
- IF THE LANDSCAPE CONTRACTOR STARTS WORK BEFORE SITE CONDITIONS ARE READY OR CONTINUES WORK IN ADVERSE CONDITIONS WITHOUT PRIOR APPROVAL THEY WILL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS RELATING TO THE CONDITION.
- IMMEDIATELY NOTIFY OWNERS REPRESENTATIVE CONCERNING ANY CONDITION AT ANY TIME DURING CONSTRUCTION THAT IS DETRIMENTAL TO THE HEALTH AND VIGOROUS GROWTH OF THE SPECIFIED PLANT MATERIAL.
- PROVIDE QUANTITY OF PLANT MATERIAL INDICATED IN PLANT LIST OR THE QUANTITY REQUIRED TO COVER AREAS INDICATED AT SPECIFIED SPACING, WHICHEVER IS GREATER.
- IF AN AREA DIFFERS SIGNIFICANTLY IN SIZE FROM THAT SCALED ON DRAWING AND REQUIRES MORE OR LESS MATERIAL THE OWNERS REPRESENTATIVE IS TO BE INFORMED.
- TOPSOIL: APPLY 9-INCH IMPORT TOPSOIL TO NEW PLANTED EXCEPT:
 - AT STORM POND AND LIDA FACILITIES INSTALL STORMWATER FACILITY GROWING MEDIUM PER CITY OF WILSONVILLE 2015 STORMWATER & SURFACE WATER DESIGN & CONSTRUCTION STANDARDS SECTION 3.A.4.00
 - DO NOT APPLY TOPSOIL TO RIPARIAN MITIGATION AREA IN SROZ.
- SOIL ANALYSIS: CONTRACTOR SHALL OBTAIN A COPY OF OWNER-PROVIDED SOIL TEST. AMEND AND FERTILIZE IN CONFORMANCE WITH RECOMMENDATIONS INDICATED IN THE REPORT.
- COMPOST: APPLY 3-INCH DEPTH COMPOST TO TOPSOIL. DO NOT APPLY AT STORM OR LIDA FACILITIES. THOROUGHLY BLEND WITH TOPSOIL TO A DEPTH OF 6 INCHES.
 - DO NOT APPLY COMPOST TO RIPARIAN MITIGATION AREA IN SROZ.
- FERTILIZER: APPLY FERTILIZER TO ALL PLANT HOLES AND TURF AREAS OF THE TYPE, QUANTITY, APPLICATION METHOD, AND TIMING NOTED IN THE SPECIFICATIONS. DO NOT APPLY FERTILIZER AT STORM FACILITIES.
- BARK MULCH: SPREAD 3-INCH DEPTH FINE-MEDIUM GRADE FIR/HEMLOCK BARK OVER SHRUB BEDS. DO NOT APPLY MULCH AT STORM POND, LIDA FACILITIES, OR IN RIPARIAN MITIGATION AREA IN SROZ. KEEP BARK CLEAR OF TREE AND SHRUB STEM BASE.
- PLANTING POCKETS: BACK FILL PLANT HOLE WITH SOIL EXCAVATED FROM HOLE. DO NOT ADD ADDITIONAL AMENDMENTS.
- ROOT BARRIER: INSTALL PER CITY OF WILSONVILLE DETAIL RD-1240. SEE SHEET L3.0.
- PLANT MATERIAL: ALL PLANT MATERIAL SHALL MEET MINIMUM QUALITY AND SIZE REQUIREMENTS ESTABLISHED IN THE AMERICAN STANDARD FOR NURSERY STOCK GUIDELINES.
- LEAVE PLANT NAME IDENTIFICATION TAGS ON TEN PERCENT OF ALL TREES AND SHRUBS INSTALLED TO AID INSPECTORS IN VERIFYING THAT SPECIFIED PLANTS HAVE BEEN INSTALLED.
- PLANT CENTER OF SHRUBS A MINIMUM OF 24 INCHES FROM ADJACENT PAVING. PLANT GROUNDCOVERS A MINIMUM OF 18 INCHES FROM ADJACENT PAVING. WHERE PLANTER IS LESS THAN 6 FEET WIDE, SET PLANTS HALF OF THE NOTED PLANT SPACING FROM ADJACENT PAVING.
- WHERE PLANT BED SLOPE IS LESS THAN 3% MOUND PLANTING BED AREAS 3% MINIMUM FOR POSITIVE DRAINAGE.
- SEE SPECIFICATIONS FOR FINAL INSPECTION, MAINTENANCE, AND WARRANTY REQUIREMENTS UNIQUE TO THIS PROJECT.
- SEE SPECIFICATIONS FOR OTHER LANDSCAPE CONSTRUCTION REQUIREMENTS.



