

**STAFF REPORT  
FOR THE PLANNING COMMISSION**

**FILE NO.:** SUB-18-01/ WRG-18-02

**HEARING**

**DATE:** November 7, 2018


**REQUEST:** 10-lot subdivision and a Willamette and Tualatin River Protection permit at 3350 Riverside Court.

**APPROVAL**

**CRITERIA:** Community Development Code (CDC) Chapter 11, Single-Family Residential Detached, R-10; Chapter 28: Willamette and Tualatin River Protection (WRG); Chapter 48: Access, Egress and Circulation; Chapter 85, Land Division General Provisions; Chapter 92: Required Improvements

**STAFF REPORT**

**PREPARED BY:** Peter Spir (thru Darren Wyss)

Planning Manager's initials 

**TABLE OF CONTENTS**

	<u><b>Page</b></u>
STAFF ANALYSIS AND RECOMMENDATION	
GENERAL INFORMATION .....	3
EXECUTIVE SUMMARY .....	4
PUBLIC COMMENTS .....	4
RECOMMENDATION AND CONDITIONS OF APPROVAL .....	4

ADDENDUM

STAFF FINDINGS (AND FIGURES) ..... 6

EXHIBITS

PC-1 AFFADAVIT AND NOTICE PACKET ..... 33  
PC-2 COMPLETENESS LETTER..... 38  
PC-3 APPLICANT SUBMITTAL ..... 40  
PC-4 PUBLIC COMMENTS..... 210



## GENERAL INFORMATION

**OWNER:** Bill Varitz  
17828 Robin View Ct.  
West Linn, OR. 97068

**APPLICANT:** Greg Sams  
18811 Trillium Drive  
West Linn, OR. 97068

**CONSULTANT:** Rick Givens  
18680 Sunblaze Drive  
Oregon City, OR 97045

**SITE LOCATION:** Property extends to the east of Old River Drive at Robin View Court

**SITE SIZE:** 3.28 acres/138,326 square feet

**LEGAL DESCRIPTION:** Tax lot 1001, 900 and 990 Assessor's Map 21E 14AD

**COMP PLAN DESIGNATION:** Low-Density Residential

**ZONING:** R-10, Single-Family Residential Detached (10,000 sq. ft. min. lot size)

**APPROVAL CRITERIA:** Community Development Code (CDC) Chapter 11: Single-Family Residential Detached, R-10; Chapter 28: Willamette and Tualatin River Protection Area; Chapter 48: Access, Egress and Circulation; Chapter 85: Land Division, General Provisions; Chapter 92: Required Improvements; Chapter 99: Procedures for Decision Making: Quasi-Judicial.

**120-DAY RULE:** The application became complete on July 26, 2018. The 120-day period has been extended by the applicant and ends on December 11, 2018.

**PUBLIC NOTICE:** Notice was mailed to property owners within 500 feet of the subject property and the Robinwood Neighborhood Association on October 17, 2018. Notice was posted in the West Linn Tidings on October 25, 2018. A sign was placed on the property on October 25, 2018. The notice was also posted on the City's website on October 17, 2018. Therefore, public notice requirements of CDC Chapter 99 have been met.

## EXECUTIVE SUMMARY

The applicant seeks approval for a ten-lot subdivision of a 138,326 square foot property east of Old River Drive at Robin View Court. All lots will exceed 10,000 square feet, which is consistent with the R-10 zone designation.

In addition, a Willamette and Tualatin River Protection (WRG) permit is required. The applicant is proposing a Habitat Conservation Area (HCA) map re-designation which is regulated under the WRG chapter. The applicant's wetland and natural resource consultant, Schott and Associates, has provided findings that support the re-designation. A geotechnical study conducted by Mia Mahedy-Sexton, a licensed engineer, found that the site is suitable for development.

The property is forested; primarily by Douglas Fir trees. The preservation of trees is complicated by the narrowness of the site and the need to build a street through the middle for access to the proposed lots. Nonetheless, the applicant will save 14 (35 percent) of the 40 significant trees which exceeds the standard of 20 percent.

The Transportation System Plan (TSP), Transportation Planning Rule (TPR) and CDC Chapter 85: "Land Division" call for street connectivity. The street will terminate at the east edge of the property with the expectation that the street will connect southwards to Robin View Court using right of way the applicant is dedicating on an adjacent property he owns. That connection is expected at such time that the adjacent properties are partitioned. A small storm water facility will be on the eastern border of the site.

**Public comments:** Tualatin Valley Fire & Rescue provide comment on March 7, 2018 (Exhibit PC-4). No other public comment was received at the time this staff report was prepared.

## RECOMMENDATION

Staff recommends approval of application SUB-18-01/ WRG-18-02, based on: 1) the findings submitted by the applicant, which are incorporated by this reference, 2) supplementary staff findings included in the Addendum below, and 3) the addition of conditions of approval below. With these findings, the applicable approval criteria are met. The conditions are as follows:

1. **Site Plan. With the exception of modifications required by these conditions, the final plat shall conform to the submitted Tentative Plan, (Sheet 1/3) (submitted May 4, 2018).**
2. **Engineering Standards. All public improvements and facilities associated with public improvements including street improvements, utilities, grading, onsite storm water design, street lighting, street trees, easements, and easement**

locations are subject to the Public Works Director's review, modification, and approval per the City adopted Public Works standards. The applicant shall provide an updated utility and public improvements plan for review and approval by the Public Works Director that addresses Staff Findings 30, 33 and 42. All improvements must be designed, constructed, and completed prior to final plat approval. The Director of Public Works may allow a waiver of improvements as allowed by Code.

3. **ROW Dedication.** The final plan is modified to include the applicant's voluntary dedication of ROW (Staff Finding 17 and 20) on the adjacent tax lot 1000 of Assessor's Map 21E 14AD to accommodate a future street connection.
4. **HCA Boundary.** The HCA Boundary is revised to remove all High and Moderate HCAs from the subject property (Staff Findings 6 and 7). The City will amend City and Metro mapping to reflect that change.

**ADDENDUM**  
**PLANNING COMMISSION STAFF REPORT**  
November 7, 2018

**STAFF EVALUATION OF THE PROPOSAL'S COMPLIANCE  
WITH APPLICABLE CODE CRITERIA**

This decision adopts the findings for approval contained within the applicant's submittal, with the following exceptions and additions:

*CHAPTER 11*

*SINGLE-FAMILY RESIDENTIAL DETACHED, R-10*

*11.030 PERMITTED USES*

*The following are uses permitted outright in this zoning district:*

- 1. Single-family detached residential unit.*
- (...)*

**Staff Finding 1:** The subdivision application will create ten lots to accommodate one "*single family detached residential unit*" on each lot. Single family detached residential units are permitted uses. The criteria is met.

*11.030 PERMITTED USES*

*The following are uses permitted outright in this zoning district:*

- 5. Utilities, minor.*

**Staff Finding 2:** Permitted uses also include "*minor utilities*". The applicant proposes a small on-site storm water facility sized exclusively for this subdivision plus rain gardens on each of the ten lots.

The applicant noted the Planning Commission's position on storm water detention being a major utility on Page Five of the application materials. In terms of scale, the applicant's storm water facilities serve only the subject site and supports the definition as a minor utility.

**CDC 02.030 SPECIFIC WORDS AND TERMS for major and minor utility definitions:**

***Utility, major. A major utility facility or service includes, but is not limited to: a substation; pump station; water storage tank; sewerage treatment plant; water treatment plant; and transmission lines for water, drainage or sewerage collection systems, gas or electric, or other similar use.***

***Utility, minor. A minor utility facility or service includes, but is not limited to: overhead or underground electric, telephone or cable television poles and wires, and distribution***

*lines for electric, gas, water, drainage or sewerage collection systems, or other similar use.*

The application (Page 5) asserts:

**“The proposed facility is not a stormwater detention pond. No water will be detained at this facility. Rather, it is a facility containing vegetative media through which storm water will pass in order to filter sediments and pollutants out of the water prior to discharge to the Willamette River. Because the facility detains no water, it would have a lesser impact on a neighborhood than a facility where there would be standing water for some period of time.”**

**“The scale of the facility is much smaller than the detention pond that was discussed at that [November 15, 2017] hearing (less than 1,000 sq. ft. vs. nearly 9,000 sq. ft.). This small scale again means lesser potential for impact upon neighboring properties in terms of visibility and amount of storm water involved. “**

**“The location of the proposed facility near the river means that there are fewer neighbors involved and that any overflow would go directly to the river so that there is not the same potential to impact neighbors as with a detention facility.”**

**Staff Finding 3: The Ferndell Estates Subdivision Preliminary Storm Drainage Report Dated April 2018 identifies an on-site storm water facility with an area of 1,008 sq.ft. It has been designed and sized by an Oregon licensed engineer to accommodate the projected peak storm runoff from this subdivision’s impervious surfaces (street and sidewalks). Any rainwater overflow will go by a small pipe and discharge into the Willamette River (Rip rap at the point of discharge from the pipe will dissipate the water velocity to avoid erosion of the riverbank.) Please see Bruce Goldson P.E.’s “Preliminary Storm Drainage Report” (received on May 4, 2018) and “Storm Addendum Memo” (dated June 29, 2018) in the Applicant’s Submittal.**

**The rain gardens are intended to serve one home/lot each. They will treat the storm water runoff from that lot’s impervious surfaces (roof and driveway). Typically, rain gardens are three to five feet wide by 10 feet long and six to 12 inches deep.**

**Both the stormwater facility and the raingardens are planted with native grasses and shrubs which filter and trap contaminants and encourage infiltration of runoff. Typically, they are dry from June through September.**

**The applicant concludes on Page 6: “Finally, in order to preserve all appeal rights, we must raise an objection to the Planning Commission’s characterization of storm water detention and, potentially, treatment facilities, as major utilities. They are, in fact, an accessory or ancillary use to residential development. Per the provisions of Chapter 92 of the Community Development Code, as well as the City’s Public Works Standards, residential development must provide for storm water detention and treatment. To make storm water facilities that are required in order to develop residential properties a conditional use would have the**

effect of making residential development itself a de facto conditional use, which would violate Statewide Planning Goal 10.”

**Staff Finding 4:** Staff notes that stormwater facilities have been approved as part of subdivisions to address storm water flow and reduce sedimentation. These facilities are present in most land divisions throughout the city.

Specific to this site, the small size of the pond and raingardens, the engineered design to serve only this subdivision, and the treatment being confined to the subject property before discharging into the Willamette River, means it does not meet the definition of a “major utility” and supports findings that these facilities qualify as a “minor utility” and are defined as permitted uses. Staff Finding 33 addressed an exemption from the detention definition for this site which discharges to the Willamette River. These findings support approval of the criteria.

*11.070 DIMENSIONAL REQUIREMENTS, USES PERMITTED OUTRIGHT AND USES PERMITTED UNDER PRESCRIBED CONDITIONS*

*Except as may be otherwise provided by the provisions of this code, the following are the requirements for uses within this zone:*

- 1. The minimum lot size shall be 10,000 square feet for a single-family detached unit.*
- 2. The minimum front lot line length or the minimum lot width at the front lot line shall be 35 feet.*
- 3. The average minimum lot width shall be 50 feet. (...)*
- 5. Except as specified in CDC 25.070(C) (1) through (4) for the Willamette Historic District, the minimum yard dimensions or minimum building setback area from the lot line shall be:*
  - a. For the front yard, 20 feet; except for steeply sloped lots where the provisions of CDC 41.010 shall apply.*
  - b. For an interior side yard, seven and one-half feet. (...)*
  - c. For a rear yard, 20 feet.*
- 6. The maximum building height shall be 35 feet, except for steeply sloped lots in which case the provisions of Chapter 41 CDC shall apply.*
- 7. The maximum lot coverage shall be 35 percent. (...)*
- 9. The floor area ratio shall be 0.45. (...)*

**Staff Finding 5:** All lots will exceed the 10,000 square foot minimum lot size. Section 11.070 (2) (3) requires a minimum frontage on the street of 35 feet and an average minimum lot width of 50 feet. The proposed lots’ frontage and lot widths range from 107 to 162 feet which meet the standard. All lots are buildable to the extent that there is room for a standard home even with retention of 14 significant trees.

At the time that a building permit is applied for to construct homes on these lots, the front, side and rear setbacks, building height, lot coverage, FAR and sidewall transition requirements will be reviewed for compliance. The criteria is met.

## CHAPTER 28: WILLAMETTE AND TUALATIN RIVER PROTECTION AREA

### 28.070 PLANNING DIRECTOR VERIFICATION OF METRO HABITAT PROTECTION MAP BOUNDARIES

A. *The [Habitat Conservation Area] HCA Map is the basis for identifying and designating the habitat conservation areas in the City. A copy of the latest, updated HCA Map is on file at the City and is adopted by reference for use with this chapter.*

*It is inevitable, given the large area that Metro's HCA Map covers, that there may be some errors. In cases where, for example, three properties share the same contours and the same natural features but the map shows the middle lot with an HCA designation on it, it is reasonable to question the accuracy of that HCA designation. Using tree overstory as the sole basis for HCA designation will also allow a change in designation since trees are already protected in the municipal code and Chapters 55 and 85 CDC.*

B. *The Planning Director shall verify the appropriate HCA or non-HCA designation by site visits or consultations with Metro or by other means. Determination is based on whether the Metro criteria are met or whether the Metro designation was based solely on tree overstory in which case a redesignation is appropriate. In cases where the determination is that the map is incorrect, the Planning Director will make a written finding of this as well as the site conditions that led to that conclusion.*

C. *Class B public notice, per Chapter 99 CDC, shall be required prior to issuance of the redesignation decision if it involves redesignation of the HCA boundary to allow the construction of, or addition to, a house.*

D. *This determination and findings shall become part of the City record and part of the record for any associated land use application. The Planning Director shall also include in the record the revised map boundary. The Planning Director's determination and map revisions shall also be sent to Metro so that their map may be corrected as necessary.*

E. *The Planning Director determination is appealable to the City Council per Chapter 99 CDC.*

F. *Lands that are designated as an HCA only due to a forested overstory are exempt under CDC 28.040, Exemptions, since trees are already protected in the municipal code and Chapters 55 and 85 CDC. Similar exemptions apply to lands that exhibit no constraints.*

**Staff Finding 6: The applicant requested a Planning Manager verification of the Metro HCA boundary shown in Figure 3 of the Staff Addendum. Staff recommends the Planning Commission accept the following findings provided applicant and the study by Schott and Associates (June, 2018) in support of the boundary verification. The report included the following findings:**

#### **"HCA on site findings**

***The site was visited and information documented in April of 2018. Tax lots 1000 and 1090 are located the furthest east within the subject property. They are bordered by the Willamette River to the east, therefore, within the City of West Linn Willamette Greenway Area. A***

**majority of tax lots 1000 and 1090 are mapped High HCA and Medium HCA. HCA mapping also covers a small area (5,155sf) within tax lots 900 and 990 at their eastern property line.**

**Upon site investigation we have determined that there was a mapping error and there are no actual Habitat Conservation Areas within the subject property. Tax lot 1000 and 1090 do border the Willamette River along the east property line, but the vegetation consists of a vast mowed lawn area vegetated with non-native grasses. The lawn area bordering the river is the lowest lying area within the subject property. From the river the lawn area varies in width to the west, from 50 to a 100' as the property angles at the eastern property line. Three sample plots were dug within the lowest lying areas and soils consisted of sand with a mixed matrix of 10YR3/3, 3/2 and 4/4. There were no redoximorphic<sup>12</sup> features present. There were no hydrology indicators observed. It was determined that no wetlands were in the lowest area of the property where they would most likely be found.**

**At the west end of the lawn area is a stone retaining wall and a steep bank dominated by English ivy and a few scattered Douglas fir trees. At the top of the steep bank the property flattens out. This is where the house is located. The house is surrounded by a manicured lawn and ornamental plantings. In front of the house, to the west, is a long driveway directing north and south. The driveway is bordered to the west by another retained sloped bank dominated by ivy. There are a few Douglas fir and big leaf maples in the overstory and a few scattered snowberry and sword fern mixed in with the ivy on the slope. The driveway circles a second house on tax lot 990, located above the slope, in a north and south direction. The driveways meet west of the second house and them direct west to Old River Drive. The second house, located on tax lot 990 was surrounded by ornamental landscape as well. HCA mapping basically stops east of the house on tax lot 990 except at the southeast corner of the lot where it extends a little further west past the house.**

**Upon site observation and site information gathered prior to the site visit, we contend that there was a mapping error and there is no actual HCA within any of the tax lots on the subject property. What was observed was vast lawns, retaining walls, ivy dominated slopes, buildings with non-native landscapes and asphalt or gravel driveways. Per Google Earth aerial photos, the subject property has been like this since at least 1994 and has remained the same to date."**

**The report concluded as follows: "Tax lots 900, 990, 1000, 1001 and 1090 were walked to verify HCA mapping accuracy. Tax lots 1000 and 1090 border the Willamette River and are**

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<sup>1</sup> Redoximorphic Features – Redoximorphic concentrations, redoximorphic depletions, reduced matrices, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation. Source: [www.soilhub.com](http://www.soilhub.com)

<sup>2</sup>The word redoximorphic stems from "redox" which is short for reduction and oxidation and "morphic" which is short for "morphology", which is the study of how things form, in this case soils. So the term literally means the formation of reduction and oxidation features. Therefore, a redoximorphic feature is a type of mottle that specifically identifies features created as a result of saturated conditions in the soil. Source: [www.soilhub.com](http://www.soilhub.com)



*almost entirely mapped HCA. Tax lot 1001 is mapped as non HCA. Tax lots 900 and 990 are HCA mapped at their eastern property boundary.*

*A 10 lot development plan has been proposed within tax lots 900, 990 and 1001, impacting 5,155sf of mapped Medium HCA. Upon walking the site and conducting a natural resource assessment, we believe the HCA mapping is in error and there is no HCA within any of the tax lots on the subject property. This may be verified by the Planning Director per 28.070. No HCA impacts are proposed and no mitigation should be required.”*

Schott and Associates have the professional qualifications to make these findings. The central finding of their report is that Metro erred when they classified the vegetative cover status based on the 2002 aerial photographs which were used to create the Metro Vegetative Cover Map. Whereas, Metro criteria calls for an overstory to provide habitat areas, the area in question is landscaped with mowed lawns and gardens with no habitat values. More importantly, they state: “...*there is no HCA within any of the tax lots on the subject property*. The criteria is met. (Condition of Approval 4 makes note of the HCA map change and obliges the City to make all necessary changes to City and Metro mapping.)

[Note: The Schott report includes reference to “*an open swale of 400sf will be located in the northeast corner of the property adjacent to the Willamette River.*” That 400 sf swale has been eliminated. It was intended to carry surface overflow from the pond to the river and will be replaced by a pipe. Also, the pond was originally on the applicant’s adjacent property but has since been consolidated with the subdivision property by a lot line adjustment.]

#### 28.110 APPROVAL CRITERIA

A. *Development: All sites.*

1. *Sites shall first be reviewed using the HCA Map to determine if the site is buildable or what portion of the site is buildable. HCAs shall be verified by the Planning Director per CDC 28.070 and site visit. Also, “tree canopy only” HCAs shall not constitute a development limitation and may be exempted per CDC 28.070(A). The municipal code protection for trees and Chapters 55 and 85 CDC tree protection shall still apply.*

2. *HCAs shall be avoided to the greatest degree possible and development activity shall instead be directed to the areas designated “Habitat and Impact Areas Not Designated as HCAs,” consistent with subsection (A) (3) of this section.*

(...)

**Staff Finding 7:** The applicant has requested a Planning Manager verification of the Metro HCA boundary shown in Figure 3 of the Staff Addendum. The applicant’s consultant, Schott and Associates, determined that “*there is no HCA within any of the tax lots on the subject properties*”. With the re-designated HCA boundary, staff finds that no development will occur in the HCA. The criteria is met.

*C. Setbacks from top of bank.*

*1. Development of single-family homes or attached housing on lands designated as "Habitat and Impact Areas Not Designated as HCAs" shall require a structural setback of 15 feet from any top of bank that represents the edge of the land designated as "Habitat and Impact Areas Not Designated as HCAs."*

**Staff Finding 8: All development, including home construction, will occur on lands designated as "Habitat and Impact Areas Not Designated as HCAs" or non-HCA lands. The criteria does not apply.**

*H. Partitions, subdivisions and incentives.*

*1. When dividing a property into lots or lots, an applicant shall verify the boundaries of the HCA on the property.*

*2. Applicant shall partition or subdivide the site so that all lots or lots have a buildable site or envelope available for home construction located on non-HCA land or areas designated "Habitat and Impact Areas Not Designated as HCAs" per the HCA Map.*

*3. Development of HCA-dominated lands shall be undertaken as a last resort. A planned unit development (PUD) of Chapter 24 CDC may be required.*

**Staff Finding 9: The applicant's lot layout accommodates home construction on non-HCA land or areas designated "Habitat and Impact Areas Not Designated as HCAs." No development of HCA lands will occur. The criteria does not apply.**

*4. Incentives are available to encourage provision of public access to, and/or along, the river. By these means, planned unit developments shall be able to satisfy the shared outdoor recreation area requirements of CDC 55.100(F). Specifically, for every square foot of riverfront path, the applicant will receive credit for two square feet in calculating the required shared outdoor recreation area square footage.*

*(...)*

**Staff Finding 10: This application does not include any riverfront property to facilitate access to or along the river. The criteria does not apply.**

*L. Roads, driveways, utilities, or passive use recreation facilities. Roads, driveways, utilities, public paths, or passive use recreation facilities may be built in those portions of HCAs that include wetlands, riparian areas, and water resource areas when no other practical alternative exists but shall use water-permeable materials unless City engineering standards do not allow that. Construction to the minimum dimensional standards for roads is required. Full mitigation and revegetation is required, with the applicant to submit a mitigation plan pursuant to CDC 32.070 and a revegetation plan pursuant to CDC 32.080. The maximum disturbance width for utility corridors is as follows:*

*1. For utility facility connections to utility facilities, no greater than 10 feet wide.*

*(...)*

**Staff Finding 11: Assuming the HCA re-designation is approved, there will be no HCA on this subdivision property and therefore the criteria does not apply.**

*T. Changing the landscape/grading.*

*1. Existing predominant topographical features of the bank line and escarpment shall be preserved and maintained except for disturbance necessary for the construction or establishment of a water related or water dependent use. Measures necessary to reduce potential bank and escarpment erosion, landslides, or flood hazard conditions shall also be taken.*

**Staff Finding 12: The Willamette River Greenway (WRG) boundary extends 85 feet inland from the edge of the Willamette River, meaning that the WRG boundary is 200 feet to the east of this subdivision. No changing of landscape or grading will occur in that area with the exception of a small storm water outfall adjacent to the river. Measures necessary to reduce potential bank erosion include standardized energy dissipaters (rip rap). The criteria is met.**

*U. Protect riparian and adjacent vegetation. Vegetative ground cover and trees upon the site shall be preserved, conserved, and maintained according to the following provisions:*

*1. Riparian vegetation below OHW removed during development shall be replaced with indigenous vegetation, which shall be compatible with and enhance the riparian environment and approved by the approval authority as part of the application.*

*(...)*

**Staff Finding 13: “Riparian and adjacent vegetation” describes vegetation in areas adjacent to the river; specifically, below the Ordinary High Water (OHW) Mark. This subdivision is 200 feet west of the OHW. No riparian vegetation will be removed as part of this application (including the pipe outfall). This criteria does not apply.**

## **CHAPTER 48: ACCESS, EGRESS AND CIRCULATION**

### **48.020 APPLICABILITY AND GENERAL PROVISIONS**

B. All lots shall have access from a public street or from a platted private street approved under the land division chapter.

**Staff Finding 14: All lots will directly access Ferndell Drive, a public street. The criteria is met.**

*F. Property owners shall not be compelled to access their homes via platted stems of flag lots if other driveways and easements are available and approved by the City Engineer.*

**Staff Finding 15: No flag lot will be created. No access via an access easement is proposed. The criteria is met.**

### **48.025 ACCESS CONTROL**

*B. Access Control Standards*

*1. Traffic impact analysis requirements. The City or other agency with access jurisdiction may require a traffic study prepared by a qualified professional to determine access, circulation and other transportation requirements. (See also CDC 55.125, Traffic Impact Analysis.)*

**Staff Finding 16: No Traffic Impact Analysis (TIA) is required since none of the criteria of 85.170(B) (2) are met. For example, an Average Daily Trip count (ADT) of 250 is required before a TIA is needed. The addition of ten new homes should only generate an ADT of 94 based on the Institute of Traffic Engineers (ITE) trip generation tables which project 9.4 ADT for each single family home. This criteria is met.**

*2. The City or other agency with access permit jurisdiction may require the closing or consolidation of existing curb cuts or other vehicle access points, recording of reciprocal access easements (i.e., for shared driveways), development of a frontage street, installation of traffic control devices, and/or other mitigation as a condition of granting an access permit, to ensure the safe and efficient operation of the street and highway system. Access to and from off-street parking areas shall not permit backing onto a public street.*

**Staff Finding 17: Ferndell Drive will be a local street with no need for access consolidation. The criteria is met.**

*(...)*

*48.030 MINIMUM VEHICULAR REQUIREMENTS FOR RESIDENTIAL USES*

*B. When any portion of any house is less than 150 feet from the adjacent right-of-way, access to the home is as follows:*

- 1. One single-family residence, including residences with an accessory dwelling unit as defined in CDC 02.030, shall provide 10 feet of unobstructed horizontal clearance. Dual-track or other driveway designs that minimize the total area of impervious driveway surface are encouraged.*
- 2. Two to four single-family residential homes equals a 14- to 20-foot-wide paved or all-weather surface. Width shall depend upon adequacy of line of sight and number of homes.*
- 3. Maximum driveway grade shall be 15 percent.*

*(...)*

**Staff Finding 18: Access to all lots will be by individual driveways. The grading plans indicate that the driveways will have a zero to eight percent slope. All individual driveways will be at least 10 feet wide. Driveways will not be installed until the homes are constructed. Compliance with this chapter will be verified at that time by Public Works. The criteria is met.**

*C. When any portion of one or more homes is more than 150 feet from the adjacent right-of-way, the provisions of subsection B of this section shall apply in addition to the following provisions.*

1. A turnaround may be required as prescribed by the Fire Chief.
2. Minimum vertical clearance for the driveway shall be 13 feet, six inches.
3. A minimum centerline turning radius of 45 feet is required unless waived by the Fire Chief.
4. There shall be sufficient horizontal clearance on either side of the driveway so that the total horizontal clearance is 20 feet.

**Staff Finding 19:** This criteria does not apply because the lot depths are 90-92 feet so no homes will be more than 150 feet from the ROW.

C. Street connectivity and formation of blocks required. In order to promote efficient vehicular and pedestrian circulation throughout the City, land divisions and large site developments shall produce complete blocks bounded by a connecting network of public and/or private streets, in accordance with the following standards:

1. Block length and perimeter. The maximum block length shall not exceed 800 feet or 1,800 feet along an arterial.
2. Street standards. Public and private streets shall also conform to Chapter 92 CDC, Required Improvements, and to any other applicable sections of the West Linn Community Development Code and approved TSP.

**Staff Finding 20:** Ferndell Drive extends 750 feet from Old River Drive to its terminus at the the east end of the property which meets the maximum 800 foot block length standard. (At such time that development of the property to the south occurs, Ferndell Drive will be extended to connect with Robin View Court.) As part of this application (and as described in Condition 3), the applicant (June 29, 2018 letter notes) "... Mr. Varitz has agreed to dedicate 30' of right-of-way from the end of Ferndell Drive out to Robin View Ct. so as to ensure that this looped street will take place when TL 1000 is developed." The applicant has provided the necessary ROW to connect the terminus to Robin View Court in order to facilitate the connection when land division occurs. The TSP has minimum spacing standards between streets. Please see TSP Table 15 below.

Old River Drive is classified as a "Neighborhood Route" and requires at least 150 feet between street intersections. The distance north from Ferndell Drive to Old River Landing is 550 feet. The distance south from Ferndell Drive to Cherokee Court is 238 feet. Therefore the minimum street spacing standards are met.

**Table 15: City Street Access Spacing Standards**

Roadway Functional Classification	Area	Traffic Signals (miles) <sup>1</sup>	Between Street Intersections (feet)	Between Street Intersections and Driveways (feet)	Driveways (feet)
Minor Arterial	Urban	½	500	150	300
Minor Arterial <sup>2</sup>	Commercial	¼	NA	NA	NA
Collector	All	¼	200	75	150
Neighborhood Route	All	¼	150	50	50
Local Residential Street	All	NA	150	35	NA <sup>3</sup>
Local Commercial Street	All	NA	150	50	50

**The distance from the centerline of Ferndell Drive to the private driveways on either side of the access point on Old River Drive is 50 feet which meets the 50 foot separation standard between streets and driveways. Therefore all TSP separation standards are met.**

## *CHAPTER 55: DESIGN REVIEW*

### *55.100 APPROVAL STANDARDS – CLASS II DESIGN REVIEW*

*(Design Review is only applicable to significant trees as cross referenced by CDC 85.200(J) (9))*

#### *B. Relationship to the natural and physical environment.*

*1. The buildings and other site elements shall be designed and located so that all heritage trees, as defined in the municipal code, shall be saved. Diseased heritage trees, as determined by the City Arborist, may be removed at his/her direction.*

*2. All heritage trees, as defined in the municipal code, all trees and clusters of trees (“cluster” is defined as three or more trees with overlapping driplines; however, native oaks need not have an overlapping dripline) that are considered significant by the City Arborist, either individually or in consultation with certified arborists or similarly qualified professionals, based on accepted arboricultural standards including consideration of their size, type, location, health, long term survivability, and/or numbers, shall be protected pursuant to the criteria of subsections (B)(2)(a) through (f) of this section. (...)*

*Non-residential and residential projects on Type I and II lands shall protect all heritage trees and all significant trees and tree clusters by limiting development in the protected area. (...)*

**Staff Finding 21: There are no heritage trees on the subject property. There are 40 significant trees on the property as verified by the City Arborist. Fourteen trees will be protected. Whereas there is an aspirational tree protection standard of 20 percent (55.100(B)(2)(b)), the applicant will be protecting 35 percent. The criteria is met.**

## *CHAPTER 85: GENERAL PROVISIONS (LAND DIVISION)*

### *85.200 APPROVAL CRITERIA*

*No tentative subdivision or partition plan shall be approved unless adequate public facilities will be available to provide service to the partition or subdivision area prior to final plat approval and the Planning Commission or Planning Director, as applicable, finds that the following standards have been satisfied, or can be satisfied by condition of approval.*

#### *A. Streets.*

*1. General. The location, width and grade of streets shall be considered in their relation to existing and planned streets (...) Internal streets are the responsibility of the developer. All*

*streets bordering the development site are to be developed by the developer with, typically, half-street improvements or to City standards prescribed by the Public Works Director. (...)*

**Staff Finding 22:** The narrowness of the property limits the road location to running down the middle of the property on an east-west axis with five lots on each side. This will be a local street with a 28 foot width to accommodate two way traffic, plus parking on one side of the street. The street will include a “temporary” emergency turn around per TVFR standards between lots 4 and 5. TVFR has reviewed and supports this configuration. Pursuant to Condition of Approval 3, the applicant will be dedicating additional ROW on the adjacent property he owns to facilitate the future extension of the street to Robin View Court. The criteria is met by condition.

2. *Right-of-way and roadway widths.*
3. *Street widths. Street widths shall depend upon which classification of street is proposed. The classifications and required cross sections are established in Chapter 8 of the adopted TSP. (...)*
4. *The decision-making body shall consider the Public Works Director’s recommendations on the desired right-of-way width, pavement width and street geometry of the various street types within the subdivision after consideration by the Public Works Director of the following criteria: (...)*

**Staff Finding 23:** The proposed Ferndell Drive right of way (ROW) is 52 feet wide. This ROW width meets the recommended ROW width for local streets per the adopted 2016 Transportation System Plan (TSP). The proposed street width will be 28 feet. That is consistent with the local streets design per the adopted 2016 Transportation System Plan (TSP). (On street parking is permitted.) The criteria is met.

8. *Future extension of streets. Where necessary to give access to or permit a satisfactory future subdivision of adjoining land, streets shall be extended to the boundary of the subdivision and the resulting dead-end streets may be approved without turnarounds. (Temporary turnarounds built to Fire Department standards are required when the dead-end street is over 100 feet long.)*

11. *Cul-de-sacs.*

a. *New cul-de-sacs and other closed-end streets (not including stub streets intended to be connected) on sites containing less than five acres, or sites accommodating uses other than residential or mixed use development, are not allowed unless the applicant demonstrates that there is no feasible alternative due to:*

1) *Physical constraints (e.g., existing development, the size or shape of the site, steep topography, or a fish bearing stream or wetland protected by Chapter 32 CDC), or*

2) *Existing easements or leases.*

- b. New cul-de-sacs and other closed-end streets, consistent with subsection (A)(11)(a) of this section, shall not exceed 200 feet in length or serve more than 25 dwelling units unless the design complies with all adopted Tualatin Valley Fire and Rescue (TVFR) access standards and adequately provides for anticipated traffic, consistent with the Transportation System Plan (TSP).*
- c. New cul-de-sacs and other closed-end streets (not including stub streets intended to be connected) on sites containing five acres or more (...)*
- d. Applicants for a proposed subdivision, partition or a multifamily, commercial or industrial development accessed by an existing cul-de-sac/closed-end street shall demonstrate that the proposal is consistent with all applicable traffic standards and TVFR access standards.*
- e. All cul-de-sacs and other closed-end streets shall include direct pedestrian and bicycle accessways from the terminus of the street to an adjacent street or pedestrian and bicycle accessways unless the applicant demonstrates that such connections are precluded by physical constraints or that necessary easements cannot be obtained at a reasonable cost.*
- f. All cul-de-sacs/closed-end streets shall terminate with a turnaround built to one of the following specifications (measurements are for the traveled way and do not include planter strips or sidewalks).*

**Staff Finding 24: The applicant proposes to terminate the street at the east edge of the subdivision property and dedicate additional right of way on the adjacent property he owns with the expectation that, at some point in the future, the property is partitioned and the street will be extended to Robin View Court. The temporary cul de sac is 700 feet long and will serve 10 homes. The 200 foot limitation may be waived if TVFR finds there is adequate turn around provided. The applicant is providing an emergency turn around per TVFR standards between lots 4 and 5. TVFR has reviewed and supports this configuration. The criteria is met.**

(...)

16. *Sidewalks. Sidewalks shall be installed per CDC 92.010(H), Sidewalks. The residential sidewalk width is six feet plus planter strip...or to match existing sidewalks or right-of-way limitations.*

(...)

**Staff Finding 25: Ferndell Drive will be provided with six foot sidewalks and six foot planter strips on each side of the street. The criteria is met.**

(...)



19. All lots in a subdivision shall have access to a public street. Lots created by partition may have access to a public street via an access easement pursuant to the standards and limitations set forth for such accessways in Chapter 48 CDC.

**Staff Finding 26: All lots will have direct access to Ferndell Drive. The criteria is met.**

(...)