SECTION - PLANT BED GRADING

Item 2.

Otak, Inc.
808 SW Third Avenue, Ste. 800
Portland, OR 97204
503.287.6825
www.otak.com

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT
GABRIEL M. BRUSE
08/28/2015
OREGON
EXPIRES: 9/30/2022

STAMP

WEST HILLS
LAND DEVELOPMENT
CONSULTANT

FROG POND TERRACE
19 DETACHED SINGLE FAMILY LOTS
CITY OF WILSONVILLE, OREGON

LANDSCAPE NOTES AND DETAILS

TITLE	#	DATE	DESCRIPTION

REVISIONS	
NAV/D88 DATUM	
OTAK CAD	KJB
DRAWN BY	CHECKED BY
LAND USE SUBMITTAL STATUS	
MAY 17, 2022	
DATE	
20015	
PROJECT NUMBER	

L3.00

© 2021 OTAK, INC.

If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according to drawing.

LIGHTING NOTES:

1. LIGHT POLES ALONG ALL ROADWAYS SHALL BE PER PGE APPROVED STREET LIGHTING EQUIPMENT (SEE SHEET IL-2 FOR ADDITIONAL DETAILS):
- | | | |
|---------------------------------|---|-------------------------------------|
| MANUFACTURER: | MANUFACTURER PRODUCT CODE: | PGE NUMBER: |
| 23' STRESSCRETE
4FT MAST ARM | KMRE-A-23FT-TXT BLACK S/F KSB52
KA32-S-1-4FT-TXTBLACKC/WKPL20-PR7AND HARNESS | CU 1498, SU 90011694
SU 90011695 |

2. POLE FOOTING SHALL BE PGE APPROVED:
- | | |
|----------------------|------------------------|
| MANUFACTURER: | CATALOG NUMBER: |
| OLDCASTLE PRECAST | 20R-LB-4-PGE |

3. JUNCTION BOXES SHALL BE PGE-APPROVED SPLICE BOXES. PGE-APPROVED BOXES TO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR ARE:
- | | |
|---|--|
| MANUFACTURER: | JB-1 Catalog Number: |
| Newbasis (Associated Plastics)
Armorcast
Highline
Quazite (Hubbell)
Oldcastle | FCA173018T-00043
A6001640TAX18-PGE
CHA173018HE1
A42173018A017
17301726 |

4. LUMINAIRE FOR THE ROADWAY LIGHTING SHALL BE (SEE SHEET IL-2 FOR ADDITIONAL DETAILS):
- | | | |
|----------------------|--|-----------------------------------|
| MANUFACTURER: | MANUFACTURER PRODUCT CODE: | PGE NUMBER: |
| KING AURORA | K829-P4FL-III-40(SSL)-8060-120-277-3K-WS-QD-TXT
BLACK s/f KPL20-PR7 | CU 1497, CU 11693,
SU 90011693 |

5. THE PHOTOELECTRIC CONTROL SHALL BE PGE-APPROVED EXTENDED LIFE TWISTLOCK, ELECTRONIC, 105 TO 300 VOLT. THE PGE-APPROVED PHOTOELECTRIC CONTROL IS:

MANUFACTURER:	CATALOG NUMBER:
RIPLEY DTL INTERMACTIC	RD8645 DLL 1271.5 J50 EK45365B

6. THE STREETLIGHT WIRE SHALL BE:
#10 AWG, 600 VOLT, 3-CONDUCTOR, CLASS B STRANDING, TYPE TC, WITH SUNLIGHT-RESISTANT 45-MIL PVC JACKET. SUITABLE FOR DIRECT BURIAL INSTALLATIONS. INSULATION TO BE BLACK, RED, AND GREEN PER NEMA WC-7 FOR NEC APPLICATIONS (TFN, THWN, THHN), WITH FILLERS OR BINDING TAPE ADDED TO PRODUCE ROUND OUTER JACKET, RATED 90 DEGREES C DRY AND 75 DEGREES C WET, 1,000 FT NR REELS. JACKET TO DISPLAY SEQUENTIAL FOOTAGE MARKINGS. 2 REEL LABELS, ONE ATTACHED TO THE OUTSIDE FLANGE SURFACE, ONE ATTACHED TO THE DRUM WRAPPING; EACH TO DETAIL TOTAL FOOTAGE, INSIDE OR STARTING FOOTAGE.

GENERAL NOTES

- ALL MATERIAL AND WORKMANSHIP ASSOCIATED WITH THE ROADWAY LIGHTING SHALL CONFORM TO P.G.E. OPTION "B" SPECIFICATIONS.
- ALL ELECTRICAL EQUIPMENT SHALL CONFORM TO THE CURRENT STANDARDS OF THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA) AND THE UNDERWRITERS LABORATORIES, INC. (U.L.). WHEREVER APPLICABLE. IN ADDITION TO THE REQUIREMENTS OF THE PLANS, STANDARD SPECIFICATIONS, AND THE SPECIAL PROVISIONS, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CURRENT REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) THE NATIONAL ELECTRICAL SAFETY CODE, STANDARDS OF THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), AND ANY LOCAL ORDINANCES WHICH MAY APPLY.
- LOCATION OF ILLUMINATION CONDUITS AND JUNCTION BOXES ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE WITH OTHER UTILITIES TO ENSURE PROPER INSTALLATION.
- THE CONTRACTOR SHALL COORDINATE WORK WITH LISA GUARNERO OF PGE AT (503) 742-8299 TO COORDINATE POWER SERVICE CONNECTION FOR THE LIGHTING SYSTEM.

LUMINAIRE TABLE										
POLE NUMBER	ROADWAY	STATION	POLE STYLE	POLE TYPE	LUMINAIRE				MOUNTING HEIGHT	ARM LENGTH
					WATT	TYPE	DISTRIBUTION	DIMMING		
1	SW BRISBAND ST	16+87	STRESSCRETE	DECORATIVE	40	LED	TYPE 3	1.0	22'	4'
2	SW BRISBAND ST	15+40	STRESSCRETE	DECORATIVE	40	LED	TYPE 3	1.0	22'	4'
3	SW TERRACE	10+36	STRESSCRETE	DECORATIVE	40	LED	TYPE 3	1.0	22'	4'
4	SW TERRACE	11+76	STRESSCRETE	DECORATIVE	40	LED	TYPE 3	1.0	22'	4'
5	SW WOODBURY LP	20+01	STRESSCRETE	DECORATIVE	40	LED	TYPE 3	1.0	22'	4'
6	SW WOODBURY LP	21+39	STRESSCRETE	DECORATIVE	40	LED	TYPE 3	1.0	22'	4'
7	SW WOODBURY LP	22+67	STRESSCRETE	DECORATIVE	40	LED	TYPE 3	1.0	22'	4'
8	SW WOODBURY LP	24+09	STRESSCRETE	DECORATIVE	40	LED	TYPE 3	1.0	22'	4'
9	SW WOODBURY LP	25+37	STRESSCRETE	DECORATIVE	40	LED	TYPE 3	1.0	22'	4'
10	SW WOODBURY LP	26+71	STRESSCRETE	DECORATIVE	40	LED	TYPE 3	1.0	22'	4'

LIGHTING TABLE				
ROADWAY	CLASSIFICATION		3000K FIXTURE	
			LIGHT LEVEL (FC)	UNIFORMITY (AVE:MIN)
SW WOODBURY LOOP @ BRISBAND INTERSECTION	LOCAL/LOCAL	RECOMMENDED	≥0.8	≤6:1
		DESIGN	1.1	2.9 : 1
SW WOODBURY LOOP @ TERRACE ST INTERSECTION	LOCAL/LOCAL	RECOMMENDED	≥0.8	≤6:1
		DESIGN	1.2	3.2 : 1
SW WOODBURY LOOP SW BRISBAND ST TO TERRACE ST	LOCAL	RECOMMENDED	≥0.4	≤6:1
		DESIGN	0.7	3.7 : 1
SW WOODBURY LOOP TERRACE ST TO NORTH LIMITS	LOCAL	RECOMMENDED	≥0.4	≤6:1
		DESIGN	0.7	3.5 : 1
SW TERRACE ST SW WOODBURY LP TO EAST LIMITS	LOCAL	RECOMMENDED	≥0.4	≤6:1
		DESIGN	0.8	2.7 : 1
SW BRISBAND ST SW WOODBURY LP TO EAST LIMITS	LOCAL	RECOMMENDED	≥0.4	≤6:1
		DESIGN	0.7	3.6 : 1



WEST HILLS
LAND DEVELOPMENT



KITTELSON
& ASSOCIATES

951 SW 6TH AVENUE, SUITE 600
PORTLAND, OR 97204
P 503.228.5200 F 503.273.8169

STAMP



EXPIRES: 06/30/22
CONSULTANT

FROG POND TERRACE

ILLUMINATION NOTES

TITLE

#	DATE	DESCRIPTION

REVISIONS

JCH ASY

DRAWN BY CHECKED BY

PRELIMINARY

STATUS

AUGUST 1, 2022

DATE

27448

PROJECT NUMBER

IL-1

© 2018 OTAK, INC.