22. Based upon the determination of the City Manager or the Manager's designee, the applicant shall construct or cause to be constructed, or contribute a proportionate share of the costs, for all necessary off-site improvements identified by the transportation analysis commissioned to address CDC 85.170(B)(2) that are required to mitigate impacts from the proposed subdivision.

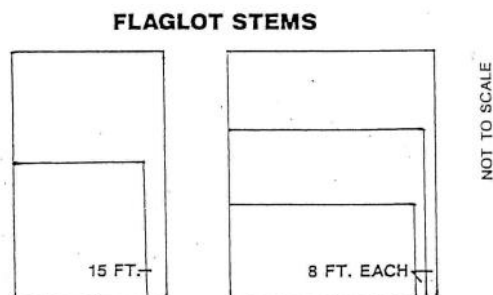
(...)

**Staff Finding 27: No off-site improvements are required or proposed by the Public Works Director. This criteria does not apply.**

*B. Blocks and Lots*

(...)

7. Flag lots. Flag lots can be created where it can be shown that no other reasonable street access is possible to achieve the requested land division. A single flag lot shall have a minimum street frontage of 15 feet for its accessway. Where two to four flag lots share a common accessway, the minimum street frontage and accessway shall be eight feet in width per lot. Common accessways shall have mutual maintenance agreements and reciprocal access and utility easements. The following dimensional requirements shall apply to flag lots:



**Staff Finding 28: No flag lots are proposed. This criteria does not apply.**

*C. Pedestrian and bicycle trails.*

(...)

**Staff Finding 29: The Trails Master Plan recommends a connective trail from Old River Wood Subdivision (to the north) to Robin View Court (to the south). That plan does not recognize the fact that there is no public right of way to the north that could facilitate that connection. A more practical north-south trail route is to turn off Old River Drive onto the proposed**

Ferndell Drive and then travel east and south via the future connection to Robin View Court and then to Calaroga Drive. (A riverfront trail is not practical since all properties to the north and south are private.) The criteria is met.

*E. Grading. Grading of building sites shall conform to the following standards unless physical conditions demonstrate the propriety of other standards:*

*1. All cuts and fills shall comply with the excavation and grading provisions of the Uniform Building Code and the following*

*(...)*

**Staff Finding 30: The “Preliminary Grading, Erosion and Sediment Control Plan” has been submitted (Sheet 3/3) and complies with Public Works standards and the Uniform Building Code. Meanwhile, a geotechnical study (dated April 4, 2018) conducted by Mia Mahedy-Sexton, an Oregon licensed engineer, found that the site is suitable for development. The criteria is met.**

*F. Water.*

*1. A plan for domestic water supply lines or related water service facilities shall be prepared consistent with the adopted Comprehensive Water System Plan, plan update, March 1987, and subsequent superseding revisions or updates.*

*2. Adequate location and sizing of the water lines.*

*(...)*

**Staff Finding 31: Consistent with the Water System Plan, the applicant will bring an eight-inch line from Old River Drive onto the site and connect it with the water line in Robin View Court. A fire hydrant will be located at the terminus of Ferndell Drive. This property is in the Robinwood Pressure Zone. There are no water supply deficiencies. The criteria is met.**

*G. Sewer.*

*1. A plan prepared by a licensed engineer shall show how the proposal is consistent with the Sanitary Sewer Master Plan (July 1989). Agreement with that plan must demonstrate how the sanitary sewer proposal will be accomplished and how it is gravity-efficient. The sewer system must be in the correct basin and should allow for full gravity service.*

*(...)*

**Staff Finding 32: The Sewer Master Plan has confirmed that there is sufficient sanitary system and sewage treatment facility capacity. The applicant proposes to install a sanitary sewer line along the street which will connect with an existing sanitary sewer line at the east edge of the site. Private laterals from the future homes will connect with the constructed public sewer line. The criteria is met.**

*H. Storm detention and treatment. All proposed storm detention and treatment facilities comply with the standards for the improvement of public and private drainage systems located in the West Linn Public Works Design Standards, there will be no adverse off-site impacts caused*

*by the development (including impacts from increased intensity of runoff downstream or constrictions causing ponding upstream), and there is sufficient factual data to support the conclusions of the submitted plan.*

**Staff Finding 33: The facilities in this application include 1.) a storm water facility; and, 2.) Individual rain gardens for each residential lot.**

**The on-site 20-foot by 10-foot by three-foot deep (approximate) storm water facility has been designed by an Oregon licensed engineer and exclusively sized to accommodate storm water from the subdivision's impervious surfaces (e.g. streets and sidewalks). To be effective, it is located at the low point of the subdivision. Any rainwater overflow will go by a small pipe and discharge over rip-rap into the Willamette River. Because the pond is sized to handle a 100-year storm incident, it is built larger than necessary to address the average annual rainfall and maintain pre-development storm water flows. Typically, they are dry from June through September. During normal rainy periods, they will have between 6-18 inches of water.**

**The storm water facility will be planted with native trees, shrubs and grasses which filter and trap contaminants and encourage infiltration of runoff. This landscaping serves to soften the visual impact of the pond upon neighboring properties and may encourage the development of wetland conditions which provide a habitat area for birds, mammals, amphibians, and macroinvertebrates. Public Works requires access to the pond from a public street for maintenance purposes. This access may be limited to a 12 foot wide grasscrete or all-weather driveway.**

**Rain gardens are designed to treat the storm water runoff from each lot's impervious surfaces (e.g. roof, patios and driveway). Typically, rain gardens are 4 feet wide by 10 feet long and 6-12 inches deep. Like the storm water treatment and detention facility, rain gardens are planted with native grasses and shrubs which filter and trap contaminants and encourage infiltration of runoff. The combination of small size and landscaping makes them unobtrusive to neighbors. Typically, they are dry from June through September. During rainy periods, the rain garden will usually have no more than 6-9 inches of water. Raingardens are reviewed by the Public Works Director and Building Official at the time of building permit application.**

**Staff has worked with the applicant to ensure that the safety, design and access components of the proposed stormwater facilities are compatible with the neighborhood. The Public Works Director has determined that the applicant's calculations, design, sizing, and location meets Public Works standards which defer to the City of Portland Stormwater Management Manual.**

**Recent revisions to Community Development Code 92.010 (E) relating to storm detention and treatment were adopted to ensure that potential impacts were evaluated by registered**

engineers. To that end, the applicant's geotechnical study correctly addresses this application's facilities.

Per condition of approval 2, the stormwater facility will be constructed to Public Works standards which address safety and access. The criteria is met.

(...)

J. Supplemental Provisions

1. *Wetland and natural drainageways.*

**Staff Finding 34: There are no wetlands or drainage way protected resources on the site and therefore the criteria does not apply.**

2. *Willamette and Tualatin Greenways. The Willamette and Tualatin River Greenways shall be protected as required by Chapter 28 CDC, Willamette and Tualatin River Protection.*

**Staff Finding 35: The applicant has applied for a Willamette River Greenway permit. Please see findings 6-13. The criteria is met.**

(...)

4. *Lighting. All subdivision street or alley lights shall meet West Linn Public Works Design Standards.*

**Staff Finding 36: Street trees and street lights will be installed. The criteria is met.**

5. *Dedications and exactions. The City may require an applicant to dedicate land and/or construct a public improvement that provides a benefit to property or persons outside the property that is the subject of the application when the exaction is roughly proportional. No exaction shall be imposed unless supported by a determination that the exaction is roughly proportional to the impact of development.*

**Staff Finding 37: No dedications or exactions are proposed outside the property. The applicant has opted to voluntarily provide a section of right-of-way linking the terminus of Ferndell to Robin View Court. The requirements of the section are not applicable.**

6. *Underground utilities. All utilities, such as electrical, telephone, and television cable, that may at times be above ground or overhead shall be buried underground in the case of new development. The exception would be in those cases where the area is substantially built out and adjacent properties have above-ground utilities and where the development site's frontage is under 200 feet and the site is less than one acre. (...)*

**Staff Finding 38: All utilities will be undergrounded. The criteria is met.**

(...)

**9. Heritage trees/significant tree and tree cluster protection.**

*All heritage trees, as defined in the Municipal Code, shall be saved. Diseased heritage trees, as determined by the City Arborist, may be removed at his/her direction. All non-heritage trees and clusters of trees (three or more trees with overlapping dripline; however, native oaks need not have an overlapping dripline) that are considered significant by virtue of their size, type, location, health, or numbers shall be saved pursuant to CDC 55.100(B)(2).*

**Staff Finding 39: There are no heritage trees on the subject property. There are 40 significant trees on the property as verified by the City Arborist. Fourteen trees will be protected. Whereas there is an aspirational tree protection standard of 20 percent, the applicant will be protecting 35 percent. The criteria is met.**

## **V. CHAPTER 92, REQUIRED IMPROVEMENTS**

### **92.020 IMPROVEMENTS IN PARTITIONS**

*The same improvements shall be installed to serve each lot of a partition as are required of a subdivision. However, if the approval authority finds that the nature of development in the vicinity of the partition makes installation of some improvements unreasonable, at the written request of the applicant those improvements may be waived. If the street improvement requirements are waived, the applicant shall pay an in-lieu fee for off-site street improvements, pursuant to the provisions of CDC 85.200(A) (1).*

*In lieu of accepting an improvement, the Planning Director may recommend to the City Council that the improvement be installed in the area under special assessment financing or other facility extension policies of the City.*

**Staff Finding 40: The applicant will be providing full improvements at the site including street, planter strips, sidewalks, street light, street trees and utilities consistent with the respective Master Plans. The criteria is met.**

- E. Storm detention and treatment. For Type I, II and III lands (refer to definitions in Chapter 02 CDC), a registered civil engineer must prepare a storm detention and treatment plan, at a scale sufficient to evaluate all aspects of the proposal, and a statement that demonstrates:
  - 1. The location and extent to which grading will take place indicating general contour lines, slope ratios, slope stabilization proposals, and location and height of retaining walls, if proposed.
  - 2. All proposed storm detention and treatment facilities comply with the standards for the improvement of public and private drainage systems located in the West Linn Public Works Design Standards.
  - 3. There will be no adverse off-site impacts, including impacts from increased intensity of runoff downstream or constrictions causing ponding upstream.

4. There is sufficient factual data to support the conclusions of the plan.
5. Per CDC [99.035](#), the Planning Director may require the information in subsections (E) (1), (2), (3) and (4) of this section for Type IV lands if the information is needed to properly evaluate the proposed site plan.

**Staff Finding 41: The on-site 20-foot by 10-foot by three-foot deep (approximate) storm water facility has been designed by an Oregon licensed civil engineer and exclusively sized to handle a 100-year storm incident as well as maintain pre-development storm water flows and accommodate storm water from the subdivision's impervious surfaces (e.g. streets and sidewalks). To be effective, it is located at the low point of the subdivision. Any rainwater overflow will be go by a small pipe and discharge over rip-rap into the Willamette River. The applicant's geotechnical Engineer made findings that the site is suitable. No adverse off-site impacts are expected.**

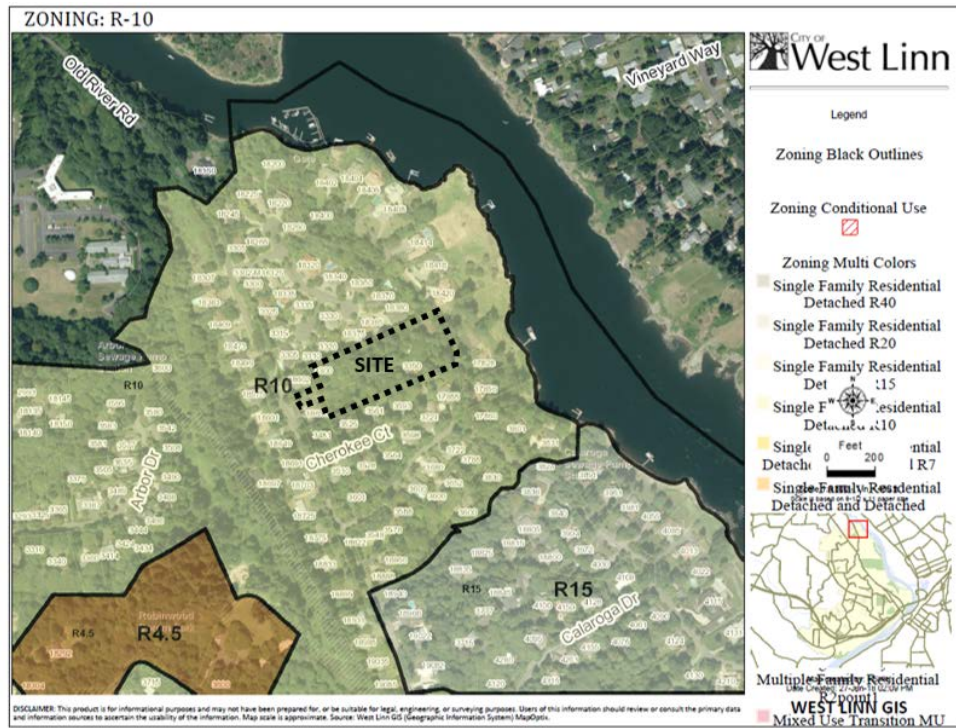
**Staff Finding 42: The Public Works Director reported Public Works Design Standard requirement for new development and redevelopment projects may be exempt from detention requirements if they discharge stormwater runoff directly into the Willamette or Tualatin Rivers or through a conveyance system that has capacity to convey the 10-year storm event to the Willamette and Tualatin Rivers. This exemption is for detention only, water quality improvements still apply. The criteria is met.**



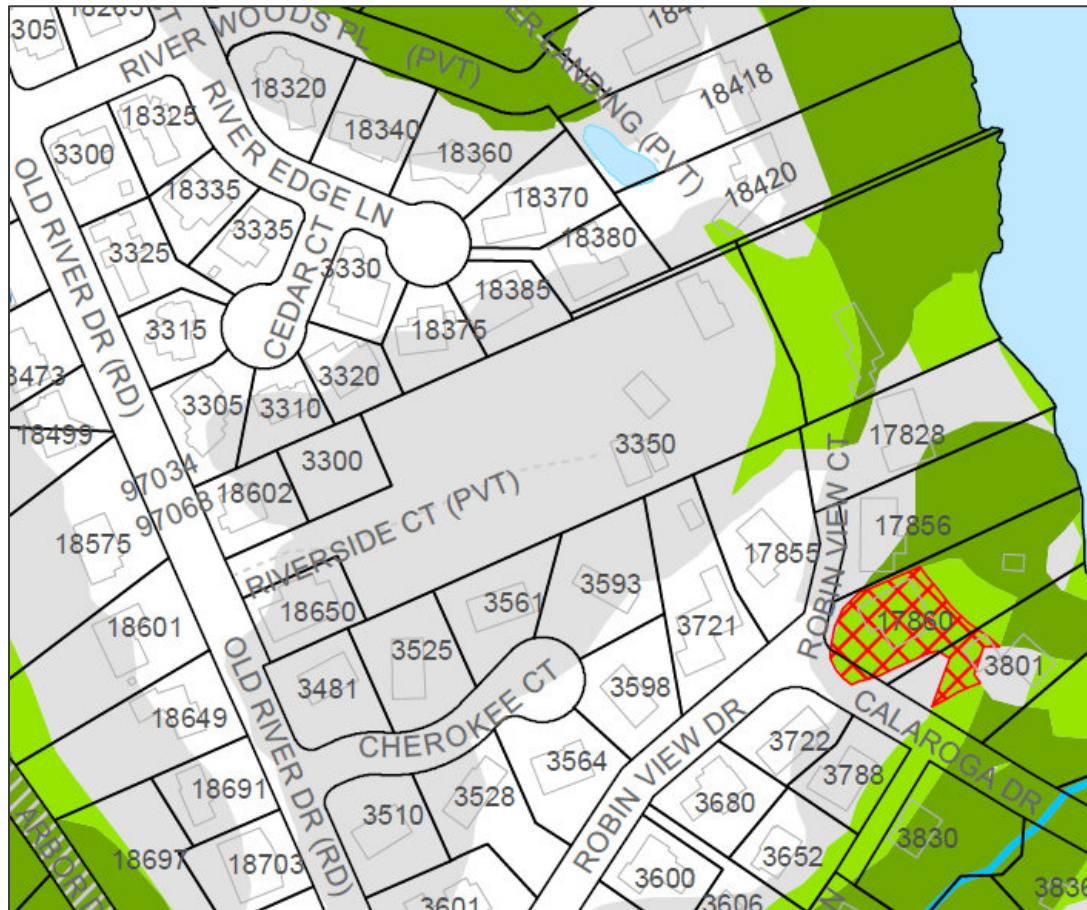
**FIGURE 1: LOCATION**



**FIGURE 2: ZONING**

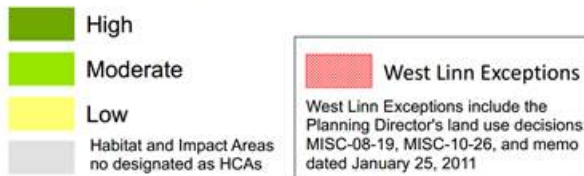


**FIGURE 3: HABITAT CONSERVATION AREAS (HCAs)  
(Existing/Before HCA reclassification)**



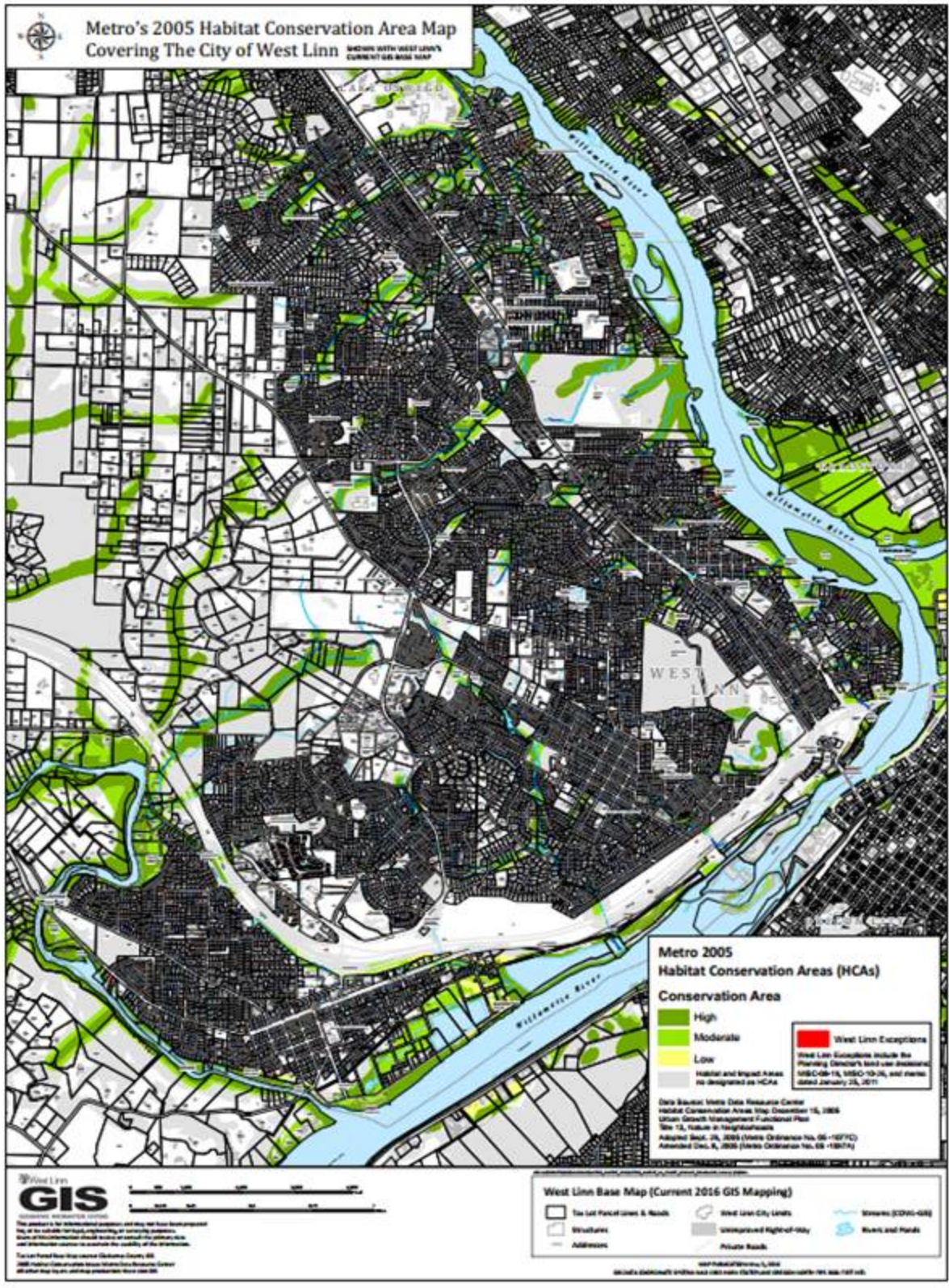
**Metro 2005  
Habitat Conservation Areas (HCAs)**

**Conservation Area**



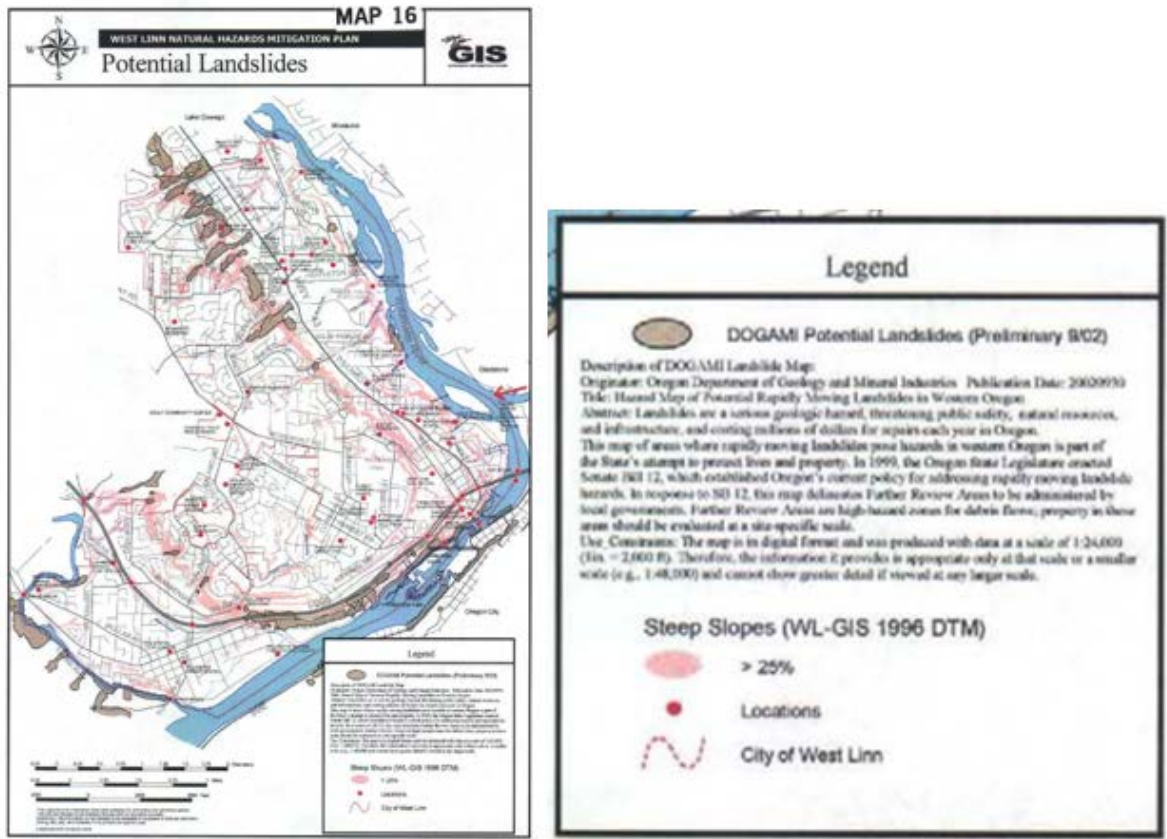
Data Source: Metro Data Resource Center  
 Habitat Conservation Areas Map December 15, 2005  
 Urban Growth Management Functional Plan  
 Title 13, Nature in Neighborhoods  
 Adopted Sept. 29, 2005 (Metro Ordinance No. 05 -1077C)  
 Amended Dec. 8, 2005 (Metro Ordinance No. 05 -1097A)



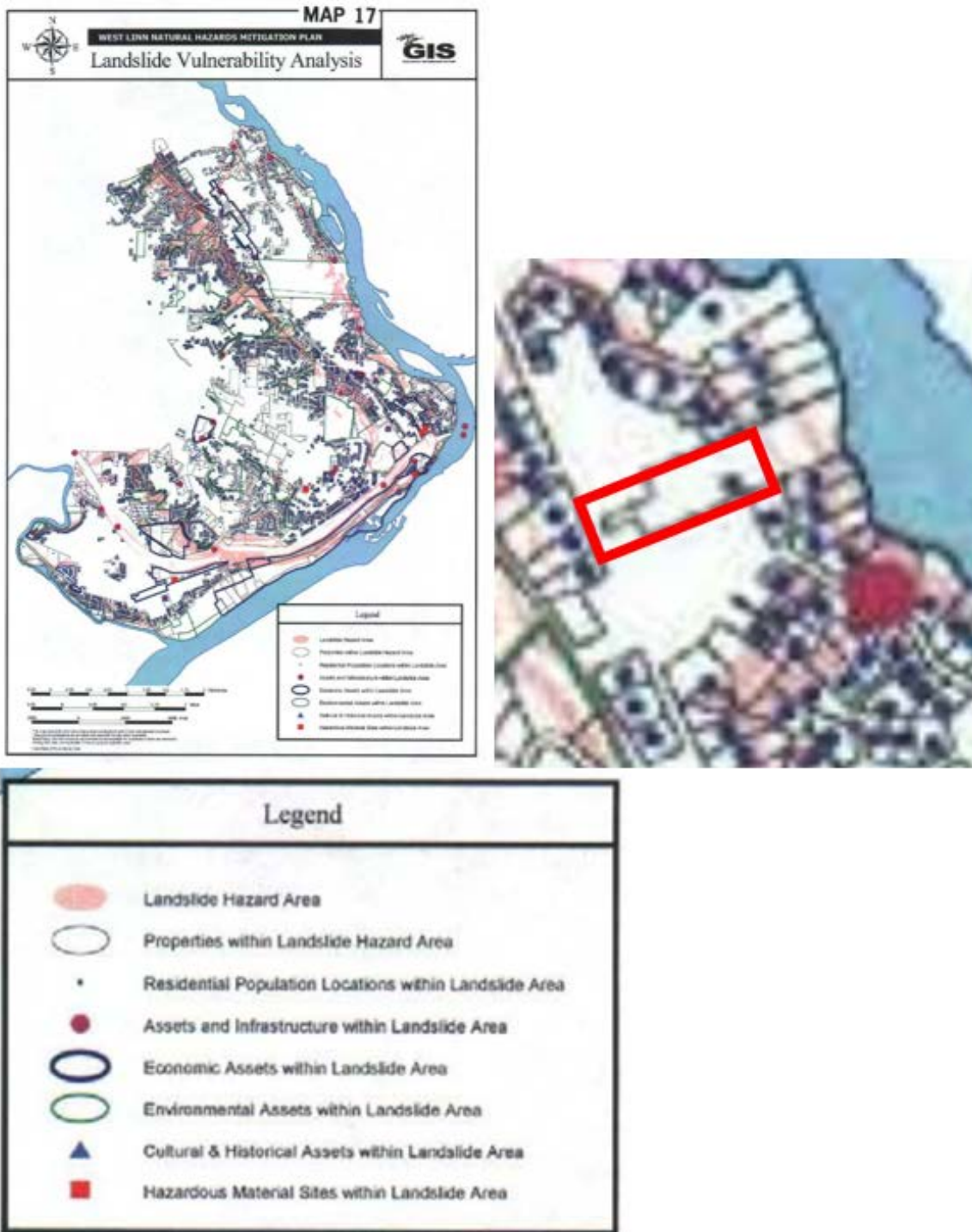




**FIGURE 4: HAZARD MAP 16/POTENTIAL LANDSLIDES**



**FIGURE 6: HAZARD MAP 17/LANDSLIDE VULNERABILITY ANALYSIS**











## **PC-1 AFFADAVIT AND NOTICE PACKET**

**AFFIDAVIT OF NOTICE**

We, the undersigned do hereby certify that, in the interest of the party (parties) initiating a proposed land use, the following took place on the dates indicated below:

**GENERAL**

File No. SVB-18-01/WRG-18-02 Applicant's Name Gray Sams  
Development Name \_\_\_\_\_  
Scheduled Meeting/Decision Date 11-7-18

**NOTICE:** Notices were sent at least 20 days prior to the scheduled hearing, meeting, or decision date per Section 99.080 of the Community Development Code. (check below)

**TYPE A**   /  

- A. The applicant (date) 10-17-18 (signed) J. Skoyev
- B. Affected property owners (date) 10-17-18 (signed) J. Skoyev
- C. School District/ Board (date) \_\_\_\_\_ (signed) \_\_\_\_\_
- D. Other affected gov't. agencies (date) 10-17-18 (signed) J. Skoyev
- E. Affected neighborhood assns. (date) 10-17-18 (All) (signed) J. Skoyev
- F. All parties to an appeal or review (date) \_\_\_\_\_ (signed) \_\_\_\_\_

At least 10 days prior to the scheduled hearing or meeting, notice was published/posted:

Tidings (published date) 10-25-18 (signed) J. Skoyev  
City's website (posted date) 10-17-18 (signed) J. Skoyev

**SIGN**

At least 10 days prior to the scheduled hearing, meeting or decision date, a sign was posted on the property per Section 99.080 of the Community Development Code.

(date) 10-25-2018 (signed) Don SLP

**NOTICE:** Notices were sent at least 14 days prior to the scheduled hearing, meeting, or decision date per Section 99.080 of the Community Development Code. (check below)

**TYPE B** \_\_\_\_\_

- A. The applicant (date) \_\_\_\_\_ (signed) \_\_\_\_\_
- B. Affected property owners (date) \_\_\_\_\_ (signed) \_\_\_\_\_
- C. School District/ Board (date) \_\_\_\_\_ (signed) \_\_\_\_\_
- D. Other affected gov't. agencies (date) \_\_\_\_\_ (signed) \_\_\_\_\_
- E. Affected neighborhood assns. (date) \_\_\_\_\_ (signed) \_\_\_\_\_

Notice was posted on the City's website at least 10 days prior to the scheduled hearing or meeting.  
Date: \_\_\_\_\_ (signed) \_\_\_\_\_

**STAFF REPORT** mailed to applicant, City Council/Planning Commission and any other applicable parties 10 days prior to the scheduled hearing.

(date) 10-25-2018 (signed) Don SLP

**FINAL DECISION** notice mailed to applicant, all other parties with standing, and, if zone change, the County surveyor's office.

(date) \_\_\_\_\_ (signed) \_\_\_\_\_



**CITY OF WEST LINN PLANNING COMMISSION  
PUBLIC HEARING NOTICE  
FILE NO. SUB-18-01/ WRG-18-02**

The West Linn Planning Commission will hold a public hearing on Wednesday, November 7, 2018, **starting at 6:30 p.m.** in the Council Chambers in City Hall, 22500 Salamo Road, West Linn, to consider a request for a 10-lot Subdivision and Willamette River Greenway (WRG) permit at 3350 Riverside Court (tax lots 1001, 900 & 990, Assessor's Map 21E14AD).

The decision by the Planning Commission to approve or deny this request will be based upon the applicable criteria found in Chapters 11, 28, 48, 85, and 92 of the West Linn Community Development Code (CDC). At the hearing, it is important that comments relate specifically to the applicable criteria.

You have been notified of this proposal because County records indicate that you own property within 500 feet of the subject property, or as otherwise required by Chapter 99 of the CDC. The complete application for SUB-18-01/ WRG-18-02 is available for inspection at no cost at City Hall or via the City of West Linn's website at <https://westlinnoregon.gov/planning/3350-riverside-court-10-lot-subdivision>. Printed copies of these documents may be obtained at City Hall for a minimal charge per page.

At least ten days prior to the hearing, a copy of the staff report will be available for inspection at no cost or copies can be obtained for a minimal charge per page. For further information, please contact Associate Planner Darren Wyss at [dwyss@westlinnoregon.gov](mailto:dwyss@westlinnoregon.gov) or 503-742-6064. Alternately, visit City Hall, 22500 Salamo Road, West Linn, OR 97068.

The hearing will be conducted in accordance with the rules of Section 99.170 of the CDC. Anyone wishing to present written testimony on this proposed action may do so in writing prior to, or at the public hearing. Oral testimony may be presented at the public hearing. At the public hearing, the Planning Commission will receive a staff presentation, and invite both oral and written testimony. The Planning Commission may continue the public hearing to another meeting to obtain additional information, leave the record open for additional evidence, arguments, or testimony, or close the public hearing and take action on the application as provided by state law. In the event that the Planning Commission decision is appealed, City Council review of the appeal will be de novo. Failure to raise an issue in person or by letter at some point prior to the close of the hearing, or failure to provide sufficient specificity to afford the decision maker an opportunity to respond to the issue, precludes an appeal to the Land Use Board of Appeals (LUBA) based on that issue.









# CITY OF West Linn

## **CITY OF WEST LINN NOTICE OF UPCOMING PLANNING COMMISSION MEETING**

**PROJECT # SUB-18-01  
MAIL: 10/17/18 TIDINGS: 10/25/18**

### **CITIZEN CONTACT INFORMATION**

To lessen the bulk of agenda packets, land use application notice, and to address the worries of some City residents about testimony contact information and online application packets containing their names and addresses as a reflection of the mailing notice area, this sheet substitutes for the photocopy of the testimony forms and/or mailing labels. A copy is available upon request.

## PC-2 COMPLETENESS LETTER



CITY OF  
**West Linn**

July 26, 2018

Greg Sams  
18811 Trillium Drive  
West Linn, OR 97068

SUBJECT: Application for 10-Lot Subdivision at 3350 Riverside Court (SUB-18-01, WRG-18-02)

Dear Greg:

You submitted this application on February 21, 2018. After subsequent resubmittals, the City finds that this application is now **complete**. The City has 120 days to exhaust all local review; that period ends on November 18, 2018.

Please be aware that a determination of a complete application does not guarantee a recommendation of approval from staff for your proposal as submitted – it signals that staff believes you have provided the necessary information for the Planning Commission to render a decision on your proposal.

Twenty day public notice will be prepared and mailed. The notice will identify the Planning Commission hearing date.