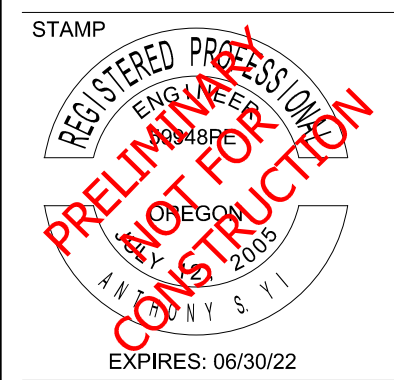
If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according



WEST HILLS
LAND DEVELOPMENT



851 SW 6TH AVENUE, SUITE 600
PORTLAND, OR 97204
P 503.228.5200 F 503.273.8169



CONSULTANT

FROG POND TERRACE
ILLUMINATION DETAILS

23' Decorative Aluminum Pole (Stresscrete)

DESCRIPTION

<ul style="list-style-type: none"> Available Heights: <ul style="list-style-type: none"> - 23ft (SU 90011694) <ul style="list-style-type: none"> • 4ft Mast Arm (SU 1695) Mast Arm <ul style="list-style-type: none"> - Included with Pole. Mounting height as pole height. Mast Arm Type <ul style="list-style-type: none"> - Single 	<ul style="list-style-type: none"> Footing Type <ul style="list-style-type: none"> - Anchor Base: 20R-LB-4 - Breakaway option see LC11540 for materials Pole Feed(s) <ul style="list-style-type: none"> - Underground Type of Fixture to use: <ul style="list-style-type: none"> - Pendant
---	---