Please contact me at 503-742-6062, or by email at [pspir@westlinnoregon.gov](mailto:pspir@westlinnoregon.gov) if you have any questions or comments

Sincerely,

*Peter Spir*

Peter Spir  
Associate Planner

## **PC-3 APPLICANT'S SUBMITTAL**

## DEVELOPMENT REVIEW APPLICATION

For Office Use Only		
STAFF CONTACT: <i>Peter Spiv</i>	PROJECT NO(S): <i>Sub 18-01 WRG 18-02</i>	
NON-REFUNDABLE FEE(S)	REFUNDABLE DEPOSIT(S): <i>7900-</i>	TOTAL: <i>7900</i>

**Type of Review** (Please check all that apply):

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Annexation (ANX)                      | <input type="checkbox"/> Historic Review                                  | <input checked="" type="checkbox"/> Subdivision (SUB)                          |
| <input type="checkbox"/> Appeal and Review (AP) *              | <input type="checkbox"/> Legislative Plan or Change                       | <input type="checkbox"/> Temporary Uses *                                      |
| <input type="checkbox"/> Conditional Use (CUP)                 | <input type="checkbox"/> Lot Line Adjustment (LLA) */**                   | <input type="checkbox"/> Time Extension *                                      |
| <input type="checkbox"/> Design Review (DR)                    | <input type="checkbox"/> Minor Partition (MIP) (Preliminary Plat or Plan) | <input type="checkbox"/> Variance (VAR)  |
| <input type="checkbox"/> Easement Vacation                     | <input type="checkbox"/> Non-Conforming Lots, Uses & Structures           | <input type="checkbox"/> Water Resource Area Protection/Single Lot (WAP)       |
| <input type="checkbox"/> Extraterritorial Ext. of Utilities    | <input type="checkbox"/> Planned Unit Development (PUD)                   | <input type="checkbox"/> Water Resource Area Protection/Wetland (WAP)          |
| <input type="checkbox"/> Final Plat or Plan (FP)               | <input type="checkbox"/> Pre-Application Conference (PA) */**             | <input checked="" type="checkbox"/> Willamette & Tualatin River Greenway (WRG) |
| <input type="checkbox"/> Flood Management Area                 | <input type="checkbox"/> Street Vacation                                  | <input type="checkbox"/> Zone Change   |
| <input type="checkbox"/> Hillside Protection & Erosion Control |   |  |

Home Occupation, Pre-Application, Sidewalk Use, Sign Review Permit, and Temporary Sign Permit applications require different or additional application forms, available on the City website or at City Hall.

<b>Site Location/Address:</b> 3350 Riverside Drive <i>COVET</i>	Assessor's Map No.: 21E14AD
	Tax Lot(s): 900 & 990
	Total Land Area: 3.28 Acres

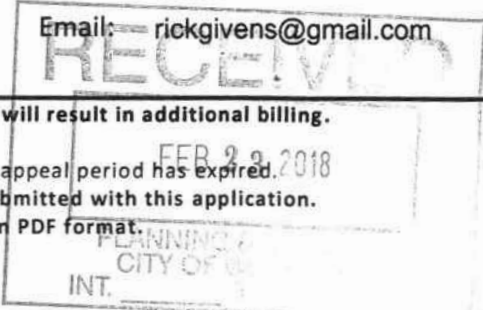
**Brief Description of Proposal:**

Tentative plan approval for a 10 lot subdivision for construction of single-family detached homes. The property is within the Willamette River Greenway so a WRG permit is also requested.

<b>Applicant Name:</b> <small>(please print)</small>	Greg Sams, Hymark Custom Homes, Inc.	Phone: (503) 939-6015
<b>Address:</b>	18811 Trillium Drive	Email: linksetc@msn.com
<b>City State Zip:</b>	West Linn, OR 97068	

<b>Owner Name</b> (required): <small>(please print)</small>	Bill Varitz	Phone: (503) 939-3803
<b>Address:</b>	17828 Robin View Ct	Email: billtiger@comcast.net
<b>City State Zip:</b>	West Linn, OR 97068-1055	

<b>Consultant Name:</b> <small>(please print)</small>	Rick Givens, Planning Consultant	Phone: (503) 479-0097
<b>Address:</b>	18680 Sunblaze Drive	Email: rickgivens@gmail.com
<b>City State Zip:</b>	Oregon City, OR 97045	



1. All application fees are non-refundable (excluding deposit). **Any overruns to deposit will result in additional billing.**
2. The owner/applicant or their representative should be present at all public hearings.
3. A denial or approval may be reversed on appeal. No permit will be in effect until the appeal period has expired.
4. **Three (3) complete hard-copy sets (single sided) of application materials must be submitted with this application.**  
One (1) complete set of digital application materials must also be submitted on CD in PDF format.  
If large sets of plans are required in application please submit only two sets.

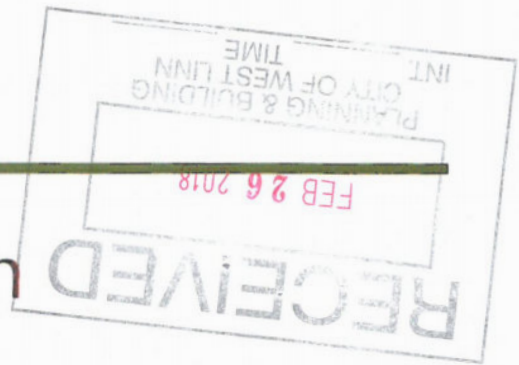
\* No CD required / \*\* Only one hard-copy set needed

The undersigned property owner(s) hereby authorizes the filing of this application, and authorizes on site review by authorized staff. I hereby agree to comply with all code requirements applicable to my application. Acceptance of this application does not infer a complete submittal. All amendments to the Community Development Code and to other regulations adopted after the application is approved shall be enforced where applicable. Approved applications and subsequent development is not vested under the provisions in place at the time of the initial application.

<i>Greg Sams</i>	<i>Feb 14, 2018</i>	<i>Bill Varitz</i>
Applicant's signature	Date	Owner's signature (required)
		<i>2.16.18</i>
		Date



CITY OF  
West Linn



### Expedited Land Division Acknowledgement Form

All applicants for partitions and subdivisions must acknowledge, by completing this form, that they were notified about the ELD process and must indicate whether they intend to apply for an ELD or a standard subdivision or partition using the procedures set forth in the City of West Linn's Community Development Code. Applicants who do not sign this form (page 1) and subsequently submit a land division application will have the land division processed under the ELD procedures per ORS 197.365. This completed form must accompany the separate ELD or standard subdivision or partition application form.

**Are you intending to apply for an Expedited Land Division?**

Yes  No

If "Yes", your application must include a written description of how the proposal satisfies ORS 197.360(1).

If "No", it indicates your intention to use the procedure set forth in the City of West Linn Community Development Code Land Division regulations.

Applicant Name: Greg Sams

Applicant Signature: *Greg Sams* Date: Feb 22, 2018

Applicant Mailing Address: 18811 Trillium Drive, West Linn, OR 97068

Owner's Name: Bill Varitz

Owner's Signature: *Bill Varitz* Date: 2/23/18

Owner's Mailing Address: 17828 Robin View Ct., West Linn, OR 97068

Site Address: \_\_\_\_\_



# FERNDELL ESATES

## Ten-Lot Subdivision Application

**Bill Varitz & Greg Sams**

**Proposal:** This application requests approval of a 10-lot subdivision to be developed on property located at 3350 Riverside Drive in West Linn. Also requested as a part of this application is a Willamette and Tualatin River Protection Area Permit.

The property is located on the east side of Old River Road at its intersection with Riverside Drive. The subject property is described as Tax Lots 900 and 990 of Clackamas County Assessor's Map 21E14AD. The site is 3.28 acres (142,933 square feet) in area. It is presently developed with a single-family detached home and outbuildings. The home and outbuildings will be removed to allow for the development of the site. The subject property is zoned R-10.

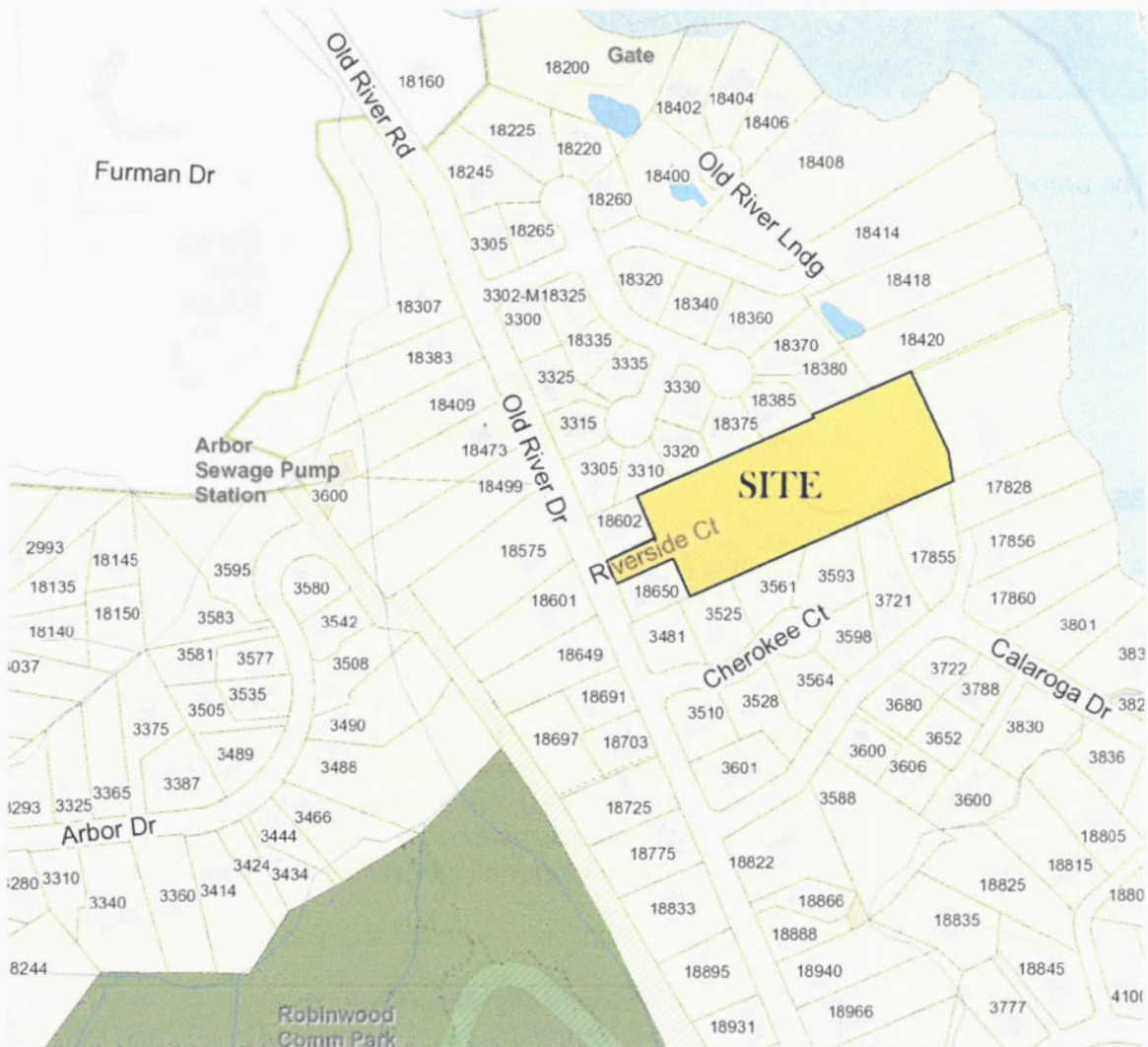


Figure 1: Vicinity Map



Figure 2: Aerial Photograph

The proposed development conforms to the applicable provisions of the CDC as follows:

#### DIVISION 8. LAND DIVISION

### **Chapter 85 GENERAL PROVISIONS**

#### **85.170 C. Grading.**

A grading plan is included with this submittal. However, recent changes to this section of the Community Development Code now require a geologic report when certain slope conditions exist:

3. *The grading plan must identify proposed building sites and include tables and maps identifying acreage, location and type of development constraints due to site characteristics such as slope, drainage and geologic hazards. For Type I, II, and III lands (refer to definitions in Chapter 02 CDC), the applicant must provide a geologic report, with text, figures and attachments as needed to meet the industry standard of practice, prepared by a certified engineering geologist and/or a geotechnical professional engineer, that includes:*
  - a. *Site characteristics, geologic descriptions and a summary of the site investigation conducted;*
  - b. *Assessment of engineering geological conditions and factors;*
  - c. *Review of the City of West Linn's Natural Hazard Mitigation Plan and applicability to the site; and*



- d. *Conclusions and recommendations focused on geologic constraints for the proposed land use or development activity, limitations and potential risks of development, recommendations for mitigation approaches and additional work needed at future development stages including further testing and monitoring.*

Comment: Chapter 02 of the CDC defines Type I, II, and III lands as follows:

*Type I lands. Lands that have severe constraints that preclude the use of standard development techniques and technical criteria. Type I lands exist in one or more of the following areas:*

1. *Slope: Land that has slopes of 35 percent or more over more than 50 percent of the site, as shown on the RLIS topography GIS layer.*
2. *Drainage: All lands within the designated floodway as shown on the appropriate FEMA flood panel.*
3. *Geological hazard: All landslide areas shown on the City's Natural Hazard Mitigation Plan ("NHMP") and identified as "landslide potential exists" on Map 16 of the NHMP, or areas outside Map 16, but within Map 17, Landslide Vulnerable Analysis Area.*

Comment: As shown on the Slope Analysis map submitted with this application, there is a small area of slopes of 35% or greater grade on the eastern edge of the subdivision. This area amounts to only 2.3% of the site and does not trigger designation as Type I land. The site is not in the 100 year flood plain, let alone the floodway. Map 16 and Map 17 of the NHMP do not indicate any landslide or "landslide potential" areas on the property. Conclusion: The site does not contain Type I lands since slopes are not 35% or greater on more than 50% of the site.

*Type II lands. Lands which have constraints that are sufficient to preclude most standard types of development. Constraints in these areas generally do not constitute a health or safety hazard, but require the use of non-standard technical design criteria. Type II lands exist in one or more of the following areas:*

1. *Slope: Land that has slopes over 25 percent on more than 50 percent of the site, as shown on the RLIS topography GIS layer.*
2. *Drainage: All drainage courses identified on the water resource area maps or areas identified as protected Goal 5 Wetlands, and areas outside the floodway, but within the floodway fringe, also known as the 100-year floodplain.*
3. *Geology: All known mineral and aggregate deposits identified on the Comprehensive Plan map as protected Goal 5 resources.*

Comment: The Slope Analysis map indicates that only 1.6% of the site contains slopes in the 25% to 35% range. When aggregated with the 2.3% of slopes greater than 35% grade, the total percentage of the site having slopes greater than 25% grade is 3.9%. There are no water resources or wetlands on the property. There are no known mineral and aggregate deposits shown for this site on the Comprehensive Plan Map.

Conclusion: The site does not contain Type II lands because slopes are not greater than 25% on more than 50% of the site and the other criteria are also not met.

*Type III lands. These lands are considered within the major portion of the City's developable lands. Standard development criteria can be applied through normal implementation measures. Type III lands have slopes over 10 percent on more than 50 percent of the site, as shown on the RLIS topography GIS layer.*

Comment: The Slope Analysis map shows that 22.5 percent of the site contains slopes in the 10% to 25% range. When aggregated with the 2.3% of slopes greater than 35% grade and 1.6% of the site having slopes in the 15-35% range, the total percentage of the site having slopes greater than 10% grade is 26.4%. Conclusion: The site does not contain Type III lands since slopes are not greater than 10 percent grade on over 50 percent of the site.

### **85.200 APPROVAL CRITERIA**

*No tentative subdivision or partition plan shall be approved unless adequate public facilities will be available to provide service to the partition or subdivision area prior to final plat approval and the Planning Commission or Planning Director, as applicable, finds that the following standards have been satisfied, or can be satisfied by condition of approval.*

#### **A. Streets.**

Comment: The subject property will extend Riverside Drive (currently Riverside Ct.) through the property from Old River Drive to the east boundary of the site. This extension was suggested by staff as a means of potentially allowing for a future connection to Robin View Ct. if Tax Lot 1000 is further divided. This will allow for a looped street configuration with improved connectivity in the surrounding neighborhood. A reserve strip will be provided at the end of Riverside Drive, consistent with City standards. No cul-de-sac streets are proposed so the provisions of Section 85.200(A)11 are not applicable.

No new street names are proposed. Consistent with City standards, the maximum street grade is 15%. This occurs at the east end of Riverside Drive as the street traverses down a short hillside area to the lower bench that TL 1000 is situated on. No alleys are proposed. All proposed streets have sidewalks and planter strips, consistent with City standards. All proposed streets will be dedicated without any reservations or restrictions. All lots in the subdivision have access to a public street, as shown on the Tentative Plan. No gated streets or special entry designs are proposed.

#### **B. Blocks and lots.**

Comment: No new blocks having a length of more than 800 feet are proposed. The distance along Riverside Drive to the eventual connection with Robin View Ct. is a little over 700 feet. Due to terrain and surrounding development patterns, it is not practicable to make blocks that are shorter. The proposed lots have property lines that are perpendicular to the street; contain sufficient area to meet the requirements

of the R-10 zone, and provide for building envelopes that will meet required setbacks. The lots have buildable depths that do not exceed 2.5 times their width.

The development conforms to the provisions of Chapter 48, as discussed below in this report.

85.200(B) (5). No double frontage lots are proposed. The proposed lot lines within the development are approximately at right angles to the streets on which they front, as required by Section 85.200(B)(6). No flag lots are proposed. The proposed lots are not large enough to allow for future re-division under the provisions of the R-10 zone.

C. Pedestrian and bicycle trails.

Comment: No pedestrian or bicycle trails are proposed in this development. No bicycle improvements were listed on the Bicycle Master Plan.

D. Transit facilities.

Comment: Not applicable. No transit facilities are proposed or required as there is no TriMet service in this area.

E. Lot grading.

Comment: Grading of the proposed building site will conform to City standards. Preliminary grading plans for the street area is shown on the Preliminary Grading Plan submitted with this application. Compliance for individual homes will be reviewed at the time of building permit application.

F. Water.

Comment: City water is available in Old River Drive. The proposed project site is in the Robinwood water pressure zone, which has adequate volume and pressure of water to serve the subdivision. The new water main to be installed in Riverside Drive will be 8" ductile iron and will be connected through to the water line in Robin View Ct. in order to provide a looped system.

G. Sewer.

Comment: As shown on the Preliminary Utility Plan, there is an existing public sewer line in an easement along the north side of the site. The sewer developed within the new street will connect to this line.

H. Storm.

Comment: As shown on the Preliminary Utility Plan, storm sewer will be installed in the new street and piped to a small treatment facility to be developed on the property to the east (which is also owned by the applicant) prior to release to the Willamette River. No storm water detention is proposed because of the proximity to the river. Please refer to the attached storm report for more detail.



We have been advised by Planning staff that the Planning Commission has recently interpreted the Community Development Code to include storm water detention facilities as a major utility, which would require approval of a conditional use permit. The proposed facility differs from the storm detention facility that was discussed at the November 15, 2017 Planning Commission hearing in several ways:

- The proposed facility is not a stormwater detention pond. No water will be detained at this facility. Rather, it is a facility containing vegetative media through which storm water will pass in order to filter sediments and pollutants out of the water prior to discharge to the Willamette River. Because the facility detains no water, it would have a lesser impact on a neighborhood than a facility where there would be standing water for some period of time.
- The scale of the facility is much smaller than the detention pond that was discussed at that hearing (less than 1,000 sq. ft. vs. nearly 9,000 sq. ft.). This small scale again means lesser potential for impact upon neighboring properties in terms of visibility and amount of storm water involved.
- The location of the proposed facility near the river means that there are fewer neighbors involved and that any overflow would go directly to the river so that there is not the same potential to impact neighbors as with a detention facility.

For all of these reasons, we believe that the Planning Commission can find that this is a minor utility that does not require Conditional Use approval.

Finally, in order to preserve all appeal rights, we must raise an objection to the Planning Commission's characterization of storm water detention and, potentially, treatment facilities, as major utilities. They are, in fact, an accessory or ancillary use to residential development. Per the provisions of Chapter 92 of the Community Development Code, as well as the City's Public Works Standards, residential development must provide for storm water detention and treatment. To make storm water facilities that are required in order to develop residential properties a conditional use would have the effect of making residential development itself a de facto conditional use, which would violate Statewide Planning Goal 10.

- I. Utility easements. Utility easements are shown on the plans submitted with this application.
- J. Supplemental provisions.
  1. Wetland and natural drainageways. Comment: There are no wetlands or natural drainageways on or abutting the subject property.
  2. Willamette and Tualatin Greenways. Comment: See discussion of Chapter 48, below.
  3. Street trees. Comment: Street trees will be provided as required, as shown on the Tentative Plan.

4. Lighting. Comment: Prior to final plat approval, an analysis of existing street lighting will be conducted and, if necessary, improvements made to comply with these standards. The preliminary design for streetlight placement within the subdivision is shown on the preliminary utility plan. To reduce ambient light and glare, high or low pressure sodium light bulbs will be provided for all streetlights within the subdivision. The lights will be shielded so that the light is directed downwards rather than omni-directional.
5. Dedications and exactions. Comment: No new dedications or exactions to service off-site properties are anticipated in conjunction with this application.
6. Underground utilities. Comment: All utilities within the development will be placed underground, as required by this section.
7. Density requirement. Comment: The density calculations submitted with this application demonstrate that the maximum density permitted on this site is 6 units. The proposed density of 6 units satisfies the minimum density standard.

#### Density Calculations

	Area (sq. ft.)	Allowable Density	Units @1 per 10,000 sq.ft.
Gross Site Area	142,933		
Land in a boundary street right-of-way, water course, or planned open space where density transfer is not requested:	0		
Area in street right-of-way:	34,373		
Net Site Area:	108,560		
Net Area within Type I or II slopes where Developed:	4,422	50%	.22
Area within Type I or II slopes where Density Will be Transferred:	0	75%	0
Area within Water Resource Area-all development transferred.	0	50%	0
Open Space (Type III and IV Lands)	0	100%	0
Type III & IV Land Developed:	104,138	100%	10.41
Base Density Allowed:			10.63
Total Allowed Density:			10 Units

8. Mix requirement. Comment: Not applicable. This requirement only applies in the R-2.1 and R-3 zones. The subject property is zoned R-10.
9. Heritage trees/significant tree and tree cluster protection. Comment: No heritage trees, as defined in the Municipal Code, are present on the site. Other existing trees are mapped on the Tree Plan, including those identified by the City Arborist as "significant". Please see discussion of Chapter 55, below.



10. Annexation and street lights. Comment: Not applicable. The subject property is within the city limits.

## **Chapter 48 - ACCESS, EGRESS AND CIRCULATION**

### **48.025 ACCESS CONTROL**

#### **B. Access control standards.**

1. Traffic impact analysis requirements. *The City or other agency with access jurisdiction may require a traffic study prepared by a qualified professional to determine access, circulation and other transportation requirements. (See also CDC 55.125, Traffic Impact Analysis.)*

Comment: The trip generation rate for single-family homes is approximately 10 vehicle trips per day according to Institute of Transportation Engineers data. One of these trips will occur in the am peak hour and one will occur in the pm peak hour. The proposed subdivision will add five new dwellings (additionally, the existing home on the property will be replaced with a new dwelling, which will generate the same traffic as the existing home would). A total of 90 new trips per day would be expected from this development, with 9 occurring in the am peak hour and 9 occurring in the pm peak hour. Because of the small size and limited amount of traffic to be generated by this development, a Traffic Impact Analysis is not required for this project.

2. *The City or other agency with access permit jurisdiction may require the closing or consolidation of existing curb cuts or other vehicle access points, recording of reciprocal access easements (i.e., for shared driveways), development of a frontage street, installation of traffic control devices, and/or other mitigation as a condition of granting an access permit, to ensure the safe and efficient operation of the street and highway system. Access to and from off-street parking areas shall not permit backing onto a public street.*

Comment: Access to the subdivision will from the extension of Riverside Drive through the property from Old River Drive to the east boundary of the site. When property to the east is partitioned, this will provide for an eventual connection of Riverside Drive to Robin View Ct., which loops back out to Old River Drive.

3. Access options. *When vehicle access is required for development (i.e., for off-street parking, delivery, service, drive-through facilities, etc.), access shall be provided by one of the following methods (planned access shall be consistent with adopted public works standards and TSP). These methods are "options" to the developer/subdivider.*

- a) Option 1. *Access is from an existing or proposed alley or mid-block lane. If a property has access to an alley or lane, direct access to a public street is not permitted.*



b) Option 2. Access is from a private street or driveway connected to an adjoining property that has direct access to a public street (i.e., "shared driveway"). A public access easement covering the driveway shall be recorded in this case to assure access to the closest public street for all users of the private street/drive.

c) Option 3. Access is from a public street adjacent to the development lot or parcel. If practicable, the owner/developer may be required to close or consolidate an existing access point as a condition of approving a new access. Street accesses shall comply with the access spacing standards in subsection (B)(6) of this section.

Comment: All lots will take access from the new Riverside Drive within the subdivision.

4. Subdivisions fronting onto an arterial street. New residential land divisions fronting onto an arterial street shall be required to provide alleys or secondary (local or collector) streets for access to individual lots. When alleys or secondary streets cannot be constructed due to topographic or other physical constraints, access may be provided by consolidating driveways for clusters of two or more lots (e.g., includes flag lots and mid-block lanes).

Comment: The site plan provides local street access for all lots. The site does not abut an arterial street.

5. Double-frontage lots. When a lot or parcel has frontage onto two or more streets, access shall be provided first from the street with the lowest classification. For example, access shall be provided from a local street before a collector or arterial street. When a lot or parcel has frontage opposite that of the adjacent lots or parcels, access shall be provided from the street with the lowest classification.

Comment: No double-frontage lots are proposed.

6. Access spacing.

a. The access spacing standards found in Chapter 8 of the adopted Transportation System Plan (TSP) shall be applicable to all newly established public street intersections and non-traversable medians.

b. Private drives and other access ways are subject to the requirements of CDC 48.060.

Comment: Old River Drive is designated as a Neighborhood Route by the West Linn Transportation Systems Plan. The minimum spacing distance listed between intersections on a Neighborhood Route is 150 feet. The proposed Riverside Drive intersection is 233' north of Cherokee Ct., and 600' south of Riverwoods Place. This standard is met.

7. Number of access points. For single-family (detached and attached), two-family, and duplex housing types, one street access point is permitted per lot or

parcel, when alley access cannot otherwise be provided; except that two access points may be permitted corner lots (i.e., no more than one access per street), subject to the access spacing standards in subsection (B)(6) of this section. The number of street access points for multiple family, commercial, industrial, and public/institutional developments shall be minimized to protect the function, safety and operation of the street(s) and sidewalk(s) for all users. Shared access may be required, in conformance with subsection (B)(8) of this section, in order to maintain the required access spacing, and minimize the number of access points.

Comment: Each proposed lot will have one access point, as specified in this section.

8. Shared driveways. The number of driveway and private street intersections with public streets shall be minimized by the use of shared driveways with adjoining lots where feasible. The City shall require shared driveways as a condition of land division or site design review, as applicable, for traffic safety and access management purposes in accordance with the following standards:

Comment: Not applicable. No shared accesses are proposed.

C. Street connectivity and formation of blocks required. In order to promote efficient vehicular and pedestrian circulation throughout the City, land divisions and large site developments shall produce complete blocks bounded by a connecting network of public and/or private streets, in accordance with the following standards:

1. Block length and perimeter. The maximum block length shall not exceed 800 feet or 1,800 feet along an arterial.

Comment: No block lengths in excess of 800 feet are proposed. The block length from Old River Drive to the eventual connection with Robin View is approximately 700 feet.

2. Street standards. Public and private streets shall also conform to Chapter 92 CDC, Required Improvements, and to any other applicable sections of the West Linn Community Development Code and approved TSP.

Comment: Proposed streets will comply with the public street standards of Chapter 92 (see below).

3. Exception. Exceptions to the above standards may be granted when blocks are divided by one or more pathway(s), in conformance with the provisions of CDC 85.200(C), Pedestrian and Bicycle Trails, or cases where extreme topographic (e.g., slope, creek, wetlands, etc.) conditions or compelling functional limitations preclude implementation, not just inconveniences or design challenges. (Ord. 1635 § 25, 2014; Ord. 1636 § 33, 2014)

Comment: No exceptions to block length are necessary.

#### **48.030 MINIMUM VEHICULAR REQUIREMENTS FOR RESIDENTIAL USES**

A. *Direct individual access from single-family dwellings and duplex lots to an arterial street, as designated in the transportation element of the Comprehensive Plan, is prohibited for lots or parcels created after the effective date of this code where an alternate access is either available or is expected to be available by imminent development application. Evidence of alternate or future access may include temporary cul-de-sacs, dedications or stubouts on adjacent lots or parcels, or tentative street layout plans submitted at one time by adjacent property owner/developer or by the owner/developer, or previous owner/developer, of the property in question.*

Comment: All lots will take access from the internal local street system. No arterial streets are located in this area.

B. *When any portion of any house is less than 150 feet from the adjacent right-of-way, access to the home is as follows:*

1. *One single-family residence, including residences with an accessory dwelling unit as defined in CDC 02.030, shall provide 10 feet of unobstructed horizontal clearance. Dual-track or other driveway designs that minimize the total area of impervious driveway surface are encouraged.*
2. *Two to four single-family residential homes equals a 14- to 20-foot-wide paved or all-weather surface. Width shall depend upon adequacy of line of sight and number of homes.*
3. *Maximum driveway grade shall be 15 percent. The 15 percent shall be measured along the centerline of the driveway only. Variations require approval of a Class II variance by the Planning Commission pursuant to Chapter 75 CDC. Regardless, the last 18 feet in front of the garage shall be under 12 percent grade as measured along the centerline of the driveway only. Grades elsewhere along the driveway shall not apply.*
4. *The driveway shall include a minimum of 20 feet in length between the garage door and the back of sidewalk, or, if no sidewalk is proposed, to the paved portion of the right-of-way.*

Comment: All lots will have individual driveways that conform to these standards. Driveways will be reviewed at the time of building permit application.

C. *When any portion of one or more homes is more than 150 feet from the adjacent right-of-way, the provisions of subsection B of this section shall apply in addition to the following provisions.*

1. *A turnaround may be required as prescribed by the Fire Chief.*
2. *Minimum vertical clearance for the driveway shall be 13 feet, six inches.*
3. *A minimum centerline turning radius of 45 feet is required unless waived by the Fire Chief.*



4. *There shall be sufficient horizontal clearance on either side of the driveway so that the total horizontal clearance is 20 feet.*

Comment: No lots will have portions of the homes located more than 150 feet for the adjacent right-of-way.

*D. Access to five or more single-family homes shall be by a street built to full construction code standards. All streets shall be public. This full street provision may only be waived by variance.*

Comment: The proposed street will be built to full City standards for local streets.

*E. Access and/or service drives for multi-family dwellings shall be fully improved with hard surface pavement:*

Comment: Not applicable. No multi-family dwellings are proposed.

*F. Where on-site maneuvering and/or access drives are necessary to accommodate required parking, in no case shall said maneuvering and/or access drives be less than that required in Chapters 46 and 48 CDC.*

Comment: Not applicable. All lots are for single-family homes and all parking will be provided on the home's driveway.

*G. The number of driveways or curb cuts shall be minimized on arterials or collectors. Consolidation or joint use of existing driveways shall be required when feasible.*

Comment: No driveways onto arterial or collector streets are proposed.

*H. In order to facilitate through traffic and improve neighborhood connections, it may be necessary to construct a public street through a multi-family site.*

Comment: Not applicable. No multi-family development is proposed.

*I. Gated accessways to residential development other than a single-family home are prohibited. (Ord. 1408, 1998; Ord. 1463, 2000; Ord. 1513, 2005; Ord. 1584, 2008; Ord. 1590 § 1, 2009; Ord. 1636 § 34, 2014)*

Comment: Not applicable. No gated accesses are proposed.

## **Chapter 55 - DESIGN REVIEW**

As required by this chapter, the applicant retained the services of an arborist (Multnomah Tree Experts) to identify the size, species, and condition of existing trees on the subject property. The trees were surveyed and mapped by Centerline Concepts, Inc., as shown on the Existing Conditions Map submitted with this application. Subsequently, the City Arborist visited the site and determined that 38 of these trees are significant trees. These trees are shown on the Tree Preservation Plan submitted with

this application. The following provisions of Chapter 55 relating to tree preservation are applicable to this proposal:

*B. Relationship to the natural and physical environment.*

*1. The buildings and other site elements shall be designed and located so that all heritage trees, as defined in the municipal code, shall be saved. Diseased heritage trees, as determined by the City Arborist, may be removed at his/her direction.*

Comment: No heritage trees are located on the subject property.

*2. All heritage trees, as defined in the municipal code, all trees and clusters of trees ("cluster" is defined as three or more trees with overlapping driplines; however, native oaks need not have an overlapping dripline) that are considered significant by the City Arborist, either individually or in consultation with certified arborists or similarly qualified professionals, based on accepted arboricultural standards including consideration of their size, type, location, health, long term survivability, and/or numbers, shall be protected pursuant to the criteria of subsections (B)(2)(a) through (f) of this section. In cases where there is a difference of opinion on the significance of a tree or tree cluster, the City Arborist's findings shall prevail. It is important to acknowledge that all trees are not significant and, further, that this code section will not necessarily protect all trees deemed significant.*

*a. Non-residential and residential projects on Type I and II lands shall protect all heritage trees and all significant trees and tree clusters by either the dedication of these areas or establishing tree conservation easements. Development of Type I and II lands shall require the careful layout of streets, driveways, building pads, lots, and utilities to avoid heritage trees and significant trees and tree clusters, and other natural resources pursuant to this code. The method for delineating the protected trees or tree clusters ("dripline + 10 feet") is explained in subsection (B)(2)(b) of this section. Exemptions of subsections (B)(2)(c), (e), and (f) of this section shall apply.*

Comment: Only one of the significant trees identified by the City Arborist is located on slopes that are consistent with Type I or II lands. That tree is proposed to be preserved. It must be noted, however, that per the definitions of Type I and II lands in Chapter 2 of the Community Development Code, there are no such lands on the subject property. The percentage of the site that they occupy (1.6%-Slopes 25-35%, and 2.3%-Slopes 35% plus) is far lower than the 50% threshold set in the definition.

*b. Non-residential and residential projects on non-Type I and II lands shall set aside up to 20 percent of the area to protect trees and tree clusters that are determined to be significant, plus any heritage trees. Therefore, in the event that the City Arborist determines that a significant tree cluster exists at a development site, then up to 20 percent of the non-Type I and II lands shall be devoted to the protection of those trees, either by dedication or easement. The exact percentage is determined by*



*establishing the driplines of the trees or tree clusters that are to be protected. In order to protect the roots which typically extend further, an additional 10-foot measurement beyond the dripline shall be added. The square footage of the area inside this "dripline plus 10 feet" measurement shall be the basis for calculating the percentage (see figure below). The City Arborist will identify which tree(s) are to be protected. Development of non-Type I and II lands shall also require the careful layout of streets, driveways, building pads, lots, and utilities to avoid significant trees, tree clusters, heritage trees, and other natural resources pursuant to this code. Exemptions of subsections (B)(2)(c), (e), and (f) of this section shall apply. Please note that in the event that more than 20 percent of the non-Type I and II lands comprise significant trees or tree clusters, the developer shall not be required to save the excess trees, but is encouraged to do so.*

Comment: The entire site is wooded and, as shown on the Tree Plan submitted with this application, Significant Trees impact every lot in the subdivision, as well as the proposed street. This makes full compliance with the 20 percent aspirational standard impracticable while maintaining reasonable building sites. A total of 19,755 sq. ft. of the site is proposed to be placed in tree preservation easement, as shown on the tree plan. This amounts to approximately 14% of site area. This does not mean that all of the Significant Trees located outside of these tree protection areas will be removed; rather it means that it will be necessary to build closer to some of these trees than the dripline-plus-10 standard. Where Significant Trees are located on lot lines or rear yard areas and it is practicable to save the trees, they will be retained.