KING AURORA PENDANT 40W LED

DESCRIPTION

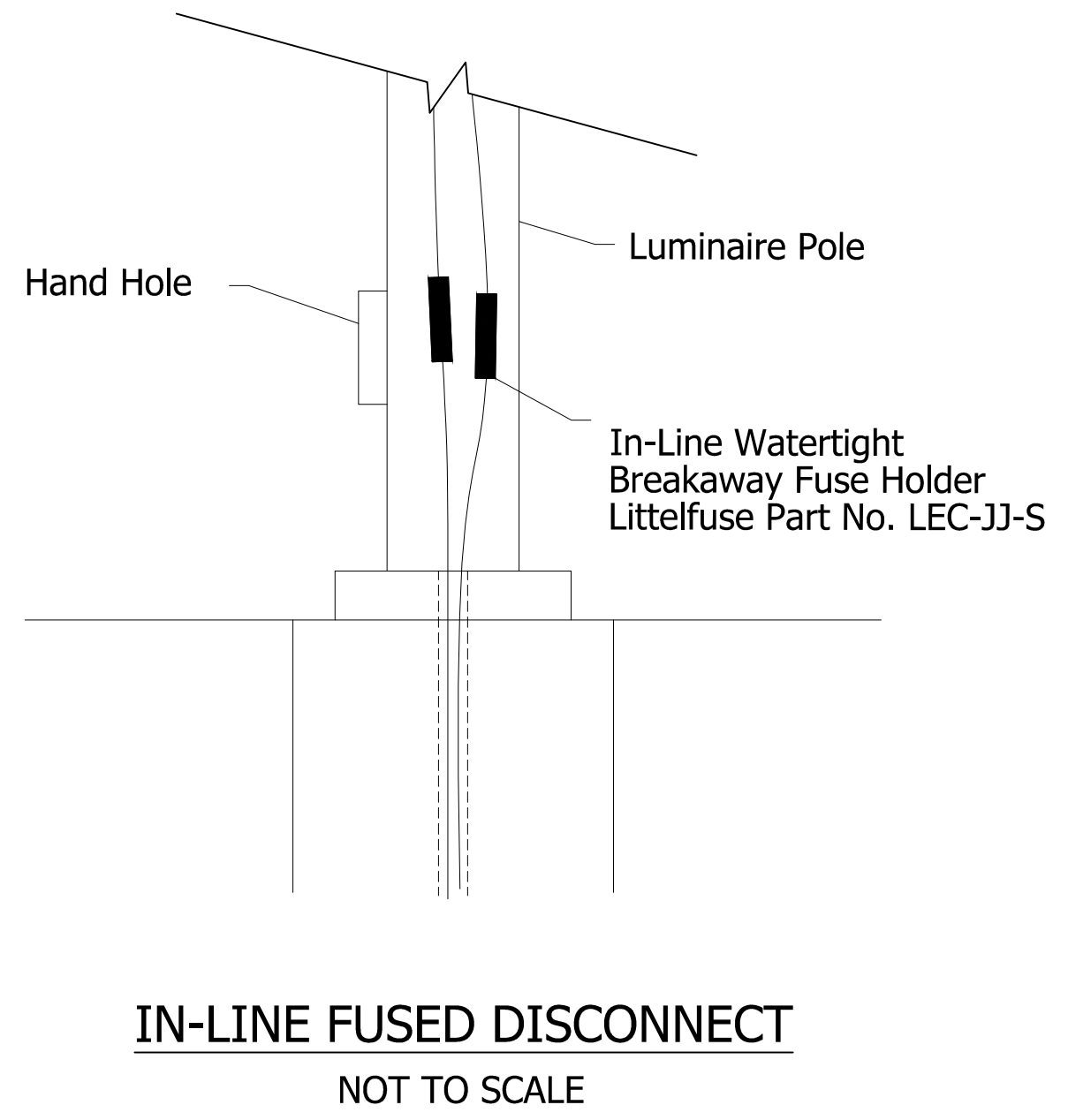
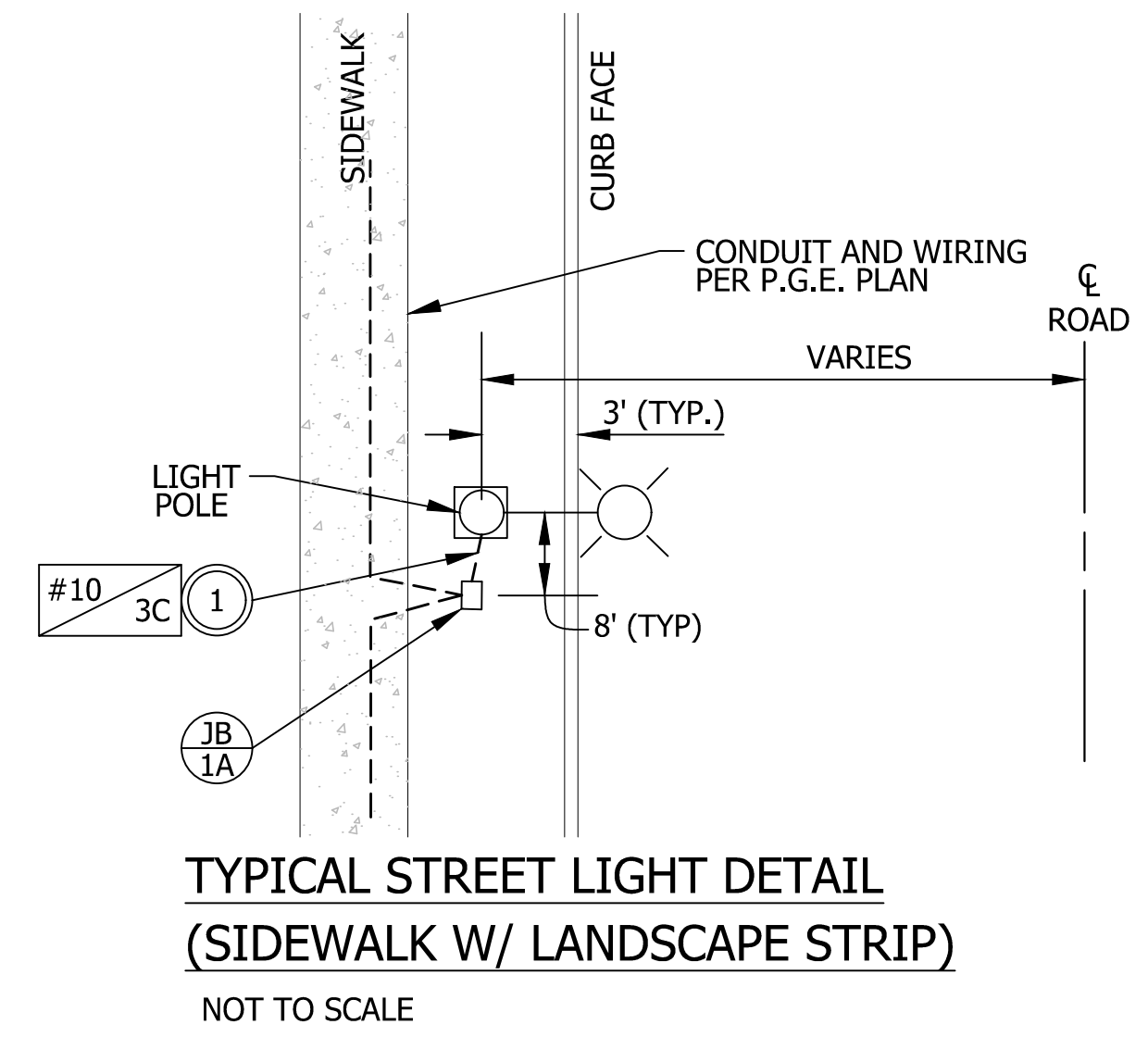
- CU 1497, SU 90011693
- CU Description:
 - Luminaire, 40W LED, King, Wattage Selector
- Available Color: Black
- Mounting Height: 22ft
- T-2 Adapter & Harness SU 90011748. Use with non-Stresscrete Poles