- c. Where stubouts of streets occur on abutting properties, and the extension of those streets will mean the loss of significant trees, tree clusters, or heritage trees, it is understood that tree loss may be inevitable. In these cases, the objective shall be to minimize tree loss. These provisions shall also apply in those cases where access, per construction code standards, to a lot or parcel is blocked by a row or screen of significant trees or tree clusters.*

Comment: Riverside Drive will be stubbed to the east property line of the subject property. This street must be extended through the site to connect with Robin View Ct. in the future. This extension will result in the loss of 4 trees located within the street right-of-way. As is apparent from the slope analysis drawing, it is not practicable to relocate the street so that it would avoid these trees.

- d. For both non-residential and residential development, the layout shall achieve at least 70 percent of maximum density for the developable net area. The developable net area excludes all Type I and II lands and up to 20 percent of the remainder of the site for the purpose of protection of stands or clusters of trees as defined in subsection (B)(2) of this section.*

Comment: The density calculations submitted with this application demonstrate that the project will achieve more than 70% of maximum density. The maximum density allowed is ten lots and that is the density proposed (100% of maximum density).

- e. *For arterial and collector street projects, including Oregon Department of Transportation street improvements, the roads and graded areas shall avoid tree clusters where possible. Significant trees, tree clusters, and heritage tree loss may occur, however, but shall be minimized.*

Comment: Not applicable. The site does not abut an arterial or collector street.

- f. *If the protection of significant tree(s) or tree clusters is to occur in an area of grading that is necessary for the development of street grades, per City construction codes, which will result in an adjustment in the grade of over or under two feet, which will then threaten the health of the tree(s), the applicant will submit evidence to the Planning Director that all reasonable alternative grading plans have been considered and cannot work. The applicant will then submit a mitigation plan to the City Arborist to compensate for the removal of the tree(s) on an "inch by inch" basis (e.g., a 48-inch Douglas fir could be replaced by 12 trees, each four-inch). The mix of tree sizes and types shall be approved by the City Arborist.*

Comment: Trees located in the protected portions of the site will not be impacted by site grading.

## **Chapter 92: REQUIRED IMPROVEMENTS**

### **92.010 PUBLIC IMPROVEMENTS FOR ALL DEVELOPMENT**

*The following improvements shall be installed at the expense of the developer and meet all City codes and standards:*

#### **A. Streets within subdivisions.**

1. *All streets within a subdivision, including alleys, shall be graded for the full right-of-way width and improved to the City's permanent improvement standards and specifications which include sidewalks and bicycle lanes, unless the decision-making authority makes the following findings:*

Comment: As shown on the Tentative Plan, the developer proposes to construct Riverside Drive to City local street standards, with a 48' right-of-way, 24' paved section, 6 foot sidewalks and 5' planter strips.

2. *When the decision-making authority makes these findings, the decision-making authority may impose any of the following conditions of approval:*

Comment: Not applicable. This subsection applies only when an applicant is proposing to construct less than full standard streets.

#### **B. Extension of streets to subdivisions. *The extension of subdivision streets to the intercepting paving line of existing streets with which subdivision streets intersect***



*shall be graded for the full right-of-way width and improved to a minimum street structural section and width of 24 feet.*

Comment: As shown on the Grading Plan submitted with this requirement will be met.

- C. Local and minor collector streets within the rights-of-way abutting a subdivision shall be graded for the full right-of-way width and approved to the City's permanent improvement standards and specifications. The City Engineer shall review the need for street improvements and shall specify whether full street or partial street improvements shall be required. The City Engineer shall also specify the extent of storm drainage improvements required. The City Engineer shall be guided by the purpose of the City's systems development charge program in determining the extent of improvements which are the responsibility of the subdivider.

Comment: As shown on the Grading Plan submitted with this application, the proposed streets will be graded for the full right-of-way and improved to City standards.

- D. Monuments. Upon completion of the first pavement lift of all street improvements, monuments shall be installed and/or reestablished at every street intersection and all points of curvature and points of tangency of street centerlines with an iron survey control rod. Elevation benchmarks shall be established at each street intersection monument with a cap (in a monument box) with elevations to a U.S. Geological Survey datum that exceeds a distance of 800 feet from an existing benchmark.

Comment: Monumentation will be installed and/or reestablished at street intersections in accordance with this subsection.

- E. Surface drainage and storm sewer system. A registered civil engineer shall prepare a plan and statement which shall be supported by factual data that clearly shows that there will be no adverse impacts from increased intensity of runoff off site of a 100-year storm, or the plan and statement shall identify all off-site impacts and measures to mitigate those impacts commensurate to the particular land use application. Mitigation measures shall maintain pre-existing levels and meet buildout volumes, and meet planning and engineering requirements.

Comment: The project engineer has prepared a storm drainage plan, as shown on the Utility Plan, and a storm report for this project. Please refer to those documents.

- F. Sanitary sewers. Sanitary sewers shall be installed to City standards to serve the subdivision and to connect the subdivision to existing mains.
1. If the area outside the subdivision to be directly served by the sewer line has reached a state of development to justify sewer installation at the time, the Planning Commission may recommend to the City Council construction as an assessment project with such arrangement with the subdivider as is desirable to assure financing his share of the construction.
  2. If the installation is not made as an assessment project, the City may reimburse the subdivider an amount estimated to be a proportionate share of the cost for each connection made to the sewer by property owners outside of the subdivision for a period of 10 years from the time of installation of the sewers.



*The actual amount shall be determined by the City Administrator considering current construction costs.*

Comment: Sanitary sewers are available to this project from an existing line in an easement that crosses the subject property. This sewer will be extended to service all lots within the development, as required by this subsection.

*G. Water system. Water lines with valves and fire hydrants providing service to each building site in the subdivision and connecting the subdivision to City mains shall be installed. Prior to starting building construction, the design shall take into account provisions for extension beyond the subdivision and to adequately grid the City system. Hydrant spacing is to be based on accessible area served according to the City Engineer's recommendations and City standards. If required water mains will directly serve property outside the subdivision, the City may reimburse the developer an amount estimated to be the proportionate share of the cost for each connection made to the water mains by property owners outside the subdivision for a period of 10 years from the time of installation of the mains. If oversizing of water mains is required to areas outside the subdivision as a general improvement, but to which no new connections can be identified, the City may reimburse the developer that proportionate share of the cost for oversizing. The actual amount and reimbursement method shall be as determined by the City Administrator considering current or actual construction costs.*

Comment: A water line will be installed within Riverside Drive and will be looped to connect to existing lines Robin View Ct.

*H. Sidewalks.*

*1. Sidewalks shall be installed on both sides of a public street and in any special pedestrian way within the subdivision, except that in the case of primary or secondary arterials, or special type industrial districts, or special site conditions, the Planning Commission may approve a subdivision without sidewalks if alternate pedestrian routes are available. In the case of the double-frontage lots, provision of sidewalks along the frontage not used for access shall be the responsibility of the developer. Providing front and side yard sidewalks shall be the responsibility of the land owner at the time a request for a building permit is received. Additionally, deed restrictions and CC&Rs shall reflect that sidewalks are to be installed prior to occupancy and it is the responsibility of the lot or homeowner to provide the sidewalk, except as required above for double-frontage lots.*

Comment: As required by this subsection, sidewalks will be installed along all street frontages in this development.

*2. On local streets serving only single-family dwellings, sidewalks may be constructed during home construction, but a letter of credit shall be required from the developer to ensure construction of all missing sidewalk segments within four years of final plat approval pursuant to CDC 91.010(A)(2).*

Comment: Sidewalks will be constructed during home construction on each lot. The required letter of credit will be provided.

3. *The sidewalks shall measure at least six feet in width and be separated from the curb by a six-foot minimum width planter strip. Reductions in widths to preserve trees or other topographic features, inadequate right-of-way, or constraints, may be permitted if approved by the City Engineer in consultation with the Planning Director.*

Comment: Sidewalks will be installed to City specifications.

4. *Sidewalks should be buffered from the roadway on high volume arterials or collectors by landscape strip or berm of three and one-half-foot minimum width.*

Comment: Not applicable. The site does not abut an arterial or collector street.

5. *The City Engineer may allow the installation of sidewalks on one side of any street only if the City Engineer finds that the presence of any of the factors listed below justifies such waiver:*
  - a. *The street has, or is projected to have, very low volume traffic density;*
  - b. *The street is a dead-end street;*
  - c. *The housing along the street is very low density; or*
  - d. *The street contains exceptional topographic conditions such as steep slopes, unstable soils, or other similar conditions making the location of a sidewalk undesirable.*

Comment: Sidewalks are proposed on both sides of all streets within this subdivision.

- I. *Bicycle routes. If appropriate to the extension of a system of bicycle routes, existing or planned, the Planning Commission may require the installation of separate bicycle lanes within streets and separate bicycle paths.*

Comment: No bicycle routes are called for on the local streets within this subdivision.

- J. *Street name signs. All street name signs and traffic control devices for the initial signing of the new development shall be installed by the City with sign and installation costs paid by the developer.*

Comment: The developer will provide all required signs, consistent with City standards.

- K. *Dead-end street signs. Signs indicating "future roadway" shall be installed at the end of all discontinued streets. Signs shall be installed by the City per City standards, with sign and installation costs paid by the developer.*

Comment: The required sign will be installed at the end of Riverside Drive.

- L. *Signs indicating future use shall be installed on land dedicated for public facilities (e.g., parks, water reservoir, fire halls, etc.). Sign and installation costs shall be paid by the developer.*

Comment: Not applicable. No public dedications are proposed.

M. Street lights. Street lights shall be installed and shall be served from an underground source of supply. The street lighting shall meet IES lighting standards. The street lights shall be the shoe-box style light (flat lens) with a 30-foot bronze pole in residential (non-intersection) areas. The street light shall be the cobra head style (drop lens) with an approximate 50-foot (sized for intersection width) bronze pole. The developer shall submit to the City Engineer for approval of any alternate residential, commercial, and industrial lighting, and alternate lighting fixture design. The developer and/or homeowners association is required to pay for all expenses related to street light energy and maintenance costs until annexed into the City.

Comment: Street lights will be installed by the developer, consistent with the requirements of this subsection.

N. Utilities. The developer shall make necessary arrangements with utility companies or other persons or corporations affected for the installation of underground lines and facilities. Electrical lines and other wires, including but not limited to communication, street lighting, and cable television, shall be placed underground.

Comment: The developer will coordinate with utility companies for the installation of underground facilities for electrical, cable, natural gas, telephone, and street lighting. As required by this section.

O. Curb cuts and driveways. Curb cuts and driveway installations are not required of the subdivider at the time of street construction, but, if installed, shall be according to City standards. Proper curb cuts and hard-surfaced driveways shall be required at the time buildings are constructed.

Comment: Curb cuts will be installed at the time of home construction and will be installed to City standards.

P. Street trees. Street trees shall be provided by the City Parks and Recreation Department in accordance with standards as adopted by the City in the Municipal Code. The fee charged the subdivider for providing and maintaining these trees shall be set by resolution of the City Council.

Comment: The developer will coordinate with the City Parks and Recreation Department regarding installation of street trees and will be responsible for paying the appropriate fee.

Q. Joint mailbox facilities shall be provided in all residential subdivisions, with each joint mailbox serving at least two, but no more than eight, dwelling units. Joint mailbox structures shall be placed in the street right-of-way adjacent to roadway curbs. Proposed locations of joint mailboxes shall be designated on a copy of the tentative plan of the subdivision, and shall be approved as part of the tentative plan approval. In addition, sketch plans for the joint mailbox structures to be used shall be submitted and approved by the City Engineer prior to final plat approval.



Comment: The developer will coordinate with the US Postal Service and the City Engineer regarding the location of joint mailbox clusters and will install them in accordance with this section.

## **CHAPTER 28 - WILLAMETTE AND TUALATIN RIVER PROTECTION**

### **28.030 APPLICABILITY**

A. *The Willamette and Tualatin River Protection Area is an overlay zone. The zone boundaries are identified on the City's zoning map, and include:*

1. *All land within the City of West Linn's Willamette River Greenway Area.*
2. *All land within 200 feet of the ordinary low water mark of the Tualatin River, and all land within the 100-year floodplain of the Tualatin River.*
3. *In addition to the Willamette Greenway and Tualatin River Protection Area boundaries, this chapter also relies on the HCA Map to delineate where development should or should not occur. Specifically, the intent is to keep out of, or minimize disturbance of, the habitat conservation areas (HCAs). Therefore, if all, or any part, of a lot or parcel is in the Willamette Greenway and Tualatin River Protection Area boundaries, and there are HCAs on the lot or parcel, a Willamette and Tualatin River Protection Area permit shall be required unless the development proposal is exempt per CDC 28.040.*

Comment: The subject property is not within the Willamette River or Tualatin River Greenway. The steep bluff area on the eastern end of the site is designated Medium Habitat Conservation Area by Metro and the City's GIS map.

### **28.040 EXEMPTIONS/USES PERMITTED OUTRIGHT**

The use of Habitat Conservation Areas for residential purposes is not listed as a use that is exempt or permitted outright. However CDC 28.040AA does apply to this proposal:

AA. *Lands that are designated as an HCA only due to a forested canopy shall be exempted since trees are already protected in the municipal code and Chapters 55 and 85 CDC. Development of lands that are designated as HCA due to other variables such as wetlands, flood areas and steep slopes shall still be regulated by the provisions of this chapter and not exempted.*

Please see discussion of this provision under section 28.070, below.

### **28.050 PROHIBITED USES**

*The following are prohibited:*

1. *Residential floating structures, also known as floating homes or houseboats.*
2. *Permanent ski jumps.*
3. *More than one dock with or without a boat house per riverfront lot of record, except City-owned tax lots 100, 200, 300, 400, and 500 of Assessor's Map 21 East 24.*
4. *The location of any dock under any water condition that prevents what would otherwise be historic, safe, uninterrupted water passage.*

5. Any new lawn area or garden area consisting primarily of non-native vegetation within HCA lands. A lawn area in the "Allowed Development" area is permitted.
6. Planting of any species identified as nuisance or prohibited plants on the Metro Native Plant List.
7. Non-permitted storage of hazardous materials as defined by the Oregon Department of Environmental Quality and dumping of any materials of any kind.
8. Excessive trimming or removal of existing native vegetation within the HCA unless it is to reestablish native vegetation in place of non-native or invasive vegetation. (Ord. 1576, 2008)

Comment: None of the uses listed in this section are proposed within the Habitat Conservation Area.

#### **28.060 ADMINISTRATION AND APPROVAL PROCESS**

*An application for a protection area permit shall be processed pursuant to the provisions of Chapter 99 CDC, Procedures for Decision-Making: Quasi-Judicial.*

Comment: The application is being processed quasi-judicially, in accordance with the provisions of Chapter 99 of the CDC.

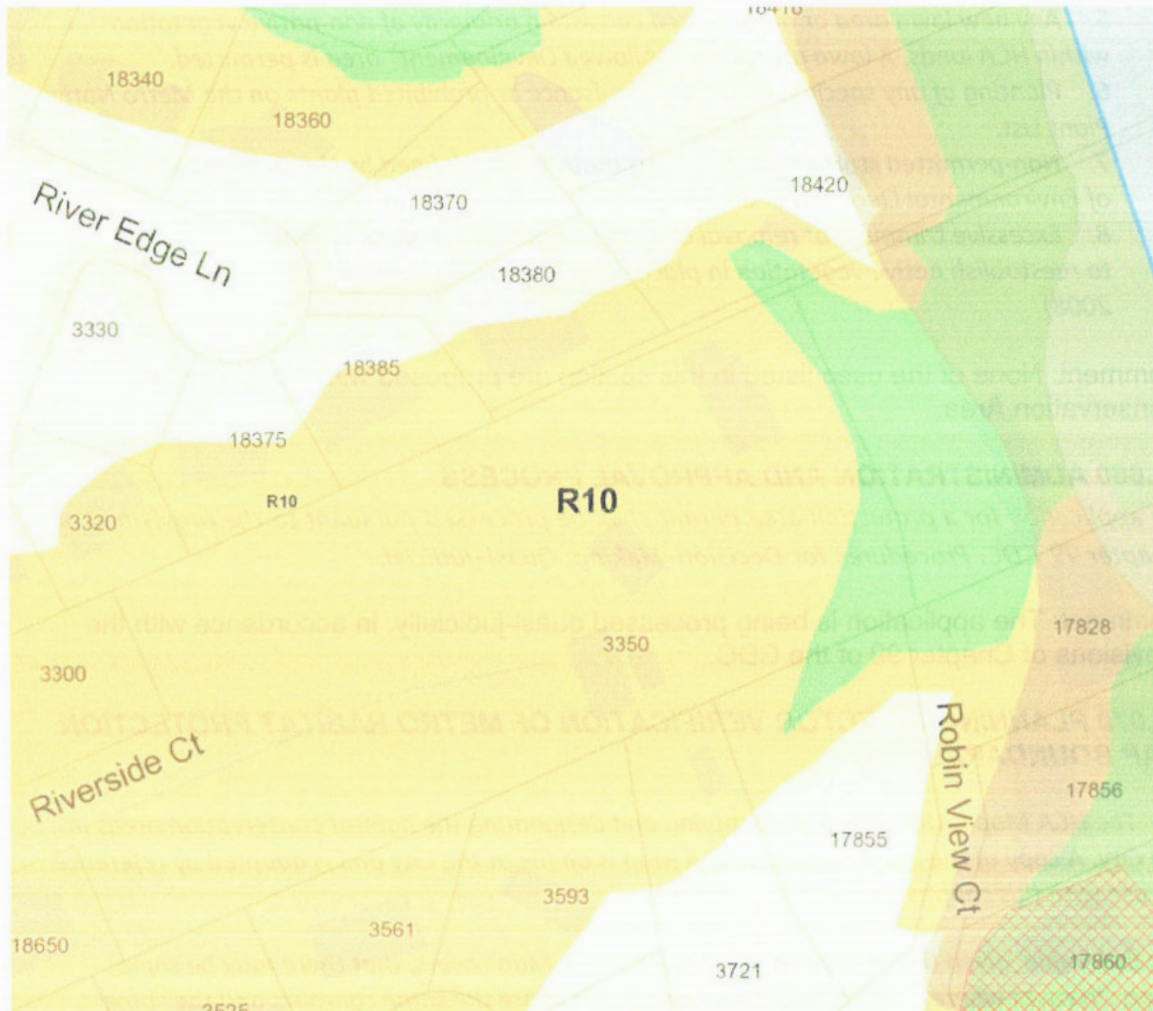
#### **28.070 PLANNING DIRECTOR VERIFICATION OF METRO HABITAT PROTECTION MAP BOUNDARIES**

A. *The HCA Map is the basis for identifying and designating the habitat conservation areas in the City. A copy of the latest, updated HCA Map is on file at the City and is adopted by reference for use with this chapter.*

*It is inevitable, given the large area that Metro's HCA Map covers, that there may be some errors. In cases where, for example, three properties share the same contours and the same natural features but the map shows the middle lot with an HCA designation on it, it is reasonable to question the accuracy of that HCA designation. Using tree overstory as the sole basis for HCA designation will also allow a change in designation since trees are already protected in the municipal code and Chapters 55 and 85 CDC.*

The map below shows the location of the HCA per the City of West Linn GIS mapping system.





The areas that are designated HCA due strictly to forested tree canopy are shown in tan. As noted in section 28.070(F) "Lands that are designated as an HCA only due to a forested overstory are exempt under CDC 28.040, Exemptions, since trees are already protected in the municipal code and Chapters 55 and 85 CDC." Therefore, the areas mapped in tan are not subject to the provisions of Chapter 28.

It is unclear as to why the HCA area mapped in green has received this designation as a moderate value HCA. It is wooded and there is a steep slope, but there are no drainageways or wetlands present in this area. Indeed, the Tax Lot to the east that is almost entirely within this designation is developed with a single-family home and has maintained residential yards and other landscaping. To the extent that it may be necessary to allow the development of Lots 5 and 6, the applicant will agree to a condition of approval requiring approval of a Planning Director Verification of the HCA boundary.

*B. The Planning Director shall verify the appropriate HCA or non-HCA designation by site visits or consultations with Metro or by other means. Determination is based on whether the Metro criteria are met or whether the Metro designation was based solely on tree overstory in which case a redesignation is appropriate. In cases where the determination is that the map is*



*incorrect, the Planning Director will make a written finding of this as well as the site conditions that led to that conclusion.*

Comment: We do not believe that there are any HCA resources on the subject property and that this area should not be designated as HCA.

*C. Class B public notice, per Chapter 99 CDC, shall be required prior to issuance of the redesignation decision if it involves redesignation of the HCA boundary to allow the construction of, or addition to, a house.*

Comment: The required notice will be provided.

*D. This determination and findings shall become part of the City record and part of the record for any associated land use application. The Planning Director shall also include in the record the revised map boundary. The Planning Director's determination and map revisions shall also be sent to Metro so that their map may be corrected as necessary.*

Comment: If approved, this requirement will be met by the City.

*E. The Planning Director determination is appealable to the City Council per Chapter 99 CDC.*

Comment: The applicant recognizes that the determination is appealable.

*F. Lands that are designated as an HCA only due to a forested overstory are exempt under CDC 28.040, Exemptions, since trees are already protected in the municipal code and Chapters 55 and 85 CDC. Similar exemptions apply to lands that exhibit no constraints. (Ord. 1576, 2008; Ord. 1604 §§ 25 – 28, 2011)*

Comment: The areas shown in tan are exempt due to this provision as there are no habitat resources in those areas other than forested overstory.

### **28.110 APPROVAL CRITERIA**

*No application for development on property within the protection area shall be approved unless the decision-making authority finds that the following standards have been met or can be met by conditions of approval. The development shall comply with the following criteria as applicable:*

Comment: Upon approval of a change in designation, these provisions will no longer apply.

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Domestic Return Receipt

PS Form 3811, July 2015 PSN 7530-02-000-9053

Notice of Neighborhood Meeting Regarding  
A Proposed 10-Lot Subdivision  
Located at 3350 Riverside Drive

Hello,

You are invited to attend a neighborhood meeting to discuss a proposed development in your area. Bill Varitz and Greg Sams are proposing to construct a 10-Lot subdivision on property located at 3350 Riverside Drive in West Linn.

As required by the West Linn Community Development Code, prior to the submittal of an application to the City of West Linn for preliminary approval of this project, a meeting with neighbors will be held to present the conceptual plan for the project, to answer questions and for the developers to receive feedback from those in attendance. This notice of the meeting is being mailed to owners of property located within 500 feet of the boundaries of the subject property. The notice is also being mailed to officers of the Robinwood Neighborhood Association as the property is located within the Robinwood Neighborhood Association boundary.

The proposed development is scheduled to be presented at the May 9, 2017 meeting of the Robinwood Neighborhood Association. There may be other items on the agenda in addition to this project. Meeting time and place are:

7:00 pm on Tuesday, May 9, 2017  
Robinwood Station  
3706 Cedaroak Drive  
West Linn, Oregon 97068.

We look forward to meeting with you. If you cannot attend in person but have questions regarding the project, please feel free to contact the project planning consultant, Rick Givens. You may phone him at (503) 479-0097 or contact him via email at [rickgivens@gmail.com](mailto:rickgivens@gmail.com).

# Notice of Neighborhood Meeting

## Regarding A Proposed 10-Lot Subdivision Located at 3350 Riverside Drive

You are invited to attend a neighborhood meeting to discuss a proposed 10-Lot subdivision on property located at 3350 Riverside Drive in West Linn. As required by the West Linn Community Development Code, prior to the submittal of an application to the City of West Linn for preliminary approval of this project, a meeting with neighbors will be held to present the conceptual plan for the project, to answer questions and for the developers to receive feedback from those in attendance.

The proposed development is scheduled to be presented at the May 9, 2017 meeting of the Robinwood Neighborhood Association. There may be other items on the agenda in addition to this project. Meeting time and place are:

7:00 pm on Tuesday, May 9, 2017  
Robinwood Station  
3706 Cedaroak Drive  
West Linn, Oregon 97068

If you cannot attend, but would like further information, please contact the project's planning consultant:

Rick Givens  
(503) 479-0097  
rickgivens@gmail.com

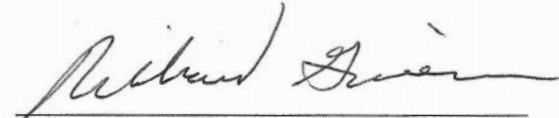




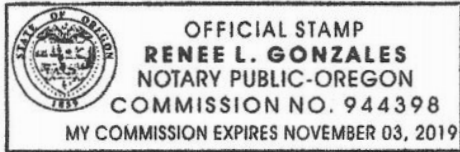
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STATE OF OREGON        )  
                                  )        SS  
County of Clackamas    )

I, Richard Givens, Planning Consultant for William Varitz and Greg Sams, in the case of the Ferndell Estates Subdivision, declare that on April 18, 2017, pursuant to Chapter 99.083 of the West Linn Community Development Code, a sign providing notice of a neighborhood meeting to discuss the proposed 10-lot project. The sign exceeded the required 11" x 17" standard and was posted on the subject property's frontage on Old River Drive.

  
\_\_\_\_\_  
RICHARD GIVENS  
PLANNING CONSULTANT

2/20/2018  
DATE



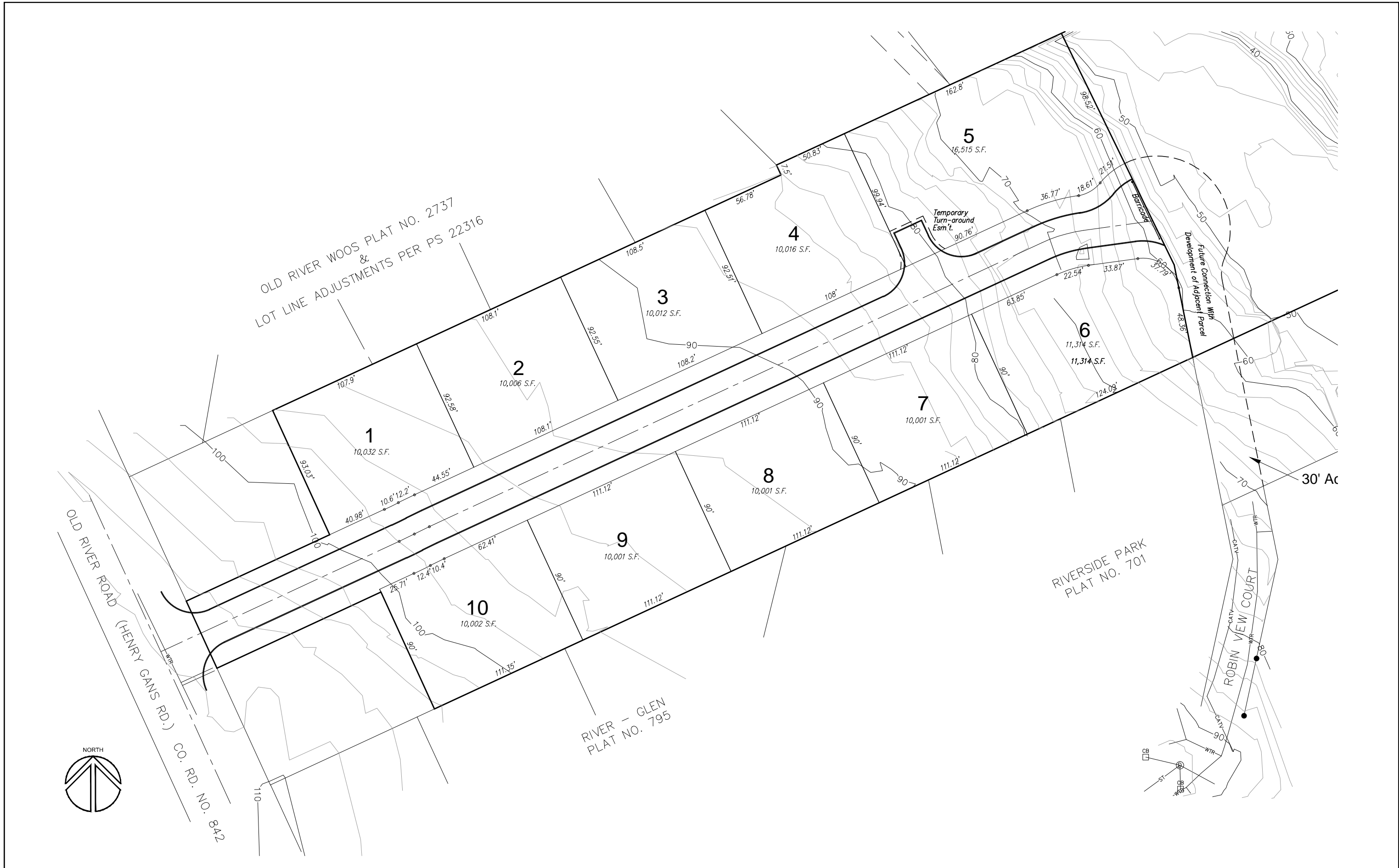
  
Renee L. Gonzales - 944398  
State of Oregon  
Clackamas County

May 9 2017

ROBINWOOD NEIGHBORHOOD ASSOCIATION

Name (Please Print)	Address	E-Mail Address
Christine Steel	Upper Midhill	STEELC123@BMAIL.COM
Mary Hill	Nixon	
JAY HALADAY	18420 OLD RIVER LANDING	JAYHALADAY@GMAIL.COM
Don Kingsborough	LIXON	
JOE WILHELM	ROBIN VIEW	
Denise + Rich Van Rhee	Robin View Dr.	
PETE BEDARD	19431 WILDERNESS	PETE.BEDARD@GMAIL.COM
Nigel Dolder	18649 Old River Dr	redlode@comcast.net
Judy Wiechmann	Cheerokee Ct	joodyw@comcast.net
Longxing Deng	18575 OLD RIVER DR	
Lisa Clifton	Ridgewood Way	
Steve Whitesides	18602 old River Dr	eukaryot@hotmail.com





DESIGNED:	R.E.G.			
DRAWN:	R.E.G.			
SCALE:	1" = 60'			
DATE:	November 2016			
FILE:	16-VAR-100	DATE	NO.	REVISION

Richard E. Givens, Planning Consultant  
 18680 Sunblaze Dr.  
 Oregon City, OR 97045  
 PH: (503) 479-0097

APPLICANT: Bill Varitz  
 17828 Robin View Ct.  
 West Linn, OR 97068  
 PH: (503) 635-2108

**Pre-application Conference**  
 Subdivision Concept Plan

SHEET:  
 1/1



# Neighborhood Meeting Minutes

## Ferndell Estates Subdivision

May 9, 2017.

Location: Robinwood Community Center

Attendance: 35-40

Developer: Greg Sams, Hymark Custom Homes, Inc.

The plan to divide this parcel of property into a 10-lot subdivision was shared with attendees. Greg Sams, one of the applicants, made the presentation.

A preliminary plat drawing showing the proposed subdivision and the placement of the street was presented. Mr. Sams noted that trees would be preserved responsibly. Overall feedback was positive for the development. Concerns included tree preservation, need for a sidewalk on one side of the street and management of all development activities to be community friendly was emphasized by those in attendance.

Ferndell Estates SUBDIVISION  
Preliminary  
STORM DRAINAGE REPORT  
January 2018

**Preliminary Only**

PREPARED BY:  
BRUCE D GOLDSON, PE  
THETA ENGINEERING



**INDEX**

Description ..... page 3  
Site conditions ..... page 3  
Regulatory ..... page 3  
Soils..... page 3  
Conclusion ..... page 4  
Reduced sized copies of Water Quality facility..... page 5  
Soils summary ..... page 6

# Preliminary Storm drainage report for Ferndell Estates

## Site Conditions:

This parcel is a rectangular tract made up of two parcels (3300 & 3350 Riverside Ct.) and containing approximately 3.1 acres. Riverside Ct. is a private drive that is connected to Old River Road, A public street. Easterly 17828 Robin View Court has direct access to the Willamette River. There are two residential dwellings and several out building on site. The property is generally wooded and slopes towards The Willamette River with an overall average slope of 7% with local areas in the 15% range. With development ten (1) lots are proposed with a public street ending with a partial blub that would be extended to Robin View Ct. with future development.

Regulatory

### *2.0013 Minimum Design Criteria*

#### *A. Storm Detention Facilities*

*2. Storms to be evaluated shall include the 2, 5, 10, 25 and 100-year events. Allowable post development discharge rates for the 2, 5, 10, and 25-year events shall be that of the pre-development rate. An outfall structure such as a "V-Notch" weir or single or multiple orifice structure shall be designed to control the release rate for the above events. No flow control orifice smaller than 1 in. shall be allowed. If the maximum release cannot be met with all the site drainage controlled by a single 1 in. orifice, the allowable release rate provided by a 1 in. orifice will be considered adequate as approved by the City Engineer.*

Hydrologic Soils Group:

The Oregon Soil Survey was used to determine the soil type and Hydrologic Soil Group.

Map unit Symbol	Map unit name
19	Cloquanta Silt
91B	Woodburn Silt

## **DRAINAGE STRATEGY**

Since the property is in close proximity to the Willamette River and has direct access to the water no detention is proposed. A water quality facility is proposed using the criteria of Clean Water Services. (CWS)



## Water Quality Facility

Streets and walks = 18,374 SF + (10)(2640) = 44974 sf

**WQ volume = 0.36 X Area/12 = (0.36") (44974sf)/12"/ft = 1349 CF**

**WQ Flow= Water Quality Volume/14400 = 1349 / 14400 = 0.09cfs**

**Orifice size - Diameter = 24 X{(Q/(C{2gH}<sup>.5</sup>)/ π)<sup>.5</sup> =**

**24{(0.09/(0.62){(2)(32)(2)}<sup>.5</sup>/π)<sup>.5</sup> = 2.5 inches**

## Design Parameters

The design storm is a 24 hour standard SCS Type 1A

- 2-year.....2.5 inches
- 10-year.....3.45 inches
- 25-year.....3.9 inches
- 100-year.....4.5 inches

## Recommendations & Conclusion

With proximity to the Willamette River detention would have no measurable effect on the flood flow of the river. A water quality pond on 17828 Robin View Court will provide the necessary cleaning of the storm water prior to discharge into the river. This facility will be located above the 100-year floor plain of the River



Density Calculations			
	Area (sq. ft.)	Allowable Density	Units @1 per 10,000 sq.ft.
Gross Site Area	142,933		
Land in a boundary street right-of-way, water course, or planned open space where density transfer is not requested:	0		
Area in street right-of-way:	34,373		
Net Site Area:	108,560		
Net Area within Type I or II slopes where Developed:	4,422	50%	.22
Area within Type I or II slopes where Density Will be Transferred:	0	75%	0
Area within Water Resource Area-all development transferred.	0	50%	0
Open Space (Type III and IV Lands)	0	100%	0
Net Type III & IV Land Developed:	104,138	100%	10.41
Base Density Allowed:			10.63
TOTAL ALLOWED DENSITY:			10 UNITS

SIGNED ON: **2 FEB 18**  
**REGISTERED PROFESSIONAL LAND SURVEYOR**  
  
**OREGON**  
**JULY 13, 2004**  
**TOBY G. BOLDEN**  
**60377LS**  
 RENEWS: DECEMBER 31, 2018

Design by: Richard E. Givens, Planning Consultant  
 Survey Work by: Centerline Concepts, Inc.

Applicant/Owner:  
 Bill Varitz  
 17828 Robin View Ct.  
 West Linn, OR 97068  
 PH: (503) 939-3803

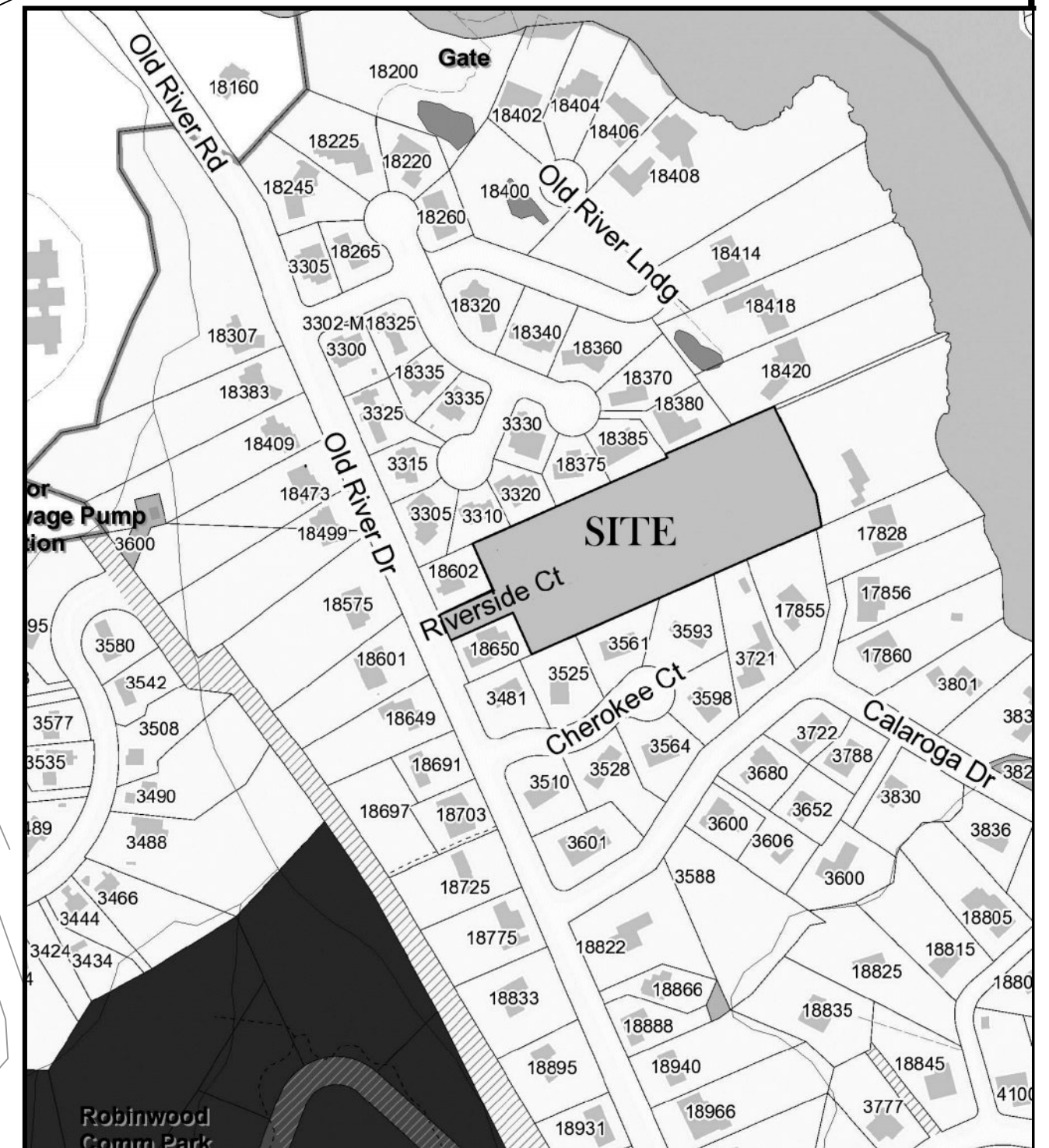
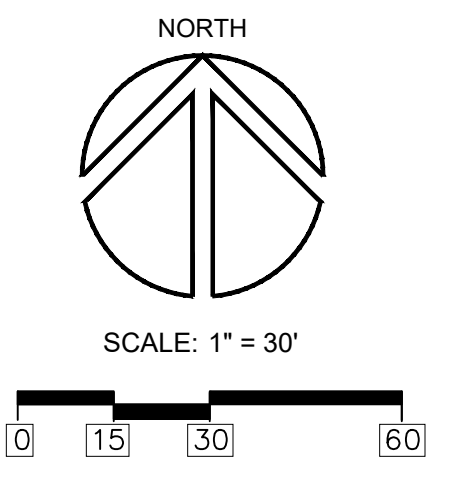
Legal: 2-1E-14AD TL 900 & 990  
 Water: City of West Linn  
 Sewer: City of West Linn

Contours: Centerline Concepts, Inc.  
 Site Area: 3.28 Acres

Engineer:  
 Theta Engineering, Inc.  
 PO Box 1345  
 Lake Oswego, OR 97035  
 PH: (503) 481-8822

Surveyor:  
 Centerline Concepts, Inc.  
 700 Molalla Ave.  
 Oregon City, OR 97045  
 PH: (503) 650-0188

Zoning: R-10



Vicinity Map

DESIGNED: REG			
DRAWN: REG			
SCALE: 1" = 30'			
DATE: February 2018			
FILE: 13-VAR-100	DATE	NO.	REVISION

Richard E. Givens, Planning Consultant  
 18680 Sunblaze Dr.  
 Oregon City, OR 97045  
 PH: (503) 479-0097

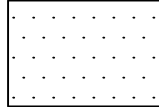
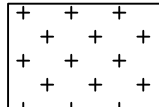
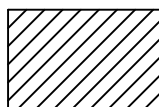
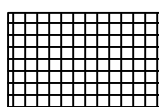
APPLICANT: Greg Sams & Bill Varitz  
 18811 Trillium Drive  
 West Linn, OR 97068  
 PH: (503) 939-6015

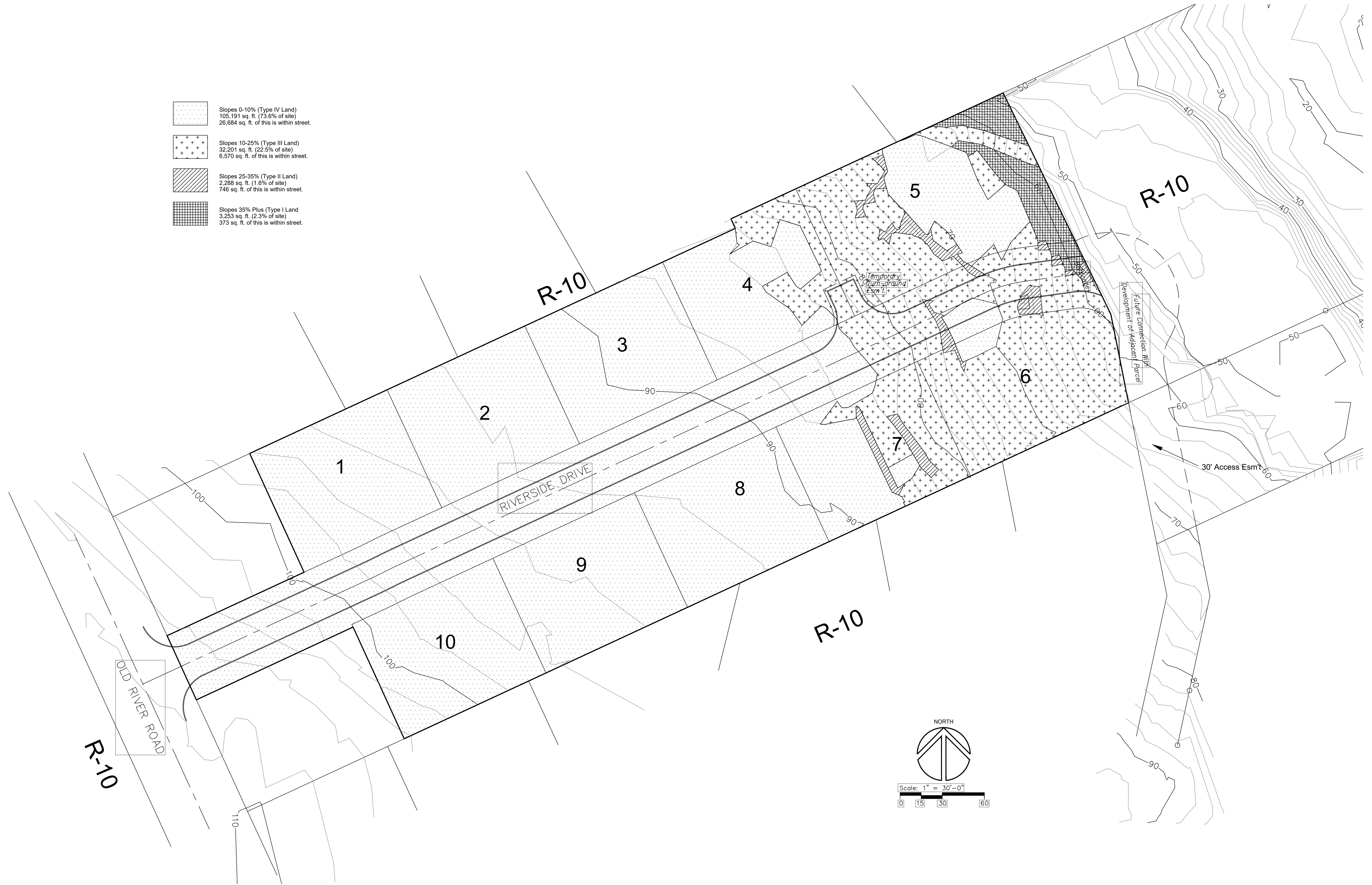
# Ferndell Estates

## Tentative Plan

11/7/18 PC Meeting  
 p. 79



-  Slopes 0-10% (Type IV Land)  
 105,191 sq. ft. (73.6% of site)  
 26,884 sq. ft. of this is within street.
-  Slopes 10-25% (Type III Land)  
 32,201 sq. ft. (22.5% of site)  
 6,570 sq. ft. of this is within street.
-  Slopes 25-35% (Type II Land)  
 2,288 sq. ft. (1.6% of site)  
 746 sq. ft. of this is within street.
-  Slopes 35% Plus (Type I Land)  
 3,253 sq. ft. (2.3% of site)  
 373 sq. ft. of this is within street.



DESIGNED:	REG			
DRAWN:	REG			
SCALE:	1" = 30'			
DATE:	February 2018			
FILE:	16-VAR-100	DATE	NO.	REVISION

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 18680 Sunblaze Dr.  
 Oregon City, OR 97045  
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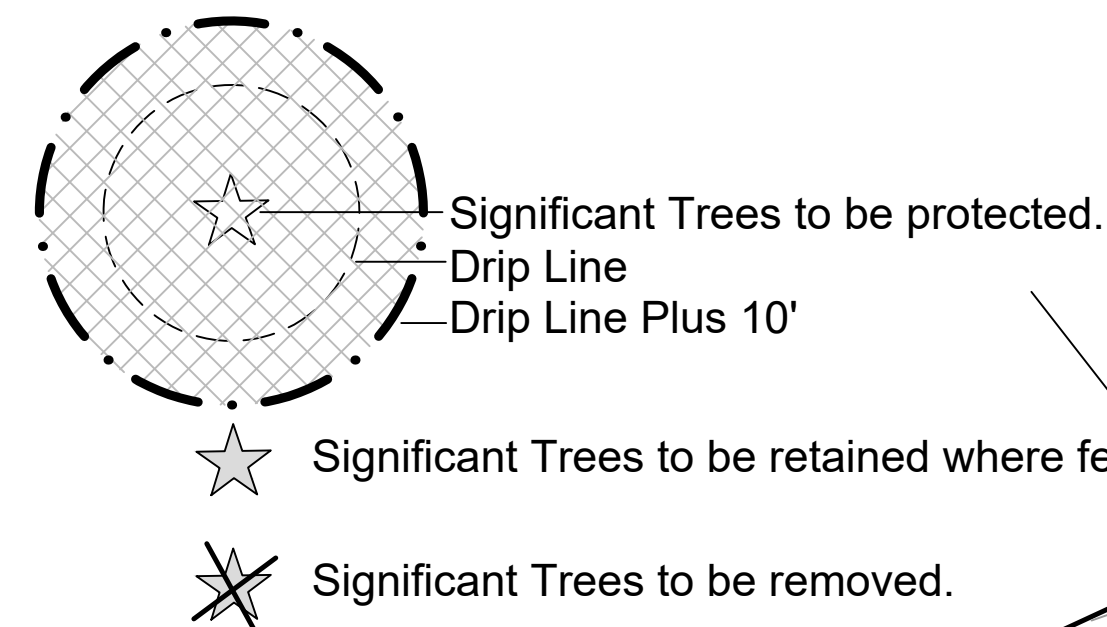
## Ferndell Estates Slope Analysis



Tag	Species	Diameter	Rating	Condition
1	Port-Orford Cedar	13	2	added
2	Douglas Fir	34	1	co-dominant stem cut; decay present
3	big leaf maple	21	2	dead branches
4	western red cedar	18	2	viable
5	sweet cherry	16	2	ivy
6	big leaf maple	14	2	viable
7	big leaf maple	15	2	viable
8	western red cedar	33	2	co-dominant @ 35'
9	western red cedar	16	2	3' off-site; added
10	sweet cherry	13	2	added
11	sweet cherry	12	2	added
12	red alder	12	1	trunk decay; added
13	red alder	12	2	trunk swoop; added
14	big leaf maple	30	1	basal decay
15	western red cedar	14	2	
16	big leaf maple	16	2	
17	big leaf maple	12,13	2	co-dominant; added
18	western red cedar	25	2	co-dominant @ 25'
19	sweet cherry	14	2	added
20	big leaf maple	22	2	
21	sweet cherry	21	2	
22	big leaf maple	15	2	added
23	sweet cherry	12	2	ivy
24	sweet cherry	15	2	ivy
25	sweet cherry	15	2	added
26	sweet cherry	13	2	added
27	big leaf maple	17	2	added
28	western red cedar	36	2	2' off-site; added
29	sweet cherry	18	2	
30	grand fir	40	3	
31	western red cedar	22	2	
32	big leaf maple	17	2	
33	big leaf maple	12	2	added
34	big leaf maple	18	2	

35	big leaf maple	36	1	multiple stems; basal decay; past failures
36	Douglas Fir	39	2	very tall
37	red alder	14	1	trunk decay; added
38	big leaf maple	14	2	added
39	sweet cherry	13	2	added
40	big leaf maple	17	2	co-dominant from base; added
41	big leaf maple	26	2	multiple stems; added
42	big leaf maple	22	2	multiple stems; added
43	big leaf maple	21	2	multiple stems; added
44	big leaf maple	25	2	multiple stems; added
45	big leaf maple	33	2	multiple stems; added
46	big leaf maple	44	1	multiple stems; added
47	big leaf maple	15	2	added
48	big leaf maple	13	2	added
49	sweet cherry	15	2	
50	big leaf maple	18	2	added
51	red alder	13	2	
52	big leaf maple	17	2	
53	sweet cherry	12	2	added
54	big leaf maple	18	1	basal decay
55	big leaf maple	27	2	added
56	big leaf maple	14	2	added
57	big leaf maple	16	2	ivy
58	Douglas Fir	26	2	very tall
59	Douglas Fir	40	2	very tall
60	Douglas Fir	49	2	very tall
61	Douglas Fir	33	2	very tall; shares stump with 162
62	western red cedar	21	2	shares stump with 161
63	big leaf maple	16	2	co-dominant from 1'; added
64	big leaf maple	13	2	
65	big leaf maple	15	2	
66	Douglas Fir	33	2	very tall
67	big leaf maple	17	2	added
68	big leaf maple	20	2	added
69	sweet cherry	12	2	added

70	Douglas Fir	19	2	poor trunk taper
71	Douglas Fir	30	2	
72	Douglas Fir	22	2	poor trunk taper
73	Douglas Fir	30	2	
74	Douglas Fir	26	2	
75	big leaf maple	13	2	added
76	Douglas Fir	17	2	
77	Douglas Fir	27	2	
78	big leaf maple	17	2	
79	big leaf maple	13	1	co-dominant stem is cut; basal decay
80	big leaf maple	20	2	
81	big leaf maple	26	2	
82	Douglas Fir	34	2	
83	Douglas Fir	32	2	
84	Douglas Fir	27	2	
85	Douglas Fir	29	2	added
86	big leaf maple	17	2	
87	Douglas Fir	40	2	
88	big leaf maple	21	2	
89	big leaf maple	15	2	added
90	big leaf maple	13	2	added
91	sweet cherry	13	2	added
92	big leaf maple	12	2	added
93	big leaf maple	13	2	added
94	big leaf maple	20	2	
95	Douglas Fir	36	2	within 1' of out building
96	sweet cherry	20	2	
97	Douglas Fir	47	2	
98	sweet cherry	13	2	added
99	sweet cherry	13	2	added
100	Douglas Fir	40	2	
101	Douglas Fir	24	2	
102	western red cedar	30	2	
103	sweet cherry	15	2	trunk swoop; added
104	western red cedar	19	2	



105	sweet cherry	12	2	added
106	big leaf maple	18	1	trunk and basal decay; added
107	big leaf maple	12	2	added
108	western red cedar	26	2	<1' off-site; added
109	sweet cherry	13	2	added
110	big leaf maple	12	2	added
111	big leaf maple	21	1	multiple stems; added
112	big leaf maple	18	2	
113	Douglas Fir	29,33	2	co-dominant from base
114	western red cedar	29	2	trunk decay; co-dominant @ 20'
115	big leaf maple	20	2	
116	big leaf maple	15	2	added
117	Douglas Fir	33	2	
118	Douglas Fir	31	2	
119	western red cedar	26	2	
120	light pole	9	N/A	not a tree
121	red alder	19	2	
122	big leaf maple	16	2	
123	Douglas Fir	27	2	
124	Douglas Fir	30	2	
125	Douglas Fir	40	2	
126	sweet cherry	23	2	co-dominant; included bark
127	big leaf maple	12	2	added
128	big leaf maple	21	2	added
129	big leaf maple	15	2	
130	big leaf maple	19	2	
131	western red cedar	41	2	
132	sweet cherry	16,14	2	co-dominant from base
133	sweet cherry	16	2	added
134	western red cedar	30	2	
135	Scouler willow	14	2	added
136	big leaf maple	40	2	co-dominant @ 5'
137	red alder	12	2	added
138	Douglas Fir	40	2	
139	western red cedar	34	2	

140	chestnut	13	2	added
141	western red cedar	30	2	
142	big leaf maple	27	2	co-dominant @ 3'
143	Douglas Fir	45	2	
144	western red cedar	13	2	
145	sweet cherry	12	2	added
146	big leaf maple	16	2	
147	big leaf maple	17	2	
148	western red cedar	18	2	
149	big leaf maple	18	2	
150	big leaf maple	27	2	co-dominant @ 3'; added
151	big leaf maple	16	2	
152	incense cedar	18	2	multiple tops
153	western red cedar	32	2	
154	Douglas Fir	35	2	
155	Douglas Fir	50	2	
156	western red cedar	32	2	7' off-site
157	western red cedar	36	2	5' off-site
158	Douglas Fir	45	2	
159	big leaf maple	26	2	co-dominant @ 3'
160	Douglas Fir	59	1	P. schweinitzii root disease; co-dominant stems
161	western red cedar	14	2	hedgerow; added
162	western red cedar	13	2	hedgerow; added
163	western red cedar	12	2	hedgerow; added
164	western red cedar	19	2	hedgerow; added
165	western red cedar	12	2	hedgerow; added
166	sweet cherry	15	2	
167	Douglas Fir	27	2	
168	Pacific madrone	6	2	added
169	Douglas Fir	27	1	red-ring rot
170	Douglas Fir	23	2	
171	Douglas Fir	35	2	
172	big leaf maple	30	2	added
173	sweet cherry	13	2	added
174	big leaf maple	14,14	2	added

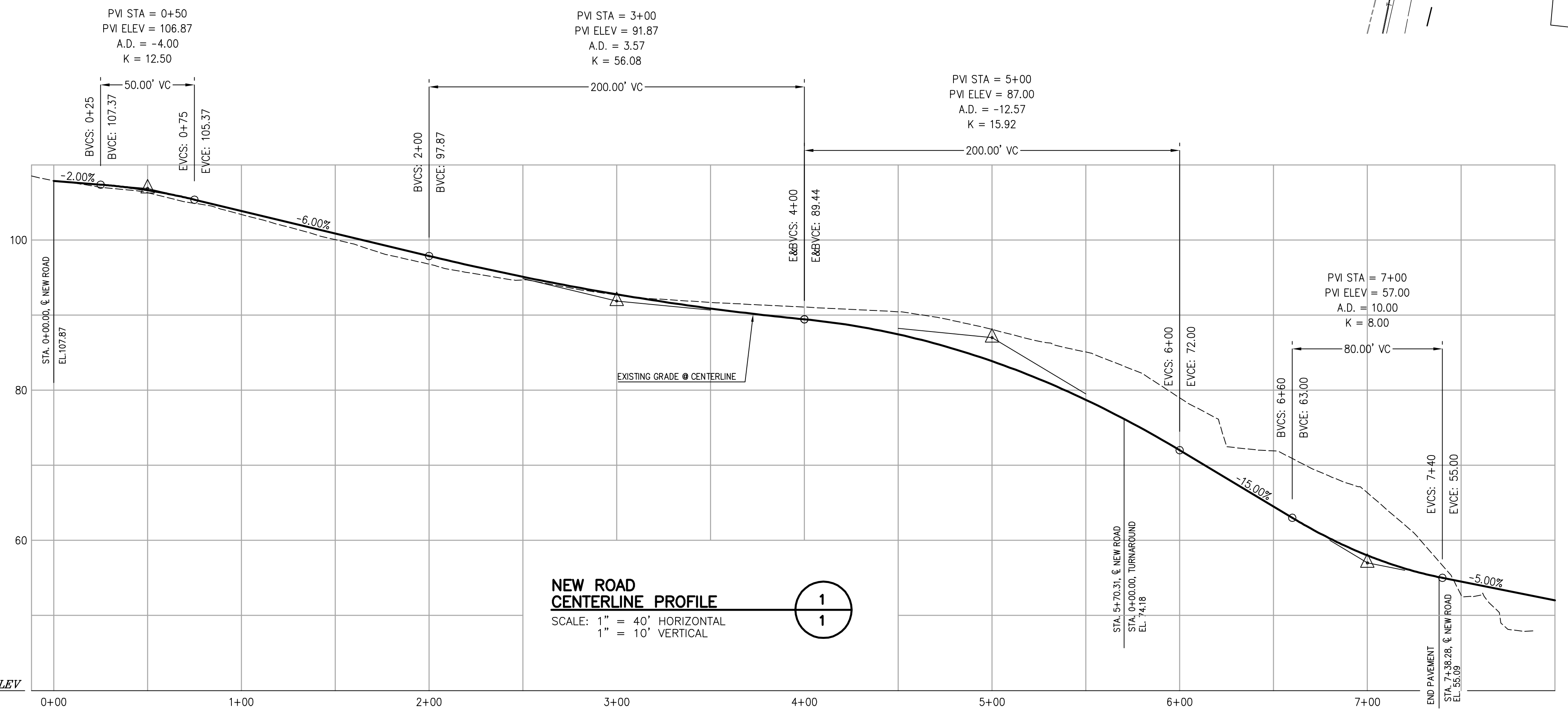
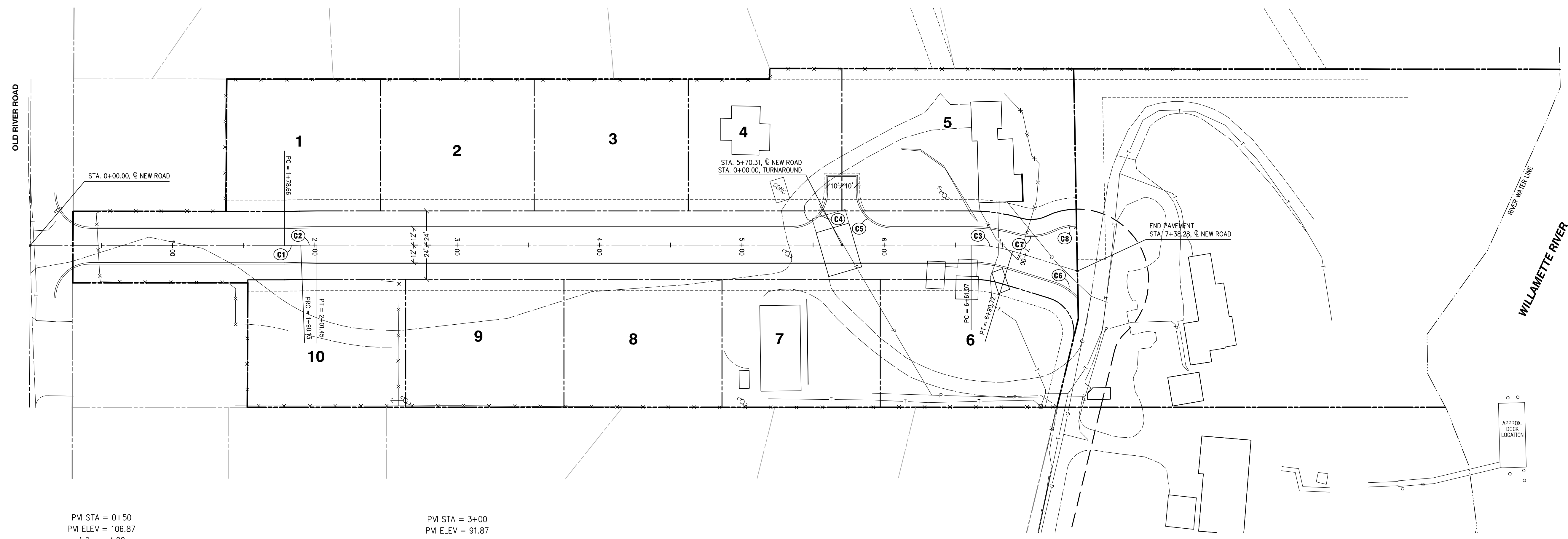
DESIGNED: REG	DATE: February 2018	NO.	REVISION
DRAWN: REG	FILE: 16-VAR-100		
SCALE: 1" = 30'			

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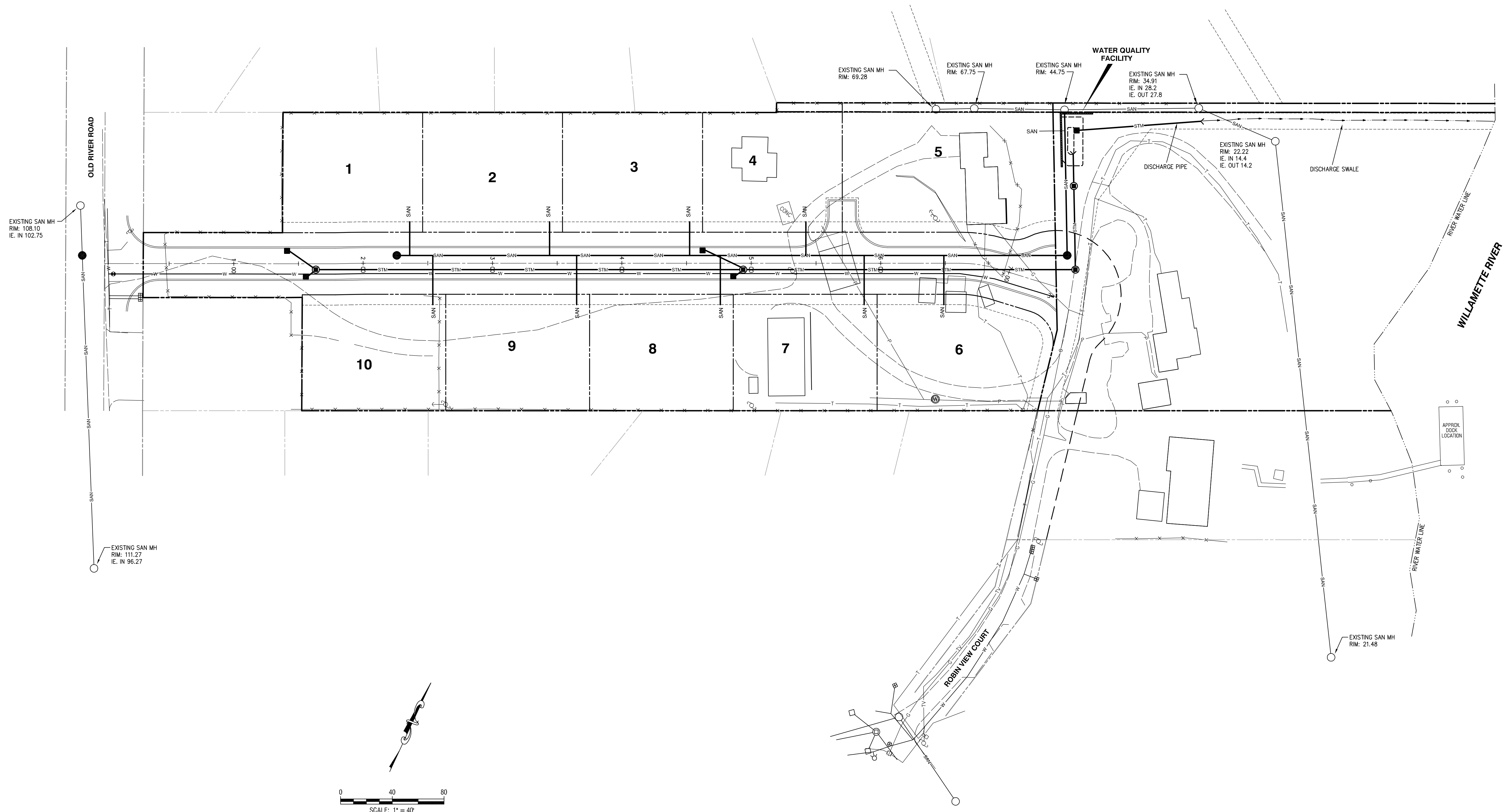
# Ferndell Estates Tree Plan





**NEW ROAD CENTERLINE PROFILE**  
 SCALE: 1" = 40' HORIZONTAL  
 1" = 10' VERTICAL

11/7/18 PC Meeting  
p. 82



2018-250

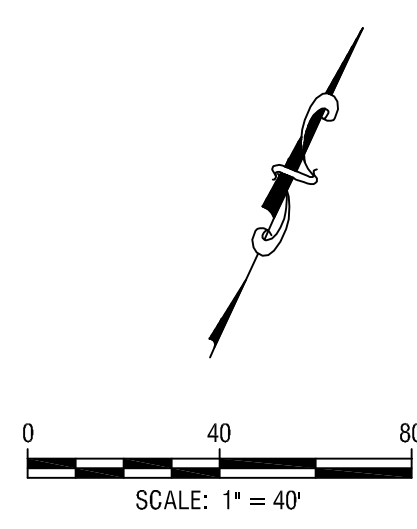
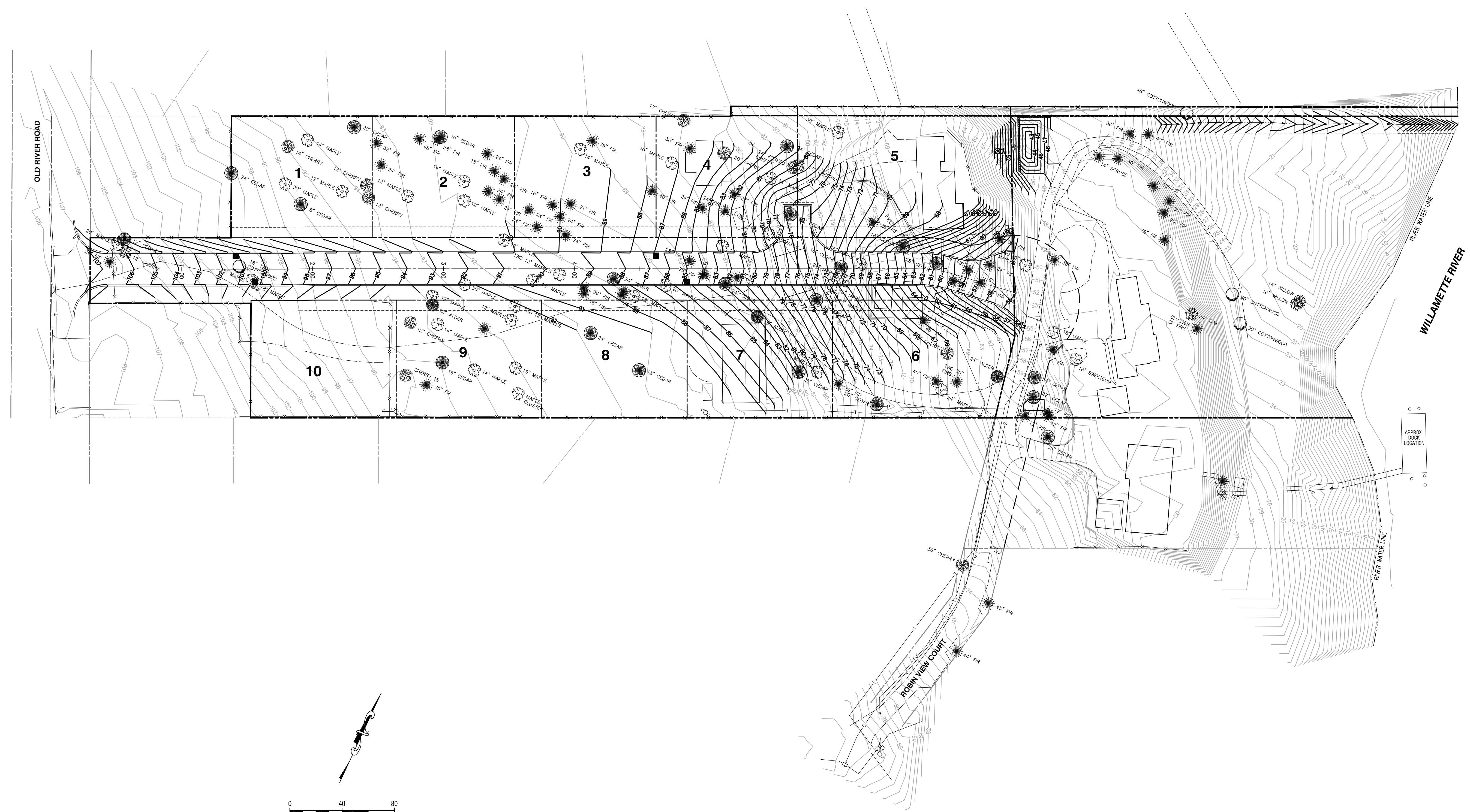
**PRELIMINARY UTILITY PLAN**

DESIGNED:	BDG			
DRAWN:	BJS			
SCALE:	1" = 40'			
DATE:	June, 2017			
FILE:	Ferndell Estates	DATE	NO.	REVISION

**Theta, llc**  
 ENGINEERING - SURVEYING - PLANNING  
 PO Box 1345 503/481-8822  
 Lake Oswego, Oregon 97035 email: thetaeng@comcast.net

Ferndell Estates

SHEET:  
**2/3**



2017-X


DESIGNED:	BDG			
DRAWN:	BJS			
SCALE:	1" = 40'			
DATE:	June, 2017			
FILE:	Ferndell Estates	DATE	NO.	REVISION

**Theta, llc**  
 ENGINEERING - SURVEYING - PLANNING  
 PO Box 1345      503/481-8822  
 Lake Oswego, Oregon 97035      email: thetaeng@comcast.net

11/7/18 PC Meeting  
p. 84

**PRELIMINARY GRADING PLAN**  
 Ferndell Estates

SHEET:  
**3/3**



May 3, 2018

Mr. Peter Spir, Assoc. Planner  
City of West Linn  
PO Box 29  
West Linn, OR 97068

**Rick Givens**  
**Planning Consultant**  
18680 Sunblaze Dr.  
Oregon City, Oregon 97045

RE: Ferndell Estates (SUB-18-01, WRG-18-02)

Dear Peter:

We are submitting additional information in response to the incompleteness letter of March 14, 2018 for Ferndell Estates. The staff comments in that letter have been addressed as follows:

1. Erosion control plans are now provided on the revised Grading Plan.
2. After discussion with Assistant City Engineer Erich Lais regarding the location of the storm drainage treatment facility on Tax Lot 1000, which is owned by Mr. Varitz but is not a part of this subdivision, it has been agreed that the applicant will grant an easement for the drainage treatment facility and for access to that facility by the City for maintenance purposes. See easement note on Tentative Plan.
3. Street trees are now shown on the revised Tentative Plan.
4. A copy of the deed to the subdivision tract with legal description is attached.
5. A re-division plan for TL 1000 is now shown on the Tentative Plan.
6. A geologic report has been prepared for the site and is being submitted with this letter.
7. A full storm report has been prepared for this application and is being submitted with this letter.
8. The requirement of the TSP Table 17 and Figure 12 for pedestrian/bike connection from Old River Rd. to Robin View Ct. will be met in part by the sidewalk and low volume local street being developed with the approval of this application. The connection will be completed when TL 1000 is developed in the future.