OTHER INFORMATION

- 3000k, flat lens array
- Multi Volt: 120-277v
- 4440 Lumens / Type III
- Manufacturer Part Number: K829-P4FL-III-60(SSL)-8060-120-277-3K-WS-QD-TXT BLACK s/f KPL20-PR7 / DWG PGE-AURORA-2

LINKS

- Spec Sheet: S:\Materials\Materials\Approved Material Spec Sheet\King_Leotek
- S:\Visual Lighting Design\IES PHOTOMETRIC FILES\King IES\Aurora Fixtures



TITLE

#	DATE	DESCRIPTION

REVISIONS

JCH ASY
DRAWN BY CHECKED BY
PRELIMINARY
STATUS
AUGUST 1, 2022
DATE
27448
PROJECT NUMBER

IL-2

© 2018 OTAK, INC.
If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according





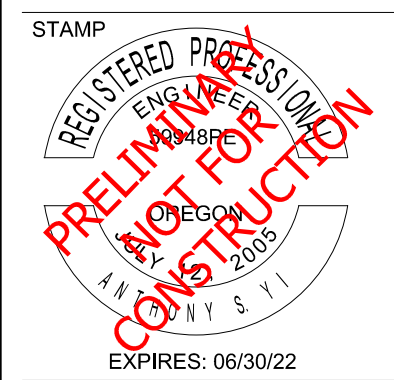
WEST HILLS
LAND DEVELOPMENT



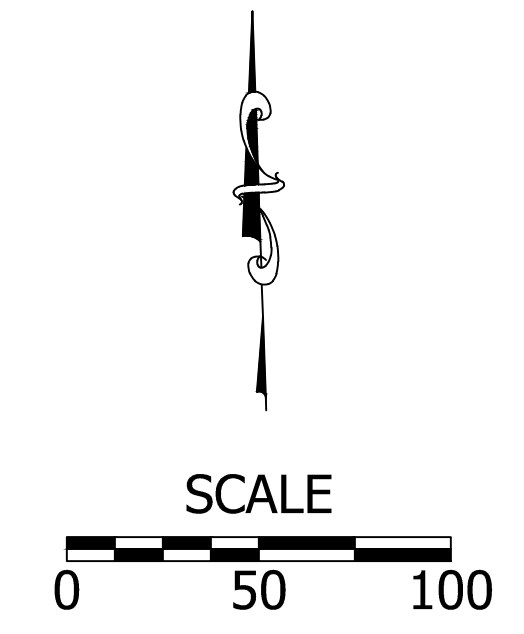
KITTELISON
& ASSOCIATES
951 SW 6TH AVENUE, SUITE 600
PORTLAND, OR 97204
P 503.226.5200 F 503.273.8169

LEGEND

-  INSTALL 13"x24"x18" (MIN. DIMENSION) PGE APPROVED PRECAST CONCRETE JUNCTION BOX WITH CONCRETE APRON.
-  INSTALL N (N=NUMBER) PGE LUMINAIRE POLE.



CONSULTANT



FROG POND TERRACE
ILLUMINATION PLAN

TITLE		
#	DATE	DESCRIPTION

REVISIONS	
JCH	ASY
DRAWN BY	CHECKED BY
PRELIMINARY	
STATUS	
AUGUST 1, 2022	
DATE	
27448	
PROJECT NUMBER	

IL-3

© 2018 OTAK, INC.

If this drawing is not 22" x 34", it has been reduced/enlarged. Scale according to drawing.

DEVELOPMENT REVIEW BOARD MEETING

**MONDAY, AUGUST 22, 2022
6:30 PM**

Board Member Communications:

3. Results of the August 8, 2022 DRB Panel A meeting

City of Wilsonville

Development Review Board Panel A Meeting Meeting Results

DATE:	AUGUST 8, 2022	TIME END:	8:44 P.M.
LOCATION:	29799 SW TOWN CENTER LOOP EAST, WILSONVILLE, OR		
TIME START:	6:30 P.M.		