Discussion with Erich Lais indicates that the proposed location of the hammerhead turn-around is acceptable to Public Works as long as the Fire Department is satisfied with this location. It is our understanding that TVF&R has approved this design.

Tax Lots 1000 and 500 are not a part of this subdivision application. As shown on the future development plan shown on the Tentative Plan, the alley-level street connection to Robin View will be completed when Tax Lot 1000 is re-developed in the future.

9. The Street Plan shows the curb returns at the entrance to the subdivision from Old River Road. Details of the pavement transition will be provided with the final engineering for the project. Per discussions with Erich Lais, the plans for the future connection to Robin View Drive/Court will be deferred until Tax Lot 1000 is re-developed.



10. The applicant proposes to change the street name from Riverside Court, which is the current address for the property, to Ferndell Drive. Riverside Court is not a platted street but, rather, an informal name for the 50' access strip of the subject property. The final plat for the proposed subdivision will establish Ferndell Drive as the name of the new street.
11. The applicant acknowledges that the correct standard for the response to Chapter 92(A)(1) is 6' sidewalks and 6' planter strips.
12. The Utility Plan now is noted to show the replacement of the existing 2" water line in Robin View Ct. from the new street's terminus to Robin View Drive.
13. A report has been prepared by Schott & Associates to address the Habitat Conservation Area designation on the eastern portion of the subject property and Tax Lot 1000. That report verifies that there are no water resources present on either property that would warrant the HCA designation. It is requested the Planning Director accept this map correction.
14. Street light locations are now noted on the Utility Plan.
15. Please refer to the Schott & Associates report regarding re-designation of the HCA.
16. As discussed in the Schott & Associates report, there are no HCA resources present on the subject property.
17. We request that the HCA map be re-designated to remove the HCA designation from the subject property and TL 1000 per the Schott & Associates recommendation.
18. The Schott & Associates report demonstrates that the HCA should be removed from the subject property so there is no need to address 28.070L.
19. The trench from the storm water treatment facility is minor in nature, consisting of simply cutting a shallow "V" to channel the water to the Willamette River. Chapter 2 defines "development" as, "Any manmade change defined as the construction of buildings or other structures, mining, dredging, paving, filling, grading or site clearing, and grubbing in amounts greater than 10 cubic yards on any lot, parcel, or lot of record. Within the flood management area, this term shall also include storage of equipment or materials." The proposed grading will not disturb more than 10 cubic yards of material and does not involve the storage of equipment or materials on the property. For this reason, a Flood Management Area permit is not required.

We believe that we have provided information to address all of the items listed in the letter of incompleteness and it is our hope that you will now deem the application complete. If you do need anything further, please let me know.

Sincerely yours,

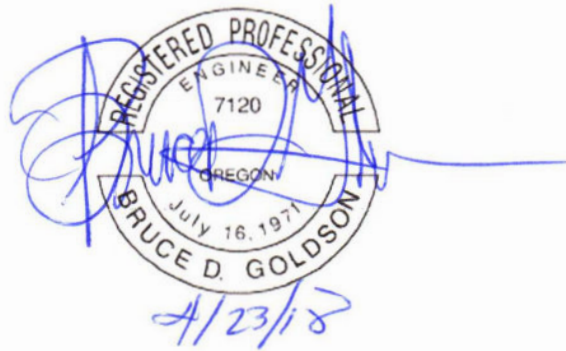


Rick Givens

Cc: Bill Varitz, Greg Sams

**Ferndell Estates SUBDIVISION**  
**Preliminary**  
**STORM DRAINAGE REPORT**  
**April 2018**

**PREPARED BY:**  
**BRUCE D GOLDSON, PE**  
**THETA ENGINEERING**



**INDEX**

Description ..... page 3

Site conditions ..... page 3

Regulatory ..... page 3

Soils..... page 3

Conclusion..... page 4

Presumptive Calculations.....page 5 & 6

Reduced sized copies of Water Quality facility ..... page 7

Soils summary ..... page 8

## Preliminary Storm drainage report for Ferndell Estates

### Site Conditions:

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#### *2.0013 Minimum Design Criteria*

##### *A. Storm Detention Facilities*

*2. Storms to be evaluated shall include the 2, 5, 10, 25 and 100-year events. Allowable post development discharge rates for the 2, 5, 10, and 25-year events shall be that of the pre-development rate. An outfall structure such as a "V-Notch" weir or single or multiple orifice structure shall be designed to control the release rate for the above events. No flow control orifice smaller than 1 in. shall be allowed. If the maximum release cannot be met with all the site drainage controlled by a single 1 in. orifice, the allowable release rate provided by a 1 in. orifice will be considered adequate as approved by the City Engineer.*

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The Oregon Soil Survey was used to determine the soil type and Hydrologic Soil Group.

Map unit Symbol	Map unit name
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91B	Woodburn Silt

### **DRAINAGE STRATEGY**

Since the property is in close proximity to the Willamette River and has direct access to the water no detention is proposed. A water quality facility is proposed using the criteria of the City of Portland.



Presumptive Approach Calculator

Hierarch Category 3, Drainage way, stream (Willamette River)

Rectangular basin with 3:1 side slopes

Results: see printout

## Design Parameters

The design storm is a 24 hour standard SCS Type 1A

- 2-year.....2.5 inches
- 10-year.....3.45 inches
- 25-year.....3.9 inches
- 100-year.....4.5 inches

## Recommendations & Conclusion

With proximity to the Willamette River detention would have no measurable effect on the flood flow of the river. A water quality pond on 17828 Robin View Court will provide the necessary cleaning of the storm water prior to discharge into the river. This facility will be located above the 100-year floor plain of the River



# Presumptive Approach Calculator ver. 1.2

Catchment ID: **A**

Run Time 4/24/2018 9:13:56 AM

Project Name: Ferdell estates

Catchment ID: A

Date: 4 24 2018

**Instructions:**

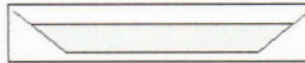
1. Identify which Stormwater Hierarchy Category the facility.
2. Select Facility Type.
3. Identify facility shape of surface facility to more accurately estimate surface volume, except for Swales and sloped planters that use the PAC Sloped Facility Worksheet to enter data.
4. Select type of facility configuration.
5. Complete data entry for all highlighted cells.

Catchment facility will meet Hierarchy Category: **3**

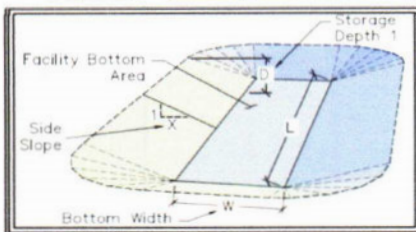
**Goal Summary:**

Hierarchy Category	SWMM Requirement	RESULTS box below needs to display...	
		Pollution Reduction as a	10-yr (aka disposal) as a
3	Off-site flow to drainageway, river, or storm-only pipe system.	PASS	N/A

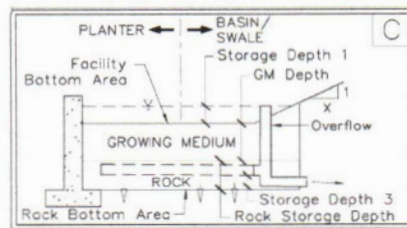
Facility Type = **basin**



Facility Shape: **Rectangle/Square**



Facility Configuration: **C**



Calculation Guide  
Max. Rock Stor.  
Bottom Area  
**600 SF**

**DATA FOR ABOVE GRADE STORAGE COMPONENT**

Facility Bottom Area = **144** sf  
 Bottom Width = **6.0** ft  
 Facility Side Slope = **3** to 1  
 Storage Depth 1 = **24** in  
 Growing Medium Depth = **18** in  
 Freeboard Depth = **12** in

Surface Capacity at Depth 1 = **744** cf  
 Infiltration Area at 75% Depth1 = **486** SF  
 GM Design Infiltration Rate = **2.00** in/hr  
 Infiltration Capacity = **0.023** cfs

**BELOW GRADE STORAGE**

Rock Storage Bottom Area = **200** sf  
 Rock Storage Depth = **12** in  
 Rock Void Ratio = **0.3**  
 Storage Depth 3 = **6** in

Rock Storage Capacity = **30** cf

Native Design Infiltration Rate = **0.50** in/hr  
 Infiltration Capacity = **0.002** cfs

RESULTS		Overflow Volume	
Pollution Reduction	<b>PASS</b>	0 CF	<b>96%</b> Surf. Cap. Used
			<b>100%</b> Rock Cap. Used
Output File			
	<b>2-yr</b>	<b>5-yr</b>	<b>10-yr</b>
Peak cfs	0.509	0.622	0.734
			<b>25-yr</b>
			0.846

FACILITY FACTS	
Total Facility Area Including Freeboard =	<b>1,008 SF</b>
Sizing Ratio (Total Facility Area / Catchment Area) =	<b>0.023</b>



# Presumptive Approach Calculator ver. 1.2

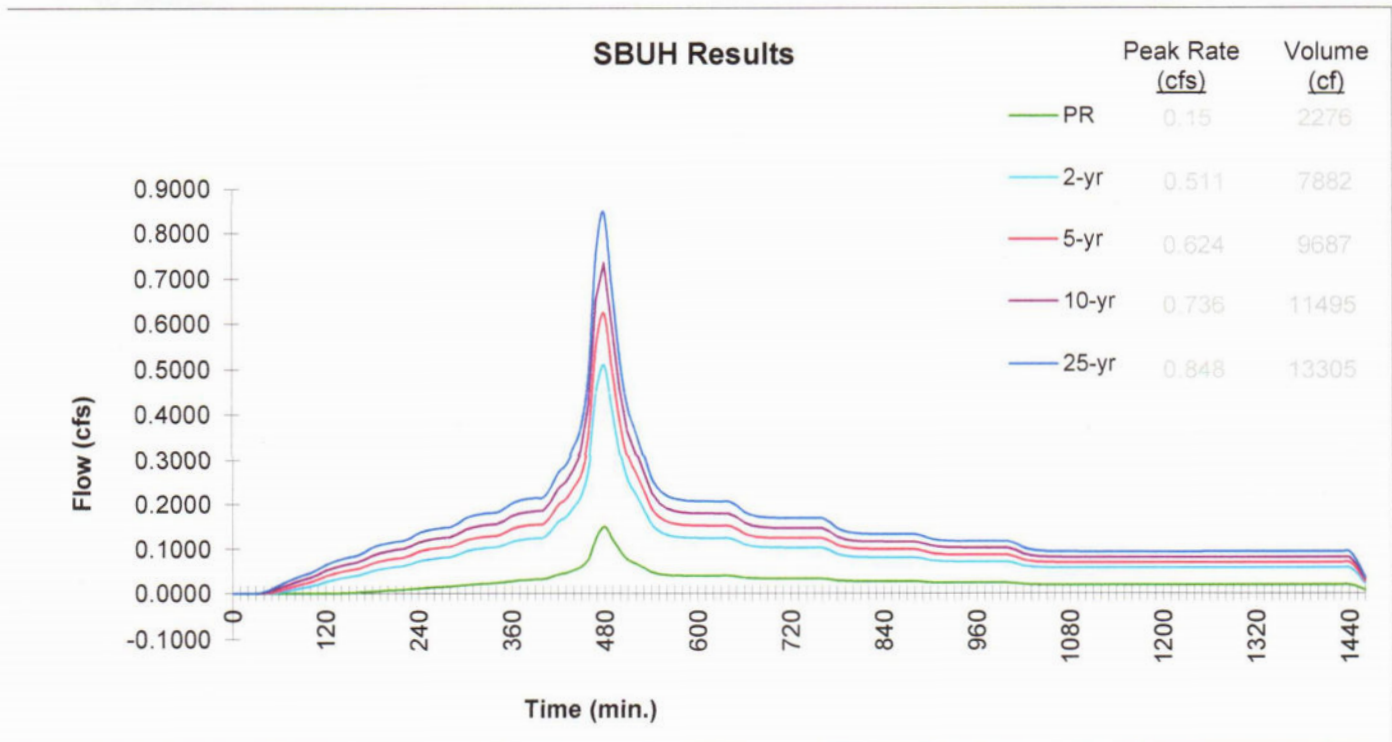
Catchment Data

Project Name: **Ferdell estates**  
 Project Address: **West Linn**  
**Oregon**  
 Designer: **Goldson**  
 Company: **Theta**

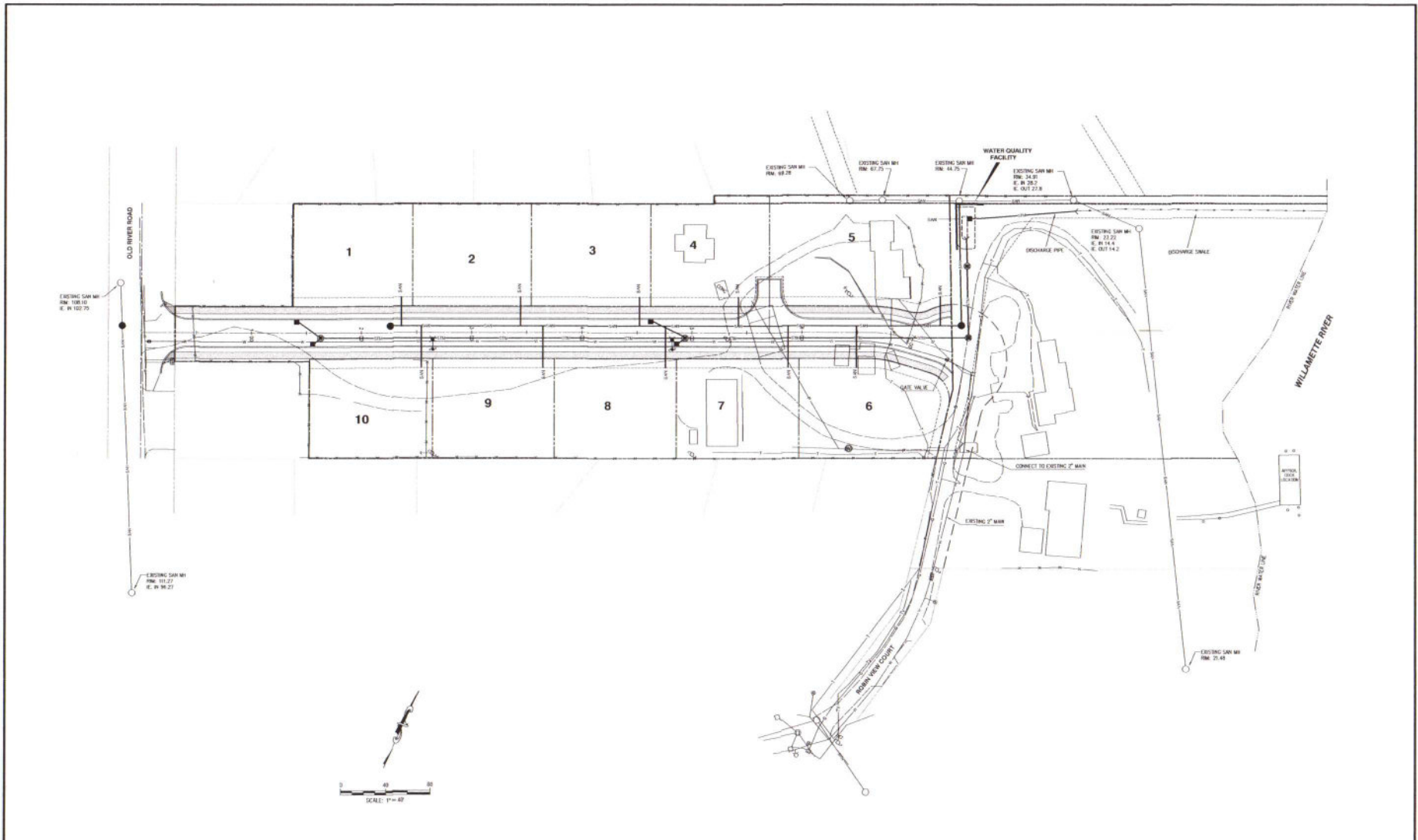
Catchment ID: **A**  
 Date: **4 24 2018**  
 Permit Number: **x**  
 Run Time 4/24/2018 9:13:56 AM

Drainage Catchment Information	
Catchment ID	A
Catchment Area	
Impervious Area	43,560 SF
Impervious Area	1.00 ac
Impervious Area Curve Number, CN <sub>imp</sub>	98
Time of Concentration, T <sub>c</sub> , minutes	15 min.
Site Soils & Infiltration Testing Data	
Infiltration Testing Procedure:	Open Pit Falling Head
Native Soil Field Tested Infiltration Rate (I <sub>test</sub> ):	1 in/hr
Bottom of Facility Meets Required Separation From High Groundwater Per BES SWMM Section 1.4:	Yes
Correction Factor Component	
CF <sub>test</sub> (ranges from 1 to 3)	2
Design Infiltration Rates	
I <sub>dsgn</sub> for Native (I <sub>test</sub> / CF <sub>test</sub> ):	0.50 in/hr
I <sub>dsgn</sub> for Imported Growing Medium:	2.00 in/hr

**Execute SBUH**







**PRELIMINARY UTILITY PLAN**

2018-250

DESIGNED: BDC			
DRAWN: BJS			
SCALE: 1" = 40'			
DATE: June, 2017			
FILE: Ferndell Estates	DATE	NO.	REVISION

**Theta, Inc**  
 ENGINEERING - SURVEYING - PLANNING  
 PO Box 1345  
 Lake Oswego, Oregon 97035  
 503.681.4822  
 email: [info@thetainc.com](mailto:info@thetainc.com)

Ferndell Estates

SHEET:  
2/3



Map Unit Legend			
Clackamas County Area, Oregon (OR610)			
Clackamas County Area, Oregon (OR610)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
19	Cloquato silt loam	0.4	8.6%
91B	Woodburn silt loam, 3 to 8 percent slopes	4.3	91.4%
<b>Totals for Area of Interest</b>		<b>4.7</b>	<b>100.0%</b>

Legend

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# GEOTECHNICAL REPORT

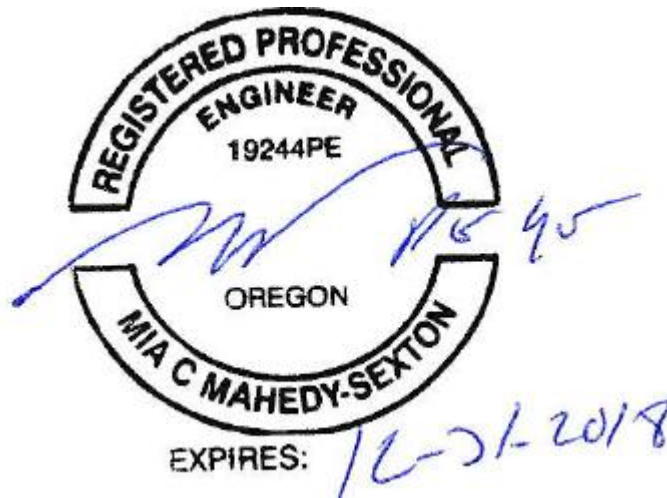
Ferndall Estates

West Linn, Oregon

For

Bill Varitz and Greg Sams

4 April 2018



3915 SW Plum Street  
Portland, OR 97219  
503-816-3689  
mia@rapidsolutions.com

## **INTRODUCTION**

Rapid Soil Solutions (RSS) has prepared this geotechnical report, as requested, for the proposed 10 lot subdivision of the Clackamas County parcel assigned the state tax lot identification numbers of 21E14AD00990 and 21E14AD01001. The site is situated in the Robinwood neighborhood of the City of West Linn, Oregon. It is situated on the eastern side of Old River Road between Cherokee Court (200 ft southeast) and River Woods Place (600 feet northwest). The site is situated on slopes between Old River Road and the Willamette River. The main body of the site extends from roughly 100' northeast of Old River Drive to about 300' southwest of the Willamette River. A 50' wide and 108' long strip of land containing Riverside Court connects the main body of the subject site with Old River Drive. This private roadway is boarded on either side by single family dwellings assigned the street addressed of 18602 and 18650 Old River Drive. The site currently contains one single family dwelling assigned the street address of 3350 Riverside Court and a vacant lot assigned the street address of 3300 Riverside Court (West Linn, OR 97068).

The site is located roughly 0.4 miles northeast of Willamette Drive, 0.4 miles southwest of SE River Road, 0.2 miles south of Hog Island, 1 miles southwest of OR-99E, 1.3 miles south of the Oswego Creek confluence with the Willamette River and is 2.8 miles northwest of I-205 at exit 8 (OR-43) in West Linn. The land surrounding the subject site was divided by a survey 1922 called the 'Holly Acres' subdivision, a now vacated plat. The site occupies portions of lots 11A, 12, 26, 27 and 28 of this subdivision. The site can be found in the Southeast Quarter of the Northeast Quarter of Section 14, Township 2-South, Range 1-East (W.M.) in Clackamas County and can be distinguished by the tax lot numbers 1001 and 990. The latitude and longitude of the subject site are 45.397024 and -122.639937 (45°23'49.3"N, 122°38'23.8"W). The site can be found in the southeastern quarter of the Lake Oswego, OR 7.5-minute quadrangle (NE ¼ of the Oregon City 15' Quadrangle).

## **SITE CONDITIONS**

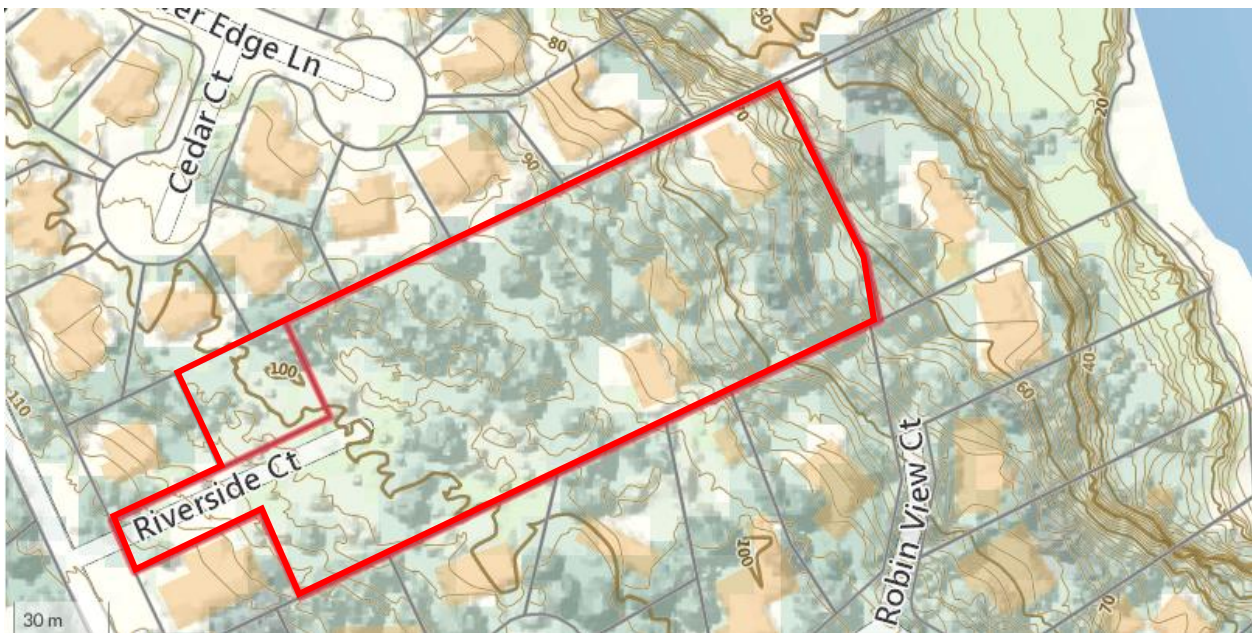
### **Surface Conditions**

The property is in the residential neighborhood of Robinwood. It is surrounded on all sides by single-family dwellings on parcels ranging from 1.45 acres to 0.20 acres in size. The surrounding dwellings are up to 64 years old, with construction dates generally clumped between 1954-1957 and 1989-1992, with a couple structures built in 1967 and 1980. The site and surrounding parcels are zoned as part of a single family residential detached dwelling district (R10) with a minimum lot size of 10,000 square feet. It is in a 'low density' designation in the West Linn, Oregon comprehensive plan. The site is located within an area of land annexed by West Linn in 1967.

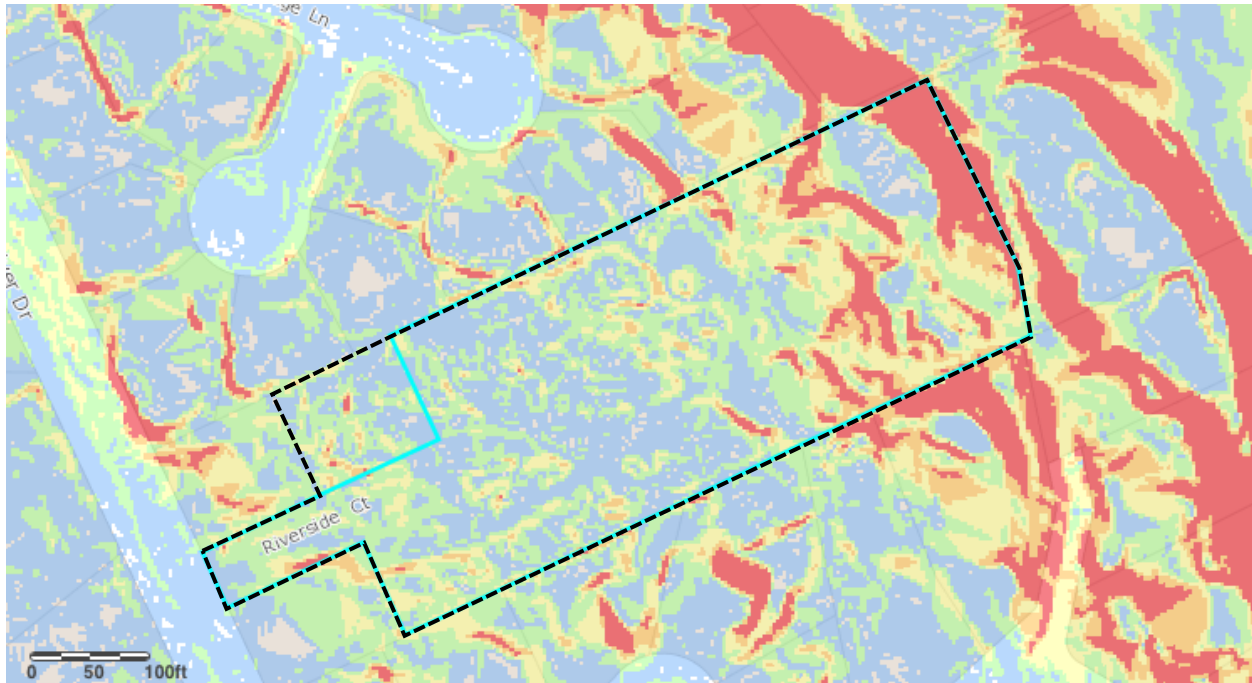
The subject site is primarily forested, containing a thick canopy and moderately thin understory typical of the local region. The site is accessed by the private road Riverside Court, which is gated roughly 50 feet northeast of Old River Road. This paved private drive is used to access the existing single-family dwelling assigned the street address of 3350 Riverside Court. The site currently contains 8 structures including the dwelling, a cabin, a shop, sheds and other outbuildings. A 1974 survey of the subject site and the parcel adjacent to the east (17828 Robin View Court) indicates the presence of three structures on the subject site when the survey was conducted. These structures correspond with the location of the existing house, outbuilding in proposed lot 4 and the cluster of structures in proposed lot 6. This survey also indicates that the

driveways running through the subject site have not been changed dramatically since 1974. Historic aerial imagery dating back to 1994 was referenced as part of this investigation. The imagery does not indicate the occurrence of major changes at the site in the past 24 years.

The slopes on site descend generally towards the Willamette River, flowing north-northwest roughly 300 feet beyond the eastern edge of the subject parcel. A 5-ft slope map derived from LIDAR of the Portland, OR and surrounding area indicates that the subject site includes slopes modeled as falling within the categories of less than 5% (blue), 5-10% (green), 10-15% (yellow), 15-20% (orange) and greater than 20% (red) with the areas of steep slopes generally located in the eastern end of the subject site. The area surrounding the existing residence is relatively level, which appears to be the result of historical grading. The low slope area in proposed lot 4, proposed lot 6 and proposed lot 7 appears to also have been artificially leveled for the structures they are underlying. This historic grading has created slightly steeper slopes adjacent to the artificially low slope areas. 2' contours of the topography at the subject site available from Metro Map and 1' contours presented in the preliminary grading plan, indicate that there is roughly a 50-foot elevation change from the southwestern edge of the site at Old River Drive and the northeastern edge of the subject site. The steepest section of the parcel is located directly down slope of the existing dwelling (proposed lot 5). Slope analysis presented by Richard E. Givens, Planning Consultant indicates that the slopes on the majority of the subject site (73.6%) are less than 10%. These slopes are found within proposed lots 1-3 and 4-6. The slope area across most of the eastern end of the subject site fall within a 10-25% slope category. The slopes of 25-35% are found adjacent to artificially leveled areas in the eastern end of the subject site. The steepest section is modeled as containing slopes of greater than 35% and are found in the northern/northeastern corner of the parcel directly down slope of the existing dwelling. RSS understands that proposed grading for the site will cut into the steeper slope areas in the eastern end of the subject site, up to 9', to create a less severe roadway descent.







## Geology

Current geologic literature<sup>1,2,3,4,5,6,7,8,9,10,11,12</sup> classifies the slopes underlying the subject site as draped in a thick layer of Missoula Flood deposits. The deposits on site are further classified as

<sup>1</sup> <http://www.oregongeology.org/sub/ogdc/index.htm>

<sup>2</sup> Ma, L., Madin, I.P., Duplantis, S., and Williams, K.J., 2012, *Lidar-based surficial geologic map and database of the greater Portland, Oregon, area, Clackamas, Columbia, Marion, Multnomah, Washington, and Yamhill Counties, Oregon, and Clark County, Washington*: Oregon Department of Geology and Mineral Industries, Open-File Report O-2012-02, scale 1:8,000.

<sup>3</sup> Burns, W.J., Mickelson, K.A., Jones, C.B., Pickner, S.G., Hughes, K.L.B., and Sleeter, Rachel, 2013, *Landslide hazard and risk study of northwestern Clackamas County, Oregon*: Oregon Department of Geology and Mineral Industries, Open-File Report O-2013-08, scale 1:8,000.

<sup>4</sup> Burns, W.J. and Duplantis, S., 2010, *Landslide inventory maps for the Lake Oswego quadrangle, Clackamas, Multnomah, and Washington Counties, Oregon*: Oregon Department of Geology and Mineral Industries, Interpretive Map Series IMS-32, scale 1:8,000.

<sup>5</sup> Beeson, M.H., Tolan, T.L., and Madin, I.P., 1989, *Geologic map of the Lake Oswego quadrangle, Clackamas, Multnomah, and Washington counties, Oregon*: Oregon Department of Geology and Mineral Industries, Geological Map Series 59, scale 1:24,000.

<sup>6</sup> 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, scale 1:24,000.

<sup>7</sup> Hart, D.H., and Newcomb, R.C., 1965, *Geology and ground water of the Tualatin Valley, Oregon*: U.S. Geological Survey, Water-Supply Paper 1697, scale 1:48,000.

<sup>8</sup> Trimble, D.E., 1957, *Geology of the Portland quadrangle, Oregon-Washington*: U.S. Geological Survey, Geologic Quadrangle Map GQ-104, scale 1:62,500.

<sup>9</sup> Trimble, D.E., 1963, *Geology of Portland, Oregon and adjacent areas*: U.S. Geological Survey, Bulletin 1119, scale 1:62,500.

<sup>10</sup> Burns, Scott, Growney, Larry, Brodersen, B., Yeats, R.S., and Popowski, T.A., 1997, *Map showing faults, bedrock geology, and sediment thickness of the western half of the Oregon City 1:100,000 quadrangle, Washington*,

part of the fine-grained facies (sand and silt) of the Missoula Floods deposits found across the Portland Basin. At the subject site the unit is overlaying flows of the Columbia River Basalt Group, specifically the Basalt of Sand Hollow formation (Frenchman Springs Member, Wanapum Basalt).

### *Geologic History*

The subject site is generally situated within the forearc basin of the Cascadia subduction system between the Cascade Range (volcanic arc) and the Coastal Range (accretionary/subduction complex). The site is part of the Tualatin Basin, one of several topographic and structural depressions that collectively constitute the Puget-Willamette forearc trough. This topographic and structural basin generally has low topographic relief. The basin formed due to tectonic compressional stress that both initiated the basin's formation and produced prolonged the enlargement of the basin. As the Tualatin Basin continued to subside during the late Miocene and Pliocene, it filled with continental fluvial and lacustrine sediments deposited by ancestral versions of modern rivers. This resulted in a thick accumulation of material preserving a complex record of deposition and erosion (aggradation and incision). The subject site is situated in an up-warped area between basins and contains basaltic bedrock below the blanket of catastrophic flood deposits.

Much of the local bedrock is comprised of the flows of the Columbia River Basalt Group. This thick accumulation of flood basalts was produced by dozens of fissure eruptions in eastern Oregon and Washington in the Middle Miocene. The volcanic eruptions are among the largest observed anywhere on earth. The floods of hot, fluid lava flowed across much of the eastern half of both Oregon and Washington, eventually reaching the Pacific Ocean. Some flows extended as far as 400 miles from their vents with individual flows covering as much as 10,000 square miles. In the Portland area, these dark grey to black basalts can be divided into 8-10 distinct Columbia River Basalt flow types, comprised of as many as two dozen individual flows. The physical properties of these flows are very similar, often making it difficult to distinguish between individual flows. They have built up as much as 10,000 feet of lava in eastern Washington, and 850 feet in the Portland area.

At the end of the last glacial maximum, an ice dam in western Montana began to melt. The periodic failure of the ice dam retaining Glacial Lake Missoula resulted in dozens of gigantic floods that stretched from their origin in Montana generally following the Columbia River and eventually reaching the Pacific Ocean. The hydraulically restrictive Oregon Coast Range caused the sediment filled waters to temporarily pond across much of the Willamette forearc trough including the Portland, Tualatin and Willamette basins. The floodwaters, which reached an elevation of 400 feet above sea level, soured many areas down to bedrock and buried others beneath thick layers of gravel, sand and silt that can be divided into a fine-grained and course-

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*Multnomah, and Marion Counties:* Oregon Department of Geology and Mineral Industries, Interpretive Map Series 4, scale 1:100,000.

<sup>11</sup> Madin, I.P., 2004, *Geologic mapping and database for the Portland area fault studies: Final report, Clackamas, Multnomah, and Washington Counties, Oregon:* Oregon Department of Geology and Mineral Industries, Open-File Report O-04-02, scale 1:100,000.

<sup>12</sup> Phillips, W.M., 1987, *Geologic map of the Vancouver quadrangle, Washington:* Washington Division of Geology and Earth Resources, Open File Report 87-10, scale 1:100,000.

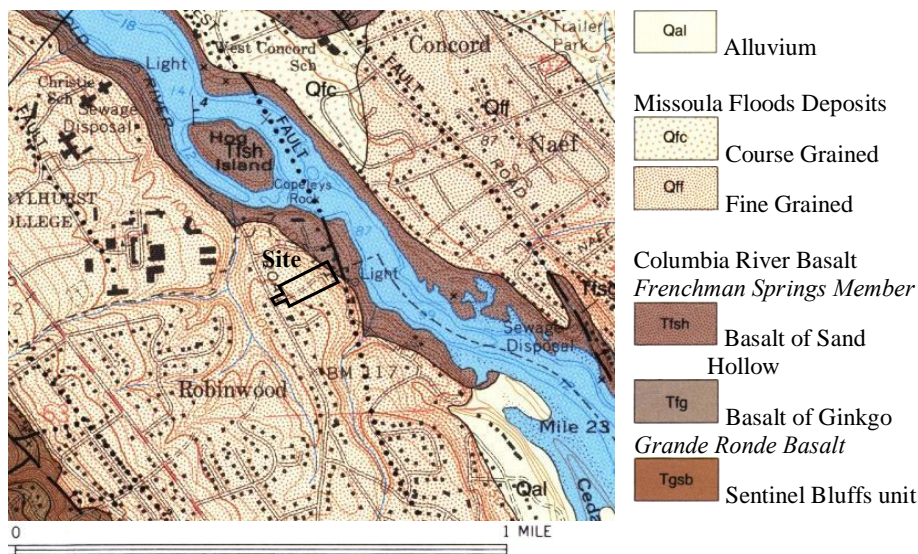
grained units. Dramatic scour features and giant bars can be seen within the Portland Basin, and demonstrate the great influence the floodwaters had on shaping the Quaternary geomorphology of the region. The sediments are generally comprised of unconsolidated silt, sand, and gravels, and were emplaced between about 21,000 to 12,000 years ago.

### Site Geology

The sediments brought into the local lowlands by the Missoula Floods were deposited when the waters slowed down, blanketing older fluvial and igneous deposits with swaths of rhythmic sedimentary beds. Various studies have divided the Missoula Floods deposits into distinct facies defined by grain size. Around the subject site the sedimentary deposits are described as falling within the sand and silt facies. The flood deposits within the Tualatin Valley are predominantly slack water silts that cover the valley floor up to 35 meters thick and can be found on slopes up to an elevation of 100 to 115 meters.

The fine-grained deposits of the Missoula Floods are described as an unconsolidated light-brown to light-gray silt, clay and fine to medium sand. The sediments are deposited in a series of distinct layers, a few inches to a few feet thick, each of which represents a single flood. The finer sediments are predominantly quartz and feldspar and also contain white mica. The coarser sediments can be comprised of Columbia River Basalt fragments. Poorly defined beds of 1- to 3-foot thickness are observed in outcrops, and complex layering has been recorded in boreholes. These deposited have been interested as slack-water sediments settling from the slowing floodwaters. In some areas of this unit, it can include sediments compositionally similar to loess. Soil development commonly introduces significant clay and iron oxides into the upper 6-10 feet of the deposit.

The lower contact of the Missoula Floods deposits is at or just beyond the eastern edge of the subject site. Some workers have indicated that a strip of coarse grained deposits separate the fine-grained deposits from bedrock. Other workers have indicated that the fine-grained deposits sit directly upon the basaltic flows of the Columbia River basalt group. Basaltic bedrock may be found relatively shallow in some areas at the eastern end of the subject site.



## **Field Exploration**

A total of five (5) hand augur were excavated in the future new lots. The locations of the borings are shown on figure 3 in the appendix. A GIT, geologist in training observed the drilled and logged the subsurface materials. The soil logs were compiled by a geotechnical engineer. The logs were created using the Unified Soil Classification and Visual Manual Procedure (ASTM-D 2488). The soil conditions were very stiff to stiff SILT to a depth of 8feet. Groundwater was not encountered. Moisture contents varied from 27.4%-33.8%. The soil is moisture sensitive and plastic. This project should only be excavated in the dry weather.

### *Soils*

The USDA National Resource Conservation Service Web Soil Survey<sup>13</sup> classifies the soils on site are primarily mapped as Woodburn silt loam (308% slopes). The soils in the northeastern corner of the subject site are classified as containing Cloquato silt loam.

Woodburn silt loam forms on terraces from stratified glaciolacustrine deposits (such as the Missoula Floods deposits). They are classified as moderately well drained with a water table often found at depths of 25 to 32 inches. The typical profile is comprised of silt loam (H1: 0"-16", H3: 38"-60") and silty clay loam (H2: 16"-38").

Cloquato silt loam forms on flood plains from mixed alluvium. It is classified as well drained with a water table generally found at depths greater than 80 inches. The typical profile of this soil type is comprised of silt loam (H1: 0"-15", H2: 15"-42") and sandy loam (H3: 42"-60").

The USDA suitability and limitations ratings for the site indicates that new development may be limited by a shallow saturation zone and slightly negatively impacted by a slight to moderate shrink-swell potential. Additionally noted is a low strength rating (as inferred from the AASHTO group index number) which could negatively impact local roads and streets.

## **Excavations**

Excavations can be accomplished with conventional excavating equipment. All excavations for footings and subgrades in the fine-grained silt should be performed by an excavator or backhoe equipped with a smooth-faced bucket (no teeth) and a bucket with teeth.

Because of safety considerations and the nature of temporary excavations, the Contractor should be made responsible for maintaining safe temporary cut slopes and supports for utility trenches, etc. We recommend that the Contractor incorporate all pertinent safety codes during construction, including the latest OSHA revised excavation requirements, and based on soil conditions and groundwater evidenced in cuts made during construction.

## **Structural Fills**

Depending upon finished building pad elevations, structural fills may be required to raise the site grades. Additionally, fill may be required for the backfilling of the proposed new foundation walls. Native or imported material may be used for fill, provided the soil is free of organics, cobbles larger than 6 inches in maximum diameter, or other deleterious matter; is of low plasticity; and, is at the proper water content. Fills should be placed on level benches in thin lifts

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<sup>13</sup> <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>



and compacted to a dry density of at least 92% of its Maximum Dry Density (MDD) as determined by the Modified Proctor Test (ASTM D-1557), if using rock and 95% of Standard proctor test (ASTM D-698) if using soil.

For any over-excavation completed in the area of footings or slabs, the backfill material shall consist of free-draining, well-graded, crushed aggregate base with a maximum particle size of ¾ inch. The rock shall not contain more than 5% fines (material passing the No. 200 sieve, as tested by ASTM D-1140). The rock shall be compacted to a dry density of at least 92% of its MDD.

**Foundation Design**

Footing excavations should be evaluated by the Engineer to confirm suitable bearing conditions. In order to reduce disturbance to the SILT, recommend all excavations for footings be accomplished with an excavator or backhoe equipped with a smooth-faced bucket and a bucket with teeth. The new footings should be designed for a maximum allowable bearing pressure of 2,000 pounds per square foot (psf) as per scribed in 2012 IBC code book under section 1804.2 Table 2 Allowable Foundation and Lateral Pressures. When sizing footings for seismic considerations, the allowable bearing pressure may be increased by 1/3. Lateral pressures may be resisted by friction between the bases of the footings and the underlying ground surface.

Engineering values summary

Bearing capacity	2,000psf
Friction angle	35
Active pressure	40pcf
Passive pressure	300pcf

**Settlement**

Based on our knowledge of the project scope, and for footings designed as described in the preceding paragraphs, maximum settlement should not exceed 1 inch. Differential settlement should be on the order of 50 to 75% of the maximum settlement over 50 feet. Our settlement estimate assumes that no disturbance to the foundation soils would be permitted during excavation and construction, and that footings are prepared as described in the preceding paragraphs.

**Seismic Design Criteria**

The seismic design criteria for this project found herein is based on the IBC2012/2015 A summary of IBC seismic design criterion is below it is generated from the USGS web site for earthquake hazards using a lat of 45.397024 and a Long of -122.639937

	<b>Short Period</b>	<b>1 Second</b>
Maximum Credible Earthquake Spectral Acceleration	Ss = 0.970	S1 = 0.415
Adjusted Spectral Acceleration	Sms = 1.079	Sm1 = 0.658
Design Spectral Response Acceleration Perimeters	Sds = 0.719	Sd1= 0.438

## Geohazard Review

The Oregon HazVu: Statewide Geohazard Viewer<sup>14</sup>, City of West Linn interactive map<sup>15</sup> Metromap<sup>16</sup> and Portland Maps<sup>17</sup> were reviewed on 27 March 2018 to investigate mapped geological hazards. This review indicates the parcel is situated outside the 100-year floodplain as mapped by FEMA. The expected earthquake-shaking hazard is classified as ‘severe’ with a mapped liquefaction hazard classification of ‘moderate’ to ‘high’. The nearest fault mapped as active by DOGAMI is a NW-SE oriented fault situated about 0.7 miles southwest of the subject site. Additional mapping indicates the presence of faults cutting across the slopes closer to the subject site, but DOGAMI does not classify these faults as active. IMS-15<sup>18</sup> rates the site vicinity as having a peak horizontal acceleration of 0.7 to 0.8g for a magnitude 6.8 Portland Hills Fault earthquake. This falls on the Modified Mercalli Intensity scale in the categories of ‘violent shaking’. Violent shaking can result in considerable damage in specially designed structures; well-designed frame structures may be thrown out of plumb and it will produce great damage in substantial buildings, with partial collapse. The DOGAMI SLIDO<sup>19</sup> interactive map and IMS-32 indicate that numerous small slides are located along the hillside to the northwest and southeast of the subject site, but that no slides are located on or directly adjacent to the subject site. The Landslide Hazard classification presented by DOGMAI indicates that the majority of the side has a low to moderate slide hazard (landsliding unlikely to landslide possible) with a small portion of the slopes along the northeastern edge of the site containing a ‘high’ landslide hazard (landsliding likely) due to the severity of the slope. The 2013 Landslide Susceptibility Maps (OFR-2013-08) indicates that the shallow-landslide susceptibility classification for the site is low in areas with low slopes but increases to high in the steeply sloping sections of the parcel. Open File Report 2013-08 also indicates a low susceptibility to deep-seated landslides across the entirety of the subject site.

## Drainage

The proposed storm water pond is probably going in the best location possible if they want to do a single facility. The proposed pond is situated on a relatively flat area that appears to will have little grading surrounding it. The slope below the pond is roughly 8-9% for about 50-60 feet beyond the proposed down slope edge of the storm water facility as it will drain down to the Willamette River. The slopes in the pond area don’t show any active movement beyond some soil creep, which is the slow movement of soil down a steep slope. The roof runoff will be hard piped to the pond area.

The Contractor should be made responsible for temporary drainage of surface water and groundwater as necessary to prevent standing water and/or erosion at the working surface. The ground surface around the structure should be sloped to create a minimum gradient of 2% away

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<sup>14</sup> <http://www.oregongeology.org/hazvu/>

<sup>15</sup> [http://maps.westlinnoregon.gov/mox6/public.cfm?action=mox6\\_view\\_interface](http://maps.westlinnoregon.gov/mox6/public.cfm?action=mox6_view_interface)

<sup>16</sup> <http://gis.oregonmetro.gov/metromap/>

<sup>17</sup> <http://www.portlandmaps.com/>

<sup>18</sup> Wong, I., Silva, W., Bott, J., Wright, D., Thomas, P., Gregor, N., Li, S., Mabey, M., Sojourner, A., and Wang, Y., (2000), *Earthquake scenario ground shaking map for the Portland, Oregon, metropolitan area: Portland Hills Fault M 6.8 earthquake, Peak horizontal acceleration (g) at the ground surface*: DOGAMI, IMS-15. Scale 1:62,500

<sup>19</sup> <http://www.oregongeology.org/slido/index.html>

from the building foundations for a distance of at least 5 feet. Surface water should be directed away from all buildings into drainage swales or into a storm drainage system. “Trapped” planting areas should not be created next to any buildings without providing means for drainage.

### **Limitations**

This report has been prepared for the exclusive use of the addressee, and their architects and engineers for aiding in the design and construction of the proposed development. It is the addressee's responsibility to provide this report to the appropriate design professionals, building officials and contractors to ensure correct implementation of the recommendations.

The opinions, comments and conclusions presented in this report were based upon information derived from our literature review, field investigation and laboratory testing. Conditions between, or beyond, my exploratory test pits may vary from those encountered. Unanticipated soil conditions and seasonal soil moisture variations are commonly encountered and cannot be fully determined by merely taking soil samples. Such variations may result in changes to our recommendations and may require that additional expenditures be made to attain a properly constructed project. Therefore, some contingency fund is recommended to accommodate such potential extra costs.

## **Appendix**



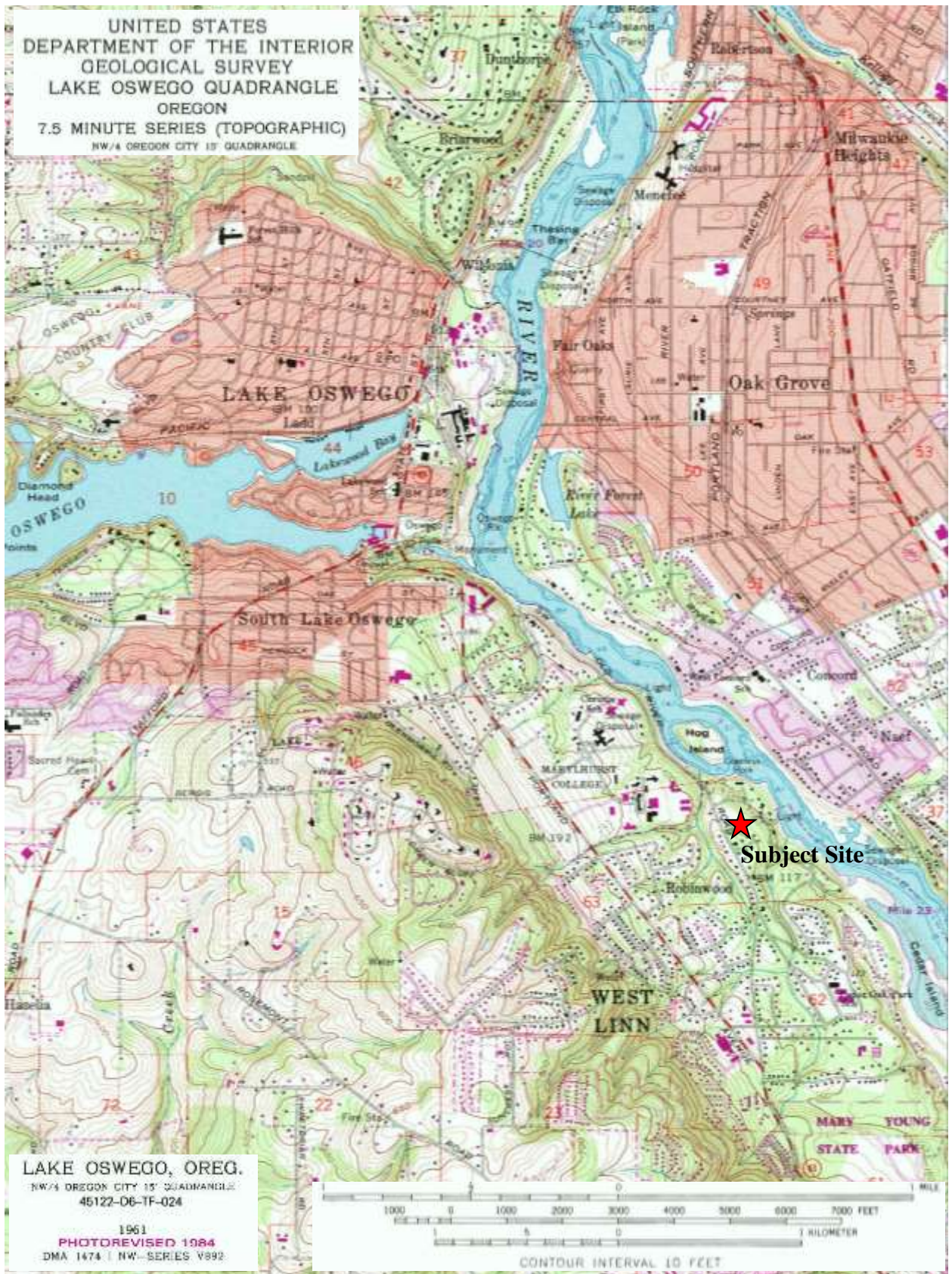


Figure 1: Subject site location in the SE quarter of the Lake Oswego Topographic Quadrangle



2 1 E 14AD  
WEST LINN

S.E.1/4 N.E.1/4 SEC.14 T.2S. R.1E. W.M.  
CLACKAMAS COUNTY

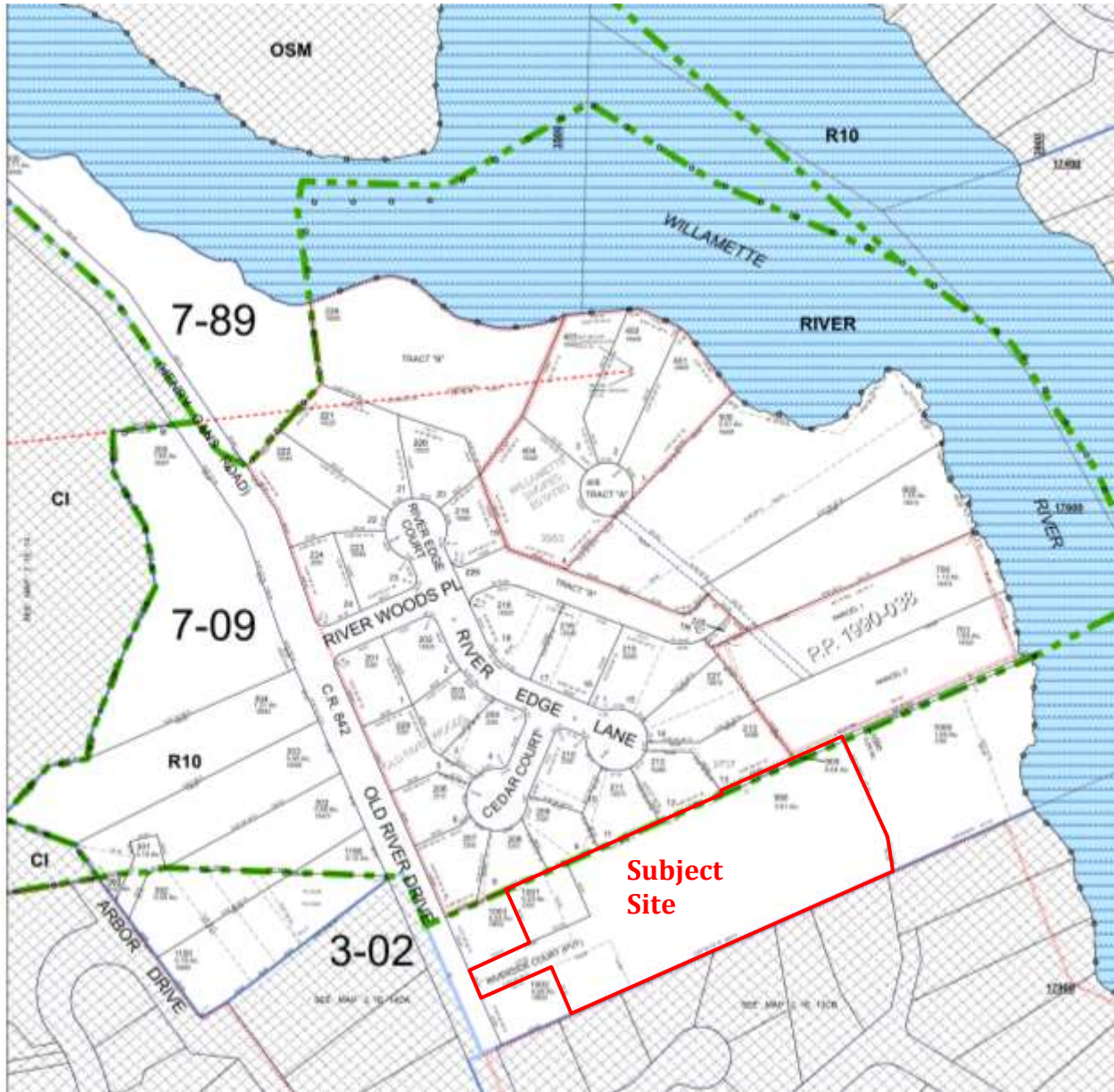


Figure 2: Subject site location on the Clackamas County Assessor's Map

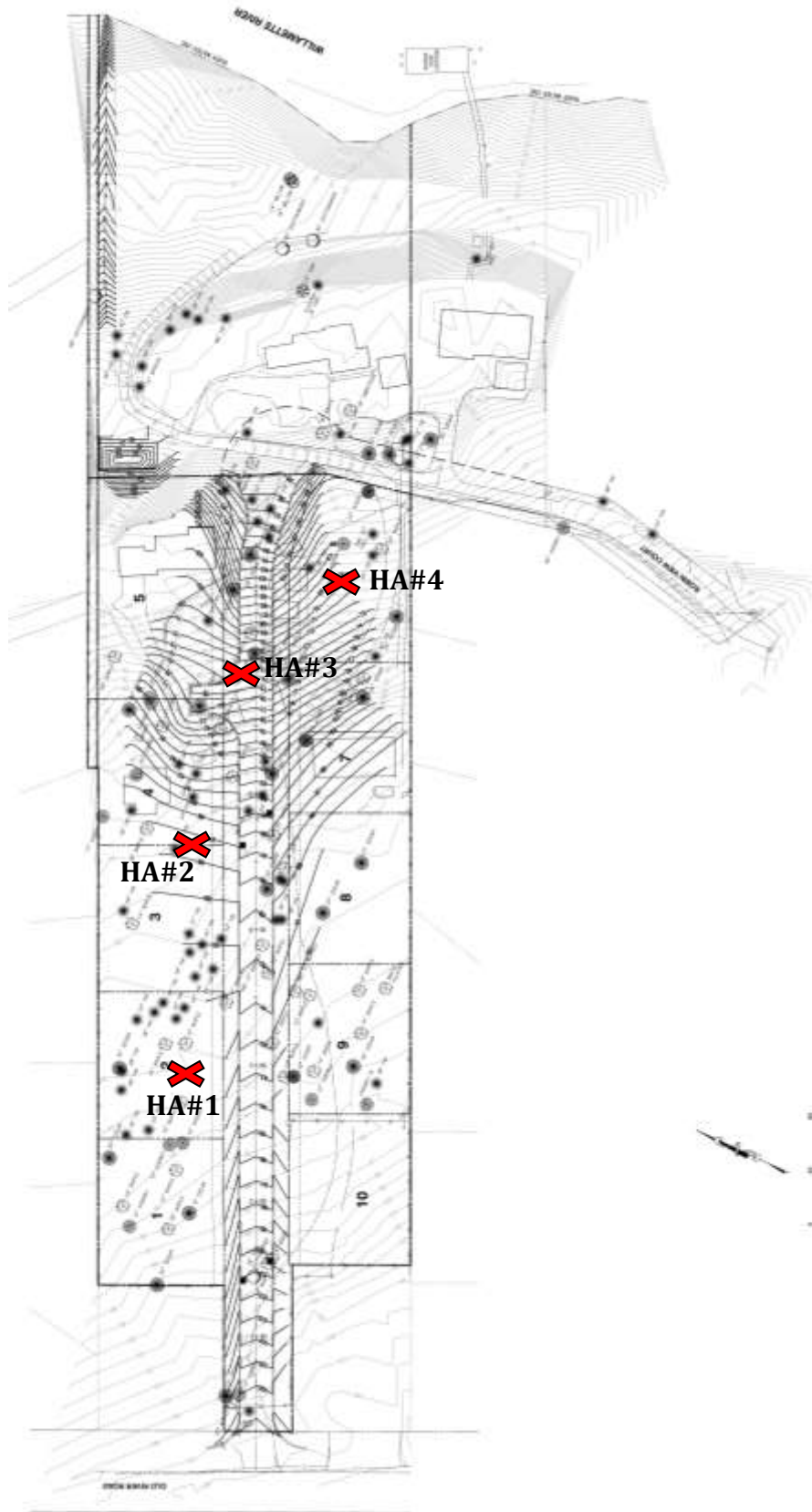


Figure 3: Approximate boring locations on tentative grading plan

Moisture

	Sample number	HA#1	HA#2	HA#3	HA#4
1	Date and time in oven	3/29/18 5:30 PM	3/29/18 5:30 PM	3/29/18 5:30 PM	3/29/18 5:30 PM
2	Date and time out of oven	3/30/18 8:00 AM	3/30/18 8:00 AM	3/30/18 8:00 AM	3/30/18 8:00 AM
3	Depth (ft)	2	4	8	4
4	Tare No.	6	7	8	9
5	Tare Mass	232	230	232	230
6	Tare plus sample moist	1108	1105	903	1045
7	Tare plus sample dry	914	917	744	839
8	Mass of water (g)	194	188	159	206
9	Mass of soil (g)	682	687	512	609
10	Water Content (%)	28.45	27.37	31.05	33.83

Atterberg Limit Test

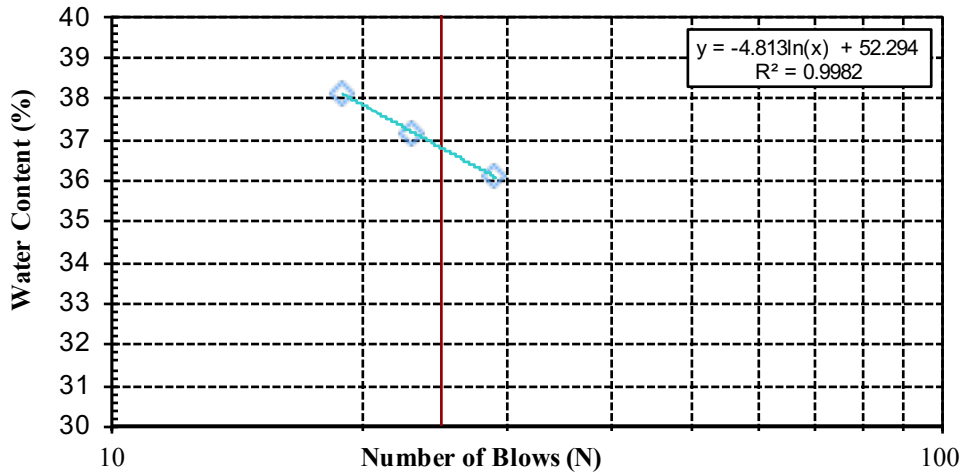
Sample Number: HA#1

Depth: 2'

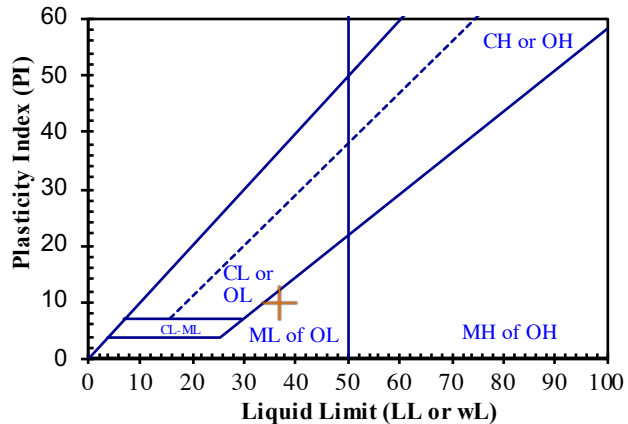
Liquid Limit

Plastic Limit

		1	2	3	1	2
1	Tare No.	D#2.1	D#2.2	D#2.3	R#2.1	R#2.2
2	Tare Mass (g)	39.83	39.64	39.42	39.87	38.97
3	Tare Plus Wet Soil (g)	73.98	70.28	69.44	52.24	52.27
4	Tare Plus Dry Soil (g)	64.92	61.98	61.15	49.64	49.39
5	Mass of Water (g)	9.06	8.3	8.29	2.6	2.88
6	Mass of Soil (g)	25.09	22.34	21.73	9.77	10.42
7	Water Content (g)	36.11	37.15	38.15	26.61	27.64
8	No. Blows	29	23	19		



Liquid Limit (%)            36.80  
 Plastic Limit (%)            27.13  
 Plasticity Index (%)        9.68  
 USCS Classification        ML





Project Name: Ferdell Estates

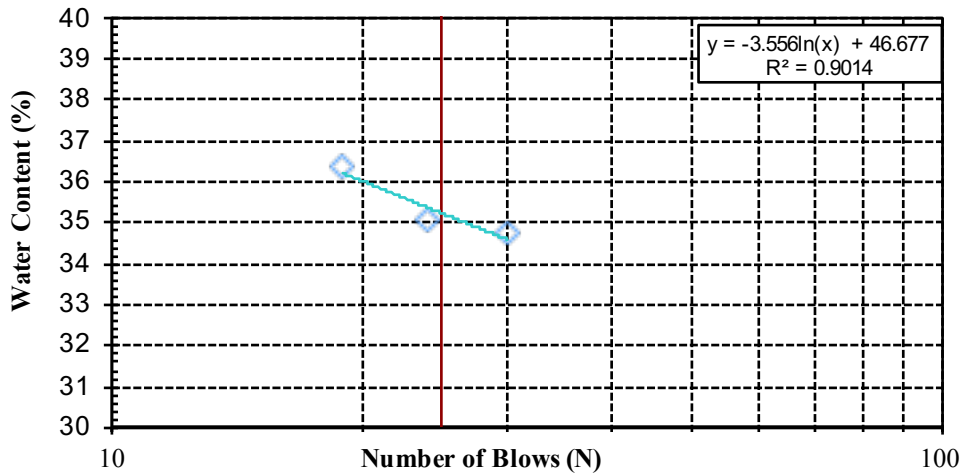
Sample Date 3/29/18

Atterberg Limit Test

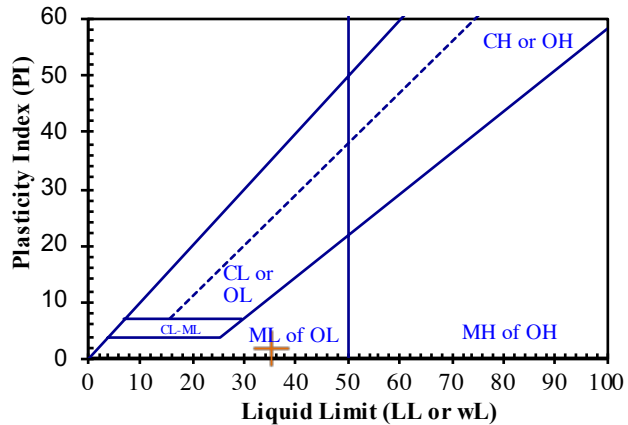
Sample Number: HA#3

Depth: 8'

	Liquid Limit			Plastic Limit	
	1	2	3	1	2
1 Tare No.	D#4.1	D#4.2	D#4.3	R#3.1	R#3.2
2 Tare Mass (g)	39.96	40.48	40	39.27	42.34
3 Tare Plus Wet Soil (g)	74.13	83.39	77.28	49.17	54.49
4 Tare Plus Dry Soil (g)	65.32	72.25	67.34	46.7	51.39
5 Mass of Water (g)	8.81	11.14	9.94	2.47	3.1
6 Mass of Soil (g)	25.36	31.77	27.34	7.43	9.05
7 Water Content (g)	34.74	35.06	36.36	33.24	34.25
8 No. Blows	30	24	19		



Liquid Limit (%) 35.23  
 Plastic Limit (%) 33.75  
 Plasticity Index (%) 1.48



Grain Size Analysis

Dry Sieve Method

HA#3

Total Sample Weight (g): 203.65

Sieve #	Weight (g)	% Retained
>1/4"	0.00	0.00
1/4" to #40	7.34	3.60
#40 to #200	123.06	60.43
< #200	73.25	35.97
> #200	130.40	64.03

USCS Classification

SM

# HA#1

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Users\strache\Documents\In Progress Files\Ferdell Estates Subdivision\Ferdell Estates Subdivision HA#1.log Date: 4/2/2018

Surface Elevation:  
 Boring Date: 3/29/18  
 Boring Location: Lake Oswego, OR  
 Drilling Method: Hand Augur

Depth	Remarks	Moisture (%)	Dry Density	Blow Counts	Sample Type	Water Table
0						
					OL	Damp, medium rich brown, fine grained, medium stiff, organic SILT
					ML	Damp-dry, medium tan brown, fine grained, stiff, SILT
1						
2	PI= 10, LL=37	28.5				
3						
4						
5						
6						
7						