ATTENDANCE LOG

BOARD MEMBERS	STAFF
Jean Svadlenka	Dan Pauly
Daniel McKay	Ryan Adams
Kathryn Neil	Aaron Parker
Ben Yacob	Shelley White
Rachelle Barrett	

AGENDA RESULTS

AGENDA	ACTIONS
CITIZENS' INPUT	None.
CONSENT AGENDA	
1. Approval of minutes of the April 11, 2022 DRB Panel A meeting	A. Unanimously approved as presented
PUBLIC HEARING	
2. Resolution No. 405 Boones Ferry Gas Station. The applicant is requesting approval of a Stage I Preliminary Plan Modification, Stage II Final Plan, Site Design Review, Class 3 Sign Permit, Sign Waiver and Type C Tree Plan for construction of a 2,999-square-foot convenience store with drive-thru and 12-pump fuel station. <u>Case Files:</u> DB21-0045 Stage I Preliminary Plan Modification DB21-0046 Stage II Final Plan DB21-0047 Site Design Review DB21-0048 Class 3 Sign Permit WAIV22-0002 Sign Waiver TPLN22-0004 Type C Tree Removal Plan	A. Resolution No. 405 was continued to September 12, 2022 date certain by a 4 to 1 vote with Rachelle Barrett opposed.
BOARD MEMBER COMUNICATIONS	
A. Results of the May 23, 2022 DRB Panel A meeting B. Results of the July 25, 2022 DRB Panel A meeting C. Recent City Council Action Minutes	A. Staff noted the approval of the Black Creek Development in the Coffee Creek Industrial Area. B. No comments C. No comments
STAFF COMMUNICATIONS	
	Board would be updated about any potential in-person meetings.

DEVELOPMENT REVIEW BOARD MEETING

**MONDAY, AUGUST 22, 2022
6:30 PM**

Board Member Communications:

4. Recent City Council Action Minutes

City Council Meeting Action Minutes
July 18, 2022

City Council members present included:

Mayor Fitzgerald
Council President Akervall – Excused
Councilor Lehan
Councilor West
Councilor Linville

Kimberly Veliz, City Recorder
Jeanna Troha, Assistant City Manager
Bill Evans, Communications & Marketing Manager
Delora Kerber, Public Works Director
Matt Lorenzen, Economic Development Manager
Chris Neamtzu, Community Development Director
Dan Pauly, Planning Manager
Zoe Mombert, Assistant to the City Manager

Staff present included:

Bryan Cosgrove, City Manager
Amanda Guile-Hinman, City Attorney

AGENDA ITEM	ACTIONS
WORK SESSION	
	START: 5:04 p.m.
A. Construction Excise Tax (CET) for Affordable Housing	Council directed staff to continue studying the pros and cons of the City establishing a Construction Excise Tax.
B. Frog Pond East and South Master Plan	Staff shared an update on the status of the Frog Pond East and South Master Plan. Council then provided direction on their desired mix of housing types.
REGULAR MEETING	
<u>Mayor’s Business</u>	
A. Civics Academy Graduation	Street signs were awarded to the graduates of the Civics Academy, Class of 2022.
B. Appointment of City Manager Pro Tem	Council appointed Assistant City Manager Jeanna Troha as City Manager Pro Tem for the period July 19, 2022 through July 23, 2022 and then again, August 1, 2022 through August 14, 2022. Furthermore, Council appointed City Attorney Amanda Guile-Hinman as City Manager Pro Tem for the period July 24, 2022 through July 31, 2022. Passed 4-0.
C. 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. City of Wilsonville Receipt of the Bronze Walk Friendly Communities Designation.	Staff shared news of the City of Wilsonville's designation as a Walk Friendly City by the University of North Carolina Highway Safety Research Center.
<u>Consent Agenda</u> A. Resolution No. 2987 A Resolution of the City of Wilsonville Authorizing the City Manager to Execute the Tri-County Metropolitan Transportation District of Oregon (TriMet) Subrecipient Agreement B. Minutes of the June 20, 2022 City Council Meeting.	The Consent Agenda was approved 4-0.
<u>New Business</u> A. Resolution No. 2979 A Resolution Of The City Council Adopting The Diversity, Equity And Inclusion (DEI) Committee Strategic Plan.	Resolution No. 2979 was adopted 4-0.
<u>Continuing Business</u> A. None.	
<u>Public Hearing</u> A. None.	
<u>City Manager's Business</u>	The City Manager provided an update on the recruitment of the Arts and Culture Program Coordinator and Behavioral Health position. Council was then informed staff would push out information on tolling via the City's website, and social media platforms.
<u>Legal Business</u>	No report.
ADJOURN	8:33 p.m.

City Council Meeting Action Minutes
August 1, 2022

City Council members present included:

Mayor Fitzgerald
Council President Akervall
Councilor Lehan
Councilor West
Councilor Linville

Jeanna Troha, Assistant City Manager
Delora Kerber, Public Works Director
Martin Montalvo, Public Works Ops. Manager
Mark Ottenad, Public/Government Affairs Director
Mike Nacrelli, Civil Engineer
Cindy Luxhoj, Associate Planner
Zach Weigel, City Engineer
Martin Montalvo, Public Works Ops. Manager
Zoe Mombert, Assistant to the City Manager
Ryan Adams, Assistant City Attorney

Staff present included:

Amanda Guile-Hinman, City Attorney
Kimberly Veliz, City Recorder

AGENDA ITEM	ACTIONS
WORK SESSION	
START: 5:05 p.m.	
A. Public Works Complex Construction Contract	Council was informed of Resolution No. 2988, which authorizes the City Manager to execute a construction contract with Emerick Construction Company for construction of the Public Works Complex Project.
B. Waste Water Treatment Plant Master Plan	Staff shared tenets of a draft Wastewater Treatment Master Plan that accommodates the City’s projected 20-year growth, addresses seismic resiliency and identifies assets to be upgraded and/or replaced.
C. 2023 League of Oregon Cities Legislative Priorities Ballot	The City’s lobbyist sought the Council’s direction to finalize the legislative priorities to be listed on the League of Oregon Cities’ (LOC) legislative priority ballot.
REGULAR MEETING	
<u>Mayor’s Business</u>	
A. July 30, 2022 Curtailment Event	Staff explained the water pump failure at the Willamette River Water Treatment Plant (WRWTP) and the subsequent Water Curtailment Notice for the cities of Wilsonville and Sherwood.
B. Upcoming Meetings	Upcoming meetings were announced by the Mayor as well as the regional meetings she attended on behalf of the City.

<p><u>Communications</u></p> <p>A. Tourism Promotion Committee Marketing</p>	<p>City Council heard highlights about the City's current promotional activities displayed on ExploreWilsonville.com, which are designed to attract visitors for overnight lodging.</p>
<p><u>Consent Agenda</u></p> <p>A. <u>Resolution No. 2988</u> Authorizing the City Manager to execute a construction contract with Emerick Construction Company for construction of the Public Works Complex Project (Capital Improvement Project #8113).</p> <p>B. <u>Resolution No. 2991</u> A Resolution Of The City Of Wilsonville Authorizing The City Manager To Execute The Second Amendment To Construction Contract With Moore Excavation, Inc. For The 5th Street / Kinsman Road Extension Project.</p> <p>C. Minutes of the July 18, 2022 City Council Meeting.</p>	<p>The Consent Agenda was approved 5-0.</p>
<p><u>New Business</u></p> <p>A. None.</p>	
<p><u>Continuing Business</u></p> <p>A. None.</p>	
<p><u>Public Hearing</u></p> <p>A. <u>Ordinance No. 865</u> An Ordinance Of The City Of Wilsonville Approving A Zone Map Amendment From The Future Development Agricultural – Holding (FDA-H) Zone To The Planned Development Industrial (PDI) Zone On Approximately 0.55 Acre Located At 28505 SW Boones Ferry Road; The Land Is More Particularly Described As Tax Lot 800, Section 14A, Township 3 South, Range 1 West, Willamette Meridian, Clackamas County, Oregon. Davidsons Boones Ferry Industrial LLC, Owner/Applicant.</p>	<p>After a public hearing was conducted, Ordinance No. 865 was approved on first reading by a vote of 5-0.</p>
<p><u>City Manager's Business</u></p>	<p>No report.</p>
<p><u>Legal Business</u></p>	<p>No report.</p>

URBAN RENEWAL AGENCY	
<u>URA Consent Agenda</u> A. <u>URA Resolution No. 327</u> A Resolution Of The City Of Wilsonville Urban Renewal Agency Authorizing The City Manager To Execute The Second Amendment To Construction Contract With Moore Excavation, Inc. For The 5th Street / Kinsman Road Extension Project. B. Minutes of the June 20, 2022 Urban Renewal Agency Meeting.	The URA Consent Agenda was approved 5-0.
<u>New Business</u> A. None.	
<u>URA Public Hearing</u> A. None.	
EXECUTIVE SESSION	Pursuant to ORS 192.660(2)(h) Legal Counsel/Litigation
ADJOURN	9:01 p.m.