GWT not encountered

Boring completed at depth of 2ft

## LOG OF BORING

**CIVILTECH SOFTWARE**

Ferdell Estates  
 Bill Varitz

Plate 1

# HA#2

Date: 4/2/2018  
File: C:\Users\strache\Documents\In Progress Files\Ferdell Estates Subdivision\Ferdell Estates Subdivision HA#1.log  
SuperLog CivilTech Software, USA www.civiltech.com

**Surface Elevation:**  
**Boring Date:** 3/29/18  
**Boring Location:** Lake Owego, OR  
**Drilling Method:** Hand Auger

Depth	Remarks	Moisture (%)	Dry Density	Blow Counts	Sample Type	Water Table
0					TP	Damp-dry, rich brown, silty organic Top Soil
					ML-CL	Damp-dry, medium brown with a slight grey hue, medium stiff, clayey SILT
1					ML	Damp-dry, tan brown, fine grained, stiff, clayey SILT to SILT
2					ML-CL	Damp, grey tan, fine grained with small hard angular gravels, stiff, clayey SILT with trace small gravels
3					ML	Dry to damp-dry, tan brown with rust- and grey-mottling, fine grained, stiff, SILT. Redoximorphic coloration.
4	27.4				ML	Dry to damp-dry, medium light brown, fine grained, stiff to medium stiff, SILT.
5						
6						
7						

GWT not encountered

Boring completed at depth of 4 ft

## LOG OF BORING

**CIVILTECH SOFTWARE**

**Ferdell Estates**  
**Bill Varitz**

**Plate 2**

# HA#3

**Surface Elevation:**  
**Boring Date:** 3/29/18  
**Boring Location:** Lake Owego, OR  
**Drilling Method:** Hand Auger

Date: 4/2/2018  
 File: C:\Users\strache\Documents\In Progress Files\Ferdell Estates Subdivision\Ferdell Estates Subdivision HA#1.log  
 SuperLog CivilTech Software, USA www.civiltech.com

Depth	Remarks	Moisture (%)	Dry Density	Blow Counts	Sample Type	Water Table
0						
						TP Damp-dry to dry, medium rich brown, organic, Top Soil with abundant roots and english ivy vines
						ML Dry, medium brown, fine grained, stiff, SILT
2						
						ML Damp-dry, medium brown with subtle red and grey mottling, fine grained, stiff, SILT
4						
						ML Dry, medium tan brown, fine grained, stiff, SILT
6						
						ML Dry, medium tan brown, fine grained, very stiff, SILT
8	PI= 1, LL=35, 60% sand, 36% silt	31.1				SM Dry, medium tan brown, course grained, medium dense, silty SAND
10						
12						
14						

## LOG OF BORING

Boring completed at depth of 8ft



# HA#4

SuperLog CivilTech Software, USA www.civiltech.com File: C:\User\strache\Documents\In Progress Files\Ferdell Estates Subdivision\Ferdell Estates Subdivision HA#1.log Date: 4/2/2018

Surface Elevation:  
 Boring Date: 3/29/18  
 Boring Location: Lake Owego, OR  
 Drilling Method: Hand Auger

Depth	Remarks	Moisture (%)	Dry Density	Blow Counts	Sample Type	Water Table
0					TP	Damp-dry, rich brown, silty organic Top Soil
0 - 2.5					ML-CL	Damp to moist, medium brown, fine grained, stiff, SILT to clayey SILT. Gradually increasing moisture with depth
2.5 - 4	34				ML-CL	Dry, medium brown, fine grained, very stiff, clayey SILT. Difficult to advance hand auger
4	Boring completed at depth of 4ft					
5						
6						
7						

## LOG OF BORING

**CIVILTECH SOFTWARE**

Ferdell Estates  
 Bill Varitz

Plate 4

WR

AFTER RECORDING  
RETURN TO:  
William R. Varitz and  
Marjory G. Varitz, Trustees  
17828 Robin View Court  
West Linn, OR 97068

GRANTOR INFORMATION:  
William R. Varitz and  
Marjory G. Varitz, Trustees  
17828 Robin View Court  
West Linn, OR 97068

GRANTEE INFORMATION:  
William R. Varitz and  
Marjory G. Varitz, Trustees  
17828 Robin View Court  
West Linn, OR 97068

SEND TAX STATEMENTS TO:  
William R. Varitz and  
Marjory G. Varitz, Trustees  
17828 Robin View Court  
West Linn, OR 97068

Clackamas County Official Records  
Sherry Hall, County Clerk

2015-003558



\$78.00

01821525201500035580060065

01/23/2015 10:54:01 AM

D-D Cnt=1 Stn=6 KARLYN  
\$30.00 \$10.00 \$16.00 \$22.00

**QUITCLAIM DEED**

William R. Varitz, Trustee of the William R. Varitz Revocable Trust dated May 10, 1988 and Marjory G. Varitz, Trustee of the Marjory G. Varitz Revocable Trust dated May 10, 1988, GRANTORS, for the consideration hereinafter stated, does hereby remise, release and forever quitclaim an undivided one-half interest to William R. Varitz, Trustee of the William R. Varitz Revocable Trust dated May 10, 1988, and an undivided one-half interest to Marjory G. Varitz, Trustee of the Marjory G. Varitz Revocable Trust dated May 10, 1988, GRANTEES, and unto grantees' heirs, successors and assigns, all of the grantors' right, title and interest in that certain real property, with the tenements, hereditaments and appurtenances thereunto belonging or in any way appertaining, situated in Clackamas County, Oregon, to wit:

Land described in Exhibit "A", Tract 1; Exhibit "A", Tract 2; and Exhibit "A", Exchange Area.

The true and actual consideration paid for this transfer, stated in terms of dollars, is \$NIL. This transfer is being made for estate planning purposes.



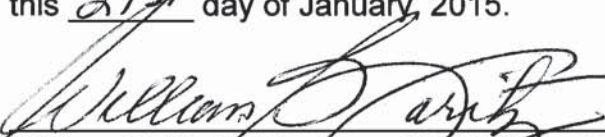
TO HAVE AND TO HOLD the same unto the said GRANTEES and GRANTEES' heirs, successors and assigns forever.

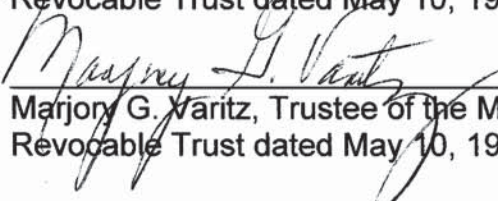
And grantor hereby covenants to and with GRANTEE and GRANTEES' heirs, successors and assigns, that GRANTORS are lawfully seized in fee simple of the above granted premises, free from all encumbrances except those of record or those of an obvious nature, and that GRANTORS will warrant and forever defend the premises and every part and parcel thereof against the lawful claims and demands of all persons whomsoever, except those claiming under the above described encumbrances.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.

In construing this deed and where the context so requires, the singular includes the plural and all grammatical changes shall be implied to make the provisions hereof apply equally to corporations and to individuals.

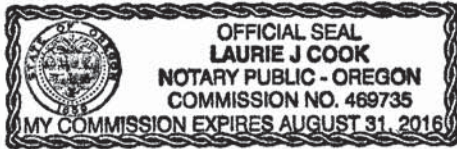
IN WITNESS WHEREOF, the GRANTORS have executed this instrument this 21<sup>st</sup> day of January, 2015.

  
\_\_\_\_\_  
William R. Varitz, Trustee of the William R. Varitz  
Revocable Trust dated May 10, 1988

  
\_\_\_\_\_  
Marjory G. Varitz, Trustee of the Marjory G. Varitz  
Revocable Trust dated May 10, 1988

STATE OF OREGON       )  
  ) ss.  
County of Clackamas    )

This instrument was acknowledged before me on January 21, 2015, by William R. Varitz, Trustee of the William R. Varitz Revocable Trust dated May 10, 1988, and Marjory G. Varitz, Trustee of the Marjory G. Varitz Revocable Trust dated May 10, 1988.



Laurie J Cook  
Notary Public for Oregon  
My Commission Expires: 8-31-2016





**CENTERLINE CONCEPTS**  
LAND SURVEYING, INC.

729 Molalla Avenue, Ste. 1 and 2, Oregon City, OR 97045  
P. 503-650-0188 F. 503-650-0189

**Exhibit "A"**  
**Tract 1**  
**Legal Description**

That tract of land described in Document No. 89-25912 and a portion of that tract of land described in Document No. 88-37558, Clackamas County Deed Records, located in the Northwest 1/4 of Section 13 and the Northeast 1/4 of Section 14, Township 2 South, Range 1 East of the Willamette Meridian, City of West Linn, County of Clackamas, State of Oregon, being more particularly described as follows:

**COMMENCING** at the Southwest corner of the Plat of "Old River Woods", Clackamas County Plat Records; thence N65°06'09"E, 107.56 feet to Northwest corner of that Tract of land described in Document No. 89-25912, Clackamas County Deed Records, and the **TRUE POINT OF BEGINNING** of the Tract to be described; thence along the North line of said Document No. 89-25912 Tract and continuing along the North line of that Tract of land described in Document No. 88-37558, Clackamas County Deed Records, N65°06'09"E, 381.28 feet to an angle point in said line; thence N24°16'23"W, 7.50 feet to an angle point in said North line; thence continuing along the North line of said Document No. 88-37558 Tract, N65°08'36"E, 213.79 feet to a point; thence leaving said North line, S25°57'06"E, 175.40 feet to a point; thence S11°17'16"E, 64.38 feet to the South line of said Document No. 88-37558 Tract; thence along the South line of said Document No. 88-37558 Tract, S65°05'00"W, 568.75 feet to the Southeast corner of that Tract of land described in Document No. 2007-078320, Clackamas County Deed Records; thence along the East line of said Document No. 2007-078320 Tract, N24°38'14"W, 87.60 feet to the Northeast corner of said Document No. 2007-078320 Tract; thence along the North line of said Document No. 2007-078320 Tract, S65°02'44"W, 123.10 feet to the East Right of Way line of Old River Road, being 30.00 feet East of centerline when measured at right angles; thence Easterly of, parallel with and 30.00 feet distant of said centerline, N24°38'54"W, 50.24 feet to the Southwest corner of that Tract of land described in Document No. 2005-112515, Clackamas County Deed Records; thence along the South line of said Document No. 2005-112515 Tract, N65°06'39"E, 107.57 feet to the Southwest corner of said Document No. 89-25912 Tract; thence along the West line of said Document No. 89-25912 Tract, N24°39'58"W, 93.03 feet to the **POINT OF BEGINNING**.

**Contains** 3.28 Acres

Subject to Easements of Record.

SIGNATURE: 7-19-2017

**REGISTERED  
PROFESSIONAL  
LAND SURVEYOR**

**OREGON  
NOVEMBER 30, 2007  
JAMES BURTON BROWN  
60379**

VALID THROUGH DECEMBER 31, 2015





**CENTERLINE CONCEPTS**  
LAND SURVEYING, INC.

729 Molalla Avenue, Ste. 1 and 2, Oregon City, OR 97045  
P. 503-650-0188 F. 503-650-0189

**Exhibit "A"**  
**Tract 2**  
**Legal Description**

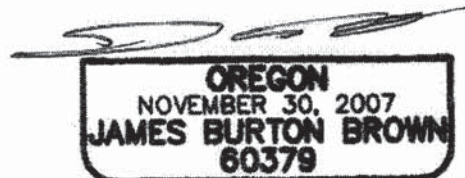
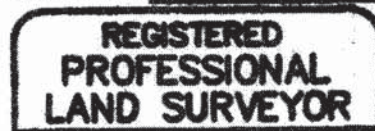
A portion of that tract of land described in Document No. 88-37558, Clackamas County Deed Records, located in the Northwest 1/4 of Section 13 and the Northeast 1/4 of Section 14, Township 2 South, Range 1 East of the Willamette Meridian, City of West Linn, County of Clackamas, State of Oregon, being more particularly described as follows:

**COMMENCING** at the Southwest corner of the Plat of "Old River Woods", Clackamas County Plat Records; thence N65°06'09"E, 488.84 feet; thence N24°16'23"W, 7.50 feet; thence N65°08'36"E, 213.79 feet to the **TRUE POINT OF BEGINNING** of the Tract to be described; thence leaving the North line of that Tract of land described in Document No. 88-37558, Clackamas County Deed Records, S25°57'06"E, 175.40 feet to a point; thence S11°17'16"E, 64.38 feet to the South line of said Document No. 88-37558 Tract; thence along the South line of said Document No. 88-37558 Tract, N65°05'00"E, 273.15 feet more or less to the Willamette River; thence Northerly along the Willamette River 250.63 feet more or less to the North line of said Document No. 88-37558 Tract; thence along the north line of said Document No. 88-37558 Tract, S65°08'36"W, 340.93 feet more or less to the **POINT OF BEGINNING**.

**Contains** 1.60 Acres more or less.

Subject to Easements of Record.

SIGNED ON: 2-14-2015



VALID THROUGH DECEMBER 31, 2015





**CENTERLINE CONCEPTS**  
LAND SURVEYING, INC.

729 Molalla Avenue, Ste. 1 and 2, Oregon City, OR 97045  
P. 503-650-0188 F. 503-650-0189

**Exhibit "A"**  
**Exchange Area (Doc. 88-37558 to Tract 1)**  
**Legal Description**

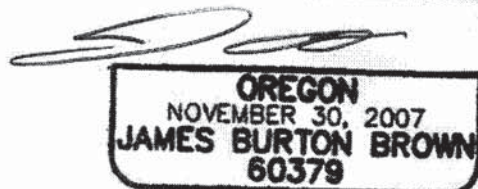
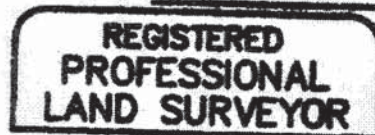
A portion of that tract of land described in Document No. 88-37558, Clackamas County Deed Records, located in the Northwest 1/4 of Section 13 and the Northeast 1/4 of Section 14, Township 2 South, Range 1 East of the Willamette Meridian, City of West Linn, County of Clackamas, State of Oregon, being more particularly described as follows:

**COMMENCING** at the Southwest corner of the Plat of "Old River Woods", Clackamas County Plat Records; thence N65°06'09"E, 215.04 feet to Northeast corner of that Tract of land described in Document No. 89-25912, Clackamas County Deed Records and the **TRUE POINT OF BEGINNING** of the Tract to be described; thence along the North line of that Tract of land described in Document No. 88-37558, Clackamas County Deed Records, N65°06'09"E, 273.80 feet to an angle point in said line; thence N24°16'23"W, 7.50 feet to an angle point in said North line; thence continuing along the North line of said Document No. 88-37558 Tract, N65°08'36"E, 213.79 feet to a point; thence leaving said North line, S25°57'06"E, 175.40 feet to a point; thence S11°17'16"E, 64.38 feet to the South line of said Document No. 88-37558 Tract; thence along the South line of said Document No. 88-37558 Tract, S65°05'00"W, 568.75 feet to the Southeast corner of that Tract of land described in Document No. 2007-078320, Clackamas County Deed Records; thence along the East line of said Document No. 2007-078320 Tract, N24°38'14"W, 87.60 feet to the Northeast corner of said Document No. 2007-078320 Tract; thence along the North line of said Document No. 2007-078320 Tract, S65°02'44"W, 123.10 feet to the East Right of Way line of Old River Road, being 30.00 feet East of centerline when measured at right angles; thence Easterly of, parallel with and 30.00 feet distant of said centerline, N24°38'54"W, 50.24 feet to the Southwest corner of that Tract of land described in Document No. 2005-112515, Clackamas County Deed Records; thence along the South line of said Document No. 2005-112515 Tract and continuing along the South line of said Document No. 89-25912 Tract, N65°06'39"E, 215.03 feet to the Southeast corner of said Document No. 89-25912 Tract; thence along the East line of said Document No. 89-25912 Tract, N24°39'18"W, 93.04 feet to the **POINT OF BEGINNING**.

**Contains** 3.05 Acres

Subject to Easements of Record.

SIGNED ON: 7-14-2014



VALID THROUGH DECEMBER 31, 2015

15-

Until a change is requested,  
all tax statements shall be  
sent to:

After recording, send to:

Mr. and Mrs. William R. Varitz  
c/o Door Distributors of Oregon  
330 S.E. Division Place  
Portland, OR 97202

Mr. and Mrs. William R. Varitz  
c/o Door Distributors of Oregon  
333 S.E. Division Place  
Portland, OR 97202

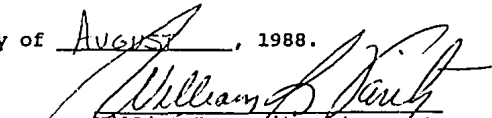
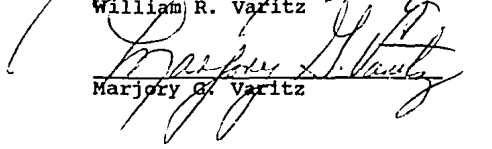
BARGAIN AND SALE DEED

William R. Varitz and Marjory G. Varitz, Grantors,  
convey an undivided equal interest to William R. Varitz, Trustee,  
under the William R. Varitz Revocable Trust dated May 10, 1988 and  
to Marjory G. Varitz, Trustee, under the Marjory G. Varitz  
Revocable Trust dated May 10, 1988, Grantees, as tenants-in-  
common, in the real property described on Exhibit A and made a  
part hereof by this reference.

The true and actual consideration for this transfer  
consists of or includes other property or other value given or  
promised.

THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY  
DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE  
LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS  
INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD  
CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO  
VERIFY APPROVED USES.

DATED this 30<sup>th</sup> day of August, 1988.

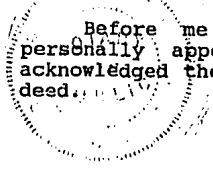
  
\_\_\_\_\_  
William R. Varitz  
  
\_\_\_\_\_  
Marjory G. Varitz



STATE OF OREGON

County of MULTNOMAH

) ss.



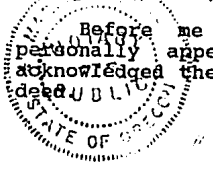
Before me on this 30<sup>TH</sup> day of AUGUST, 1988,  
personally appeared the above named William R. Varitz and  
acknowledged the foregoing instrument to be his voluntary act and  
deed.

Margie Thomas  
Notary Public for Oregon  
My commission expires: 8.24.91

STATE OF OREGON

County of MULTNOMAH

) ss.



Before me on this 30<sup>TH</sup> day of AUGUST, 1988,  
personally appeared the above named Marjory G. Varitz and  
acknowledged the foregoing instrument to be her voluntary act and  
deed.

Margie Thomas  
Notary Public for Oregon  
My commission expires: 8-24-91

DHF\03601000.D05

PAGE 2 - BARGAIN AND SALE DEED

2

**EXHIBIT A**

Parcel I: A tract of land situated in the west one-half of Section 13, Township 2 South, Range 1 East, and the East one-half of Section 14, Township 2 South, Range 1 East, of the W.M., in the County of Clackamas and State of Oregon, described as follows:

Beginning at a two inch iron pipe at the most northerly corner and initial point of survey of Holly Acres as platted and recorded in Book 16, page 3, which plat is now vacated, which point is 490.70 feet South and 562.80 feet East of the northeast corner of the Gabriel Walling D. L. C. in Sections 13 and 14, Township 2 South, Range 1 East, W.M., and running thence South 85° 05' West, following the northerly line of a tract described in Deed to Harold L. Scofield and wife, recorded July 14, 1977, Fee No. 77 27522; thence South 24° 40' 35" East, along the northeasterly line of said Scofield tract to the most easterly corner thereof; thence South 65° 05' West, along the southeasterly line of said Scofield tract, 215.06 feet to the easterly right of way line of Gans Road; thence southeasterly along said easterly right of way line, 50 feet to the most westerly corner of a tract described in Deed to Harold L. Scofield and Edith L. Scofield, recorded November 22, 1977, Fee No. 77 47795; thence North 65° 05' East, along the northwesterly line of said Scofield tract, 228.5 feet to the most northerly corner thereof; thence South 24° 40' 35" East, along the northeasterly line of said Scofield tract, 87 feet, more or less, to the southeasterly line of a tract described in Deed to Norman A. Hayes and wife, recorded April 7, 1947, in Book 388, page 260, Deed Records; thence North 65° 05' East, along said southeasterly line to the most easterly corner thereof; thence North 23° 10' West, 230.55 feet to the point of beginning.

ALSO beginning at the most northerly corner of the above described tract; thence North 65° 05' East to the Willamette River; thence southerly up said river to a point North 65° 05' East, from the southeast corner of the above described tract; thence South 65° 05' West, to the east line of the above described tract; thence North 23° 10' West, 230.55 feet to the point of beginning.

**PARCEL III**  
A strip of land lying in Section 13, Township 2 south, Range 1 East, of the W. M., described as follows:

All that portion lying southerly of a line drawn 7 1/2 feet southerly from and parallel to the northwesterly line of the following described tract of land:

Beginning at an iron pipe on the east line of Section 14, Township 2 South, Range 1 East, of the W. M., which pipe is 28 chains South (measured along the section line) from the northeast corner of Section 14; running thence South 81° 55' West, 616 feet to an iron pipe on the easterly line of the County Road; thence South 35° 20' East along the easterly line of the County Road, a distance of 172 feet to an old iron pipe at an angle point in the easterly line of said road; thence continuing along said easterly line of the County Road, South 20° 10' East, 193 feet to an iron pipe at an angle point in the easterly line of said road; thence continuing along said easterly line of the County Road, 317 feet to an iron pipe at the southerly corner of the tract conveyed to Mary S. Young by instrument recorded in Book 178 at page 302, Deed Records; thence North 65° 06' East along the southeasterly line of said Mary S. Young tract, 489.55 feet, to the true point of beginning of the tract of land herein described; thence North 65° 06' East along the south line of said Mary S. Young tract, 526.69 feet, more or less, to the low water line on the left bank of the Willamette River; thence Northwesterly along said low water line to a point which is 15 feet easterly of and parallel to the southeasterly line of said Mary S. Young tract; thence South 65° 06' West, on a line 13 feet northerly of and parallel to the southeasterly line of said Mary S. Young tract, 526.69 feet, more or less, to a point north 24° 34' West from the true point of beginning; thence South 24° 34' East 15 feet to the true point of beginning. -----

3

STATE OF OREGON  
County of Clackamas  
I, John F. Kauffman, County Clerk, for the County of Clackamas, do hereby certify that the instrument of writing was received for recording in the records of said County at

1983 SEP 12 PM 12:45



Witness my hand and seal this day of  
*John F. Kauffman*  
John F. KAUFFMAN  
County Clerk

Recording Certificate  
C-Book (Rev. 12-78) 88 37558

**EXHIBIT A**

**Parcel I:** A tract of land situated in the west one-half of Section 13, Township 1 South, Range 1 East, and the East one-half of Section 14, Township 2 South, Range 1 East, of a W.M., in the County of Clackamas and State of Oregon, described as follows:

Beginning at a two inch iron pipe at the most northerly corner and initial point of survey of Holly area as platted and recorded in Book 16, page 3, which plat is now vacated, which point is 490.70 feet South and 382.80 feet East of the northeast corner of the Gabriel Walling D. L. C. in Sections 13 and 14, Township 1 South, Range 1 East, W.M., and running thence South 45° 05' West, following the Northerly line of vacated Holly Acres to the most northerly corner of a tract described in Deed to Harold L. Scofield and wife, recorded July 14, 1977, Fee No. 77 27522; thence South 24° 40' 35" East, along the northeasterly line of said Scofield tract to the most easterly corner thereof; thence South 65° 05' West, along the southeasterly line of said Scofield tract, 213.06 feet to the easterly right of way line of Gans Road; thence southeasterly along said easterly right of way line, 30 feet to the most westerly corner of a tract described in Deed to Harold L. Scofield and Edith L. Scofield, recorded November 21, 1977, Fee No. 77 47793; thence North 65° 05' East, along the northwesterly line of said Scofield tract, 228.5 feet to the most northerly corner thereof; thence South 24° 40' 35" East, along the northeasterly line of said Scofield tract, 87 feet, more or less, to the southeasterly line of a tract described in Deed to Norman A. Hayes and wife, recorded April 7, 1947, in Book 388, page 230, Deed Records; thence North 65° 05' East, along said southeasterly line to the most easterly corner thereof; thence North 23° 10' West, 230.35 feet to the point of beginning.

Also beginning at the most northerly corner of the above described tract; thence North 45° 05' East to the Willamette River; thence southerly up said river to a point North 65° 05' East, from the southeast corner of the above described tract; thence South 65° 05' West, to the east line of the above described tract; thence North 23° 10' West, 230.35 feet to the point of beginning.

**PARCEL III**  
A strip of land lying in Section 13, Township 1 South, Range 1 East, of the W. M., described as follows:

All that portion lying southerly of a line drawn 7 1/2 feet southerly from and parallel to the northwesterly line of the following described tract of land:

Beginning at an iron pipe on the east line of Section 14, Township 2 South, Range 1 East, of the W. M., which pipe is 46 chains South (measured along the section line) from the northeast corner of Section 14; running thence South 81° 35' West, 616 feet to an iron pipe on the easterly line of the County Road; thence South 25° 20' East along the easterly line of the County Road, a distance of 172 feet to an old iron pipe at an angle point in the easterly line of said road; thence continuing along said easterly line of the County Road, South 20° 10' East, 183 feet to an iron pipe at an angle point in the easterly line of said road; thence continuing along said easterly line of the County Road, 317 feet to an iron pipe at the southerly corner of the tract conveyed to Mary S. Young by instrument recorded in Book 178 at page 302, Deed Records; thence North 45° 05' West along the southeasterly line of said Mary S. Young tract, 489.56 feet, to the true point of beginning of the tract of land herein described; thence North 45° 05' East along the south line of said Mary S. Young tract, 528.69 feet, more or less, to the low water line on the left bank of the Willamette River; thence Northwesterly along said low water line to a point which is 15 feet easterly of and parallel to the southeasterly line of said Mary S. Young tract; thence South 65° 05' West, on a line 15 feet northerly of and parallel to the southeasterly line of said Mary S. Young tract, 528.69 feet, more or less, to a point North 24° 36' West from the true point of beginning; thence South 24° 36' East 15 feet to the true point of beginning. -----

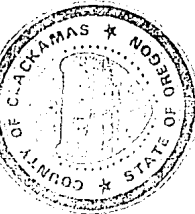
3

ILLEGIBLE WHEN RECORDED

STATE OF OREGON  
County of Clackamas

I, John F. Kauffman, County Clerk, for the County of Clackamas, do hereby certify that the instrument of writing was received for recording in the records of said county at

1988 SEP-12 PM 12:45



Witness my hand and seal this day

*John F. Kauffman*  
JOHN F. KAUFFMAN  
County Clerk

Recording Certificate  
CCP-RA (REV. 12-88)

88 37558

**NATURAL RESOURCE ASSESSMENT**  
**Within**  
**Habitat Conservation Area**

**FOR**

**Ferndell Estates**

Prepared for:  
**Bill Varitz**  
**17828 Robin View Ct**  
**West Linn, OR 97068**

Prepared by:  
**Schott and Associates**

April 2018  
Project #: 2588



## **INTRODUCTION**

### **Site Location**

Schott and Associates was contracted to conduct a wetland delineation and natural resource assessment on the subject property located east of Old River Road in West Linn, Clackamas County, Oregon. The property consists of 3 main tax lots (T2S R1E Sec.14AD 990, 1000, 1001) with two narrow strips attached to the north that are considered tax lots as well (T2S R1E Sec.14AD TL#900 and 1090 ).

### **Site Description**

The rectangular shaped subject property is situated east of Old River Road and west of the Willamette River. The property is bordered by residential housing to the north, south and west. The Willamette River binds the property to the east. The subject property is mainly gently east sloping, but toward the eastern portion sloping is steeper and terraced.

The properties are entered by Riverside Court directing east off of Old River Road in between two tax lots at the west border of tax lots 990 and 1001 . Riverside Court is a private drive turning into a long driveway leading to a house and associated outbuildings at the east end of tax lot 990. The main driveway then winds south and east to tax lot 1000 with an associated house and attached garage.

Tax lot 1001 of 0.23 AC, tax lot 990 of 3.01 AC and the associated tax lot strip 900 of 0.04 AC are the most western tax lots. These tax lots are located just east of Old River Road and entered by Riverside Court which turns into a long private driveway. All of tax lot 1001 and tax lot 900 and the western portion of tax lot 990 are forested on both sides of the long driveway. Vegetation consisted of an overstory of Douglas fir (*Pseudotsuga menziesii*) and big leaf maple (*Acer macrophyllum*) and some ornamental tree varieties. The understory consisted of English ivy (*Hedera helix*) with some snowberry (*Symphoricarpos albus*) and sword fern (*Polystichum munitum*) mixed in. North or south of the driveway, in the forested area, is one large shop and a smaller storage shed prior to the house located at the east end of tax lot 990. The house is mainly surrounded by a maintained lawn and ornamental landscaping. The driveway then loops north and south around the house entering onto the most eastern tax lot 1000.

Tax lots 1000 and 1090 are fully developed. The driveway ends at a large house with an attached garage. The house is surrounded by a manicured lawn and ornamental landscape. East of the house is a stone retaining wall and a lower terraced area that is entirely lawn bordering the Willamette River to the east.

### **Project Objectives**

The applicant proposes a 10 lot residential subdivision entirely within tax lots 900, 990 and 1001. Tax lots 1000 and 1090 will not be part of the present development proposal. Main access will be from Riverside Ct, entered from Old River Road to the west and through the middle of the development. As shown on the HCA Map, the subject property contains Habitat Conservation Areas (HCAs). The east end of the proposed roadway and the east end of proposed lots 5 and 6 are mapped within medium HCA. This report will provide HCA map verification and a description of site findings.

## **METHODS**

A wetland and natural resource assessment were conducted on April 12, 2018. As per 28.030, 28.070 Habitat Conservation Area boundaries were determined and documented in this report.

Prior to visiting, site information was gathered, including recent and historical aerial photographs provided by Google Earth, the soil survey (NRCS web soil survey), the Local Wetland Inventory (LWI), the National Wetland Inventory (NWI), the Water Resource Area (WRA) map and the Habitat Conservation Area (HCA) map. The USGB topography map was also reviewed prior to the site visit.

The wetland delineation field work was conducted using the *1987 Manual and Regional Supplement to the Corps of Engineers Delineation Manual: Western Mountains, Valleys and Coast Region* to determine presence or absence of State of Oregon wetland boundaries and the Federal jurisdictional wetlands.

## **SENSITIVE AREA CONDITIONS**

### **Waterway**

There were no waterways onsite. The Willamette River bordered tax lot 1000 to the east and defines the property boundary. The waterway is not within the defined project area boundary.

### **Wetland**

Based on soil, vegetation and hydrology data taken in the field no wetlands were found on the subject property. Sample plots were placed where geomorphic location or vegetation indicated the possibility of wetlands. Three sample plots were dug within the lowest lying areas located in the most eastern location of tax lot 1000 on a lower terrace bordering the Willamette River. The sample plots were all located within a mowed area of facultative grasses. Soils were mainly sand with a matrix color mix of 10YR 3/2, 3/3 and 4/4. No redoximorphic features were present and soils were dry. No hydrology indicators were present. No wetlands were present within the subject property.

The LWI, as well as the NWI and the WRA map, documented the Willamette River bordering the subject property to the east. The maps did not document any wetlands or waterways within the subject property. Onsite findings resulted in the same information.

The Web Soil Survey for Clackamas County mapped Cloquato silt loam and Woodburn silt loam 3 to 8% slopes within the subject property. Neither is considered a hydric soil.

### **HCA**

#### ***28.070 PLANNING DIRECTOR VERIFICATION OF METRO HABITAT PROTECTION MAP BOUNDARIES***

*A. The HCA Map is the basis for identifying and designating the habitat conservation areas in the City. A copy of the latest, updated HCA Map is on file at the City and is adopted by reference for use with this chapter.*

*It is inevitable, given the large area that Metro's HCA Map covers, that there may be some errors. In cases where, for example, three properties share the same contours and the same natural features but the map shows the middle lot with an HCA designation on it, it is reasonable to question the accuracy of that HCA designation. Using tree overstory as the sole basis for HCA designation will also allow a change in designation since trees are already protected in the municipal code and Chapters 55 and 85 CDC.*

*B. The Planning Director shall verify the appropriate HCA or non-HCA designation by site visits or consultations with Metro or by other means. Determination is based on*

*whether the Metro criteria are met or whether the Metro designation was based solely on tree overstory in which case a redesignation is appropriate. In cases where the determination is that the map is incorrect, the Planning Director will make a written finding of this as well as the site conditions that led to that conclusion.*

*C. Class B public notice, per Chapter 99 CDC, shall be required prior to issuance of the redesignation decision if it involves redesignation of the HCA boundary to allow the construction of, or addition to, a house.*

*D. This determination and findings shall become part of the City record and part of the record for any associated land use application. The Planning Director shall also include in the record the revised map boundary. The Planning Director's determination and map revisions shall also be sent to Metro so that their map may be corrected as necessary.*

*E. The Planning Director determination is appealable to the City Council per Chapter 99 CDC.*

*F. Lands that are designated as an HCA only due to a forested overstory are exempt under CDC 28.040, Exemptions, since trees are already protected in the municipal code and Chapters 55 and 85 CDC. Similar exemptions apply to lands that exhibit no constraints. (Ord. 1576, 2008; Ord. 1604 §§ 25 – 28, 2011)*

### HCA Map description

Most of tax lot 1000 and 1090 are mapped HCA. The eastern 2/3rds of tax lots 1000 and 1090 are mapped High HCA. The western 1/3 is mainly mapped Medium HCA. The east edge of tax lots 900 and 990 are mapped Medium HCA. The remaining area of these tax lots, as well as tax lot 1001, is mapped Habitat and Impact Areas not designated as HCAs. No development is proposed in tax lots 1000 and 1090 where the majority of the HCA is mapped. A 10 lot subdivision is proposed within tax lots 900, 990 and 1001. Only the very eastern property boundary of tax lots 900 and 990 are mapped Medium HCA, covering 5,155sf of area.

### HCA on site findings

The site was visited and information documented in April of 2018. Tax lots 1000 and 1090 are located the furthest east within the subject property. They are bordered by the Willamette River to the east, therefore, within the City of West Linn Willamette Greenway Area. A majority of tax lots 1000 and 1090 are mapped High HCA and Medium HCA.

HCA mapping also covers a small area (5,155sf) within tax lots 900 and 990 at their eastern property line. Upon site investigation we have determined that there was a mapping error and there are no actual Habitat Conservation Areas within the subject property.

Tax lot 1000 and 1090 do border the Willamette River along the east property line, but the vegetation consists of a vast mowed lawn area vegetated with non-native grasses. The lawn area bordering the river is the lowest lying area within the subject property. From the river the lawn area varies in width to the west, from 50 to a 100' as the property angles at the eastern property line. Three sample plots were dug within the lowest lying areas and soils consisted of sand with a mixed matrix of 10YR3/3, 3/2 and 4/4. There were no redoximorphic features present. There were no hydrology indicators observed. It was determined that no wetlands were in the lowest area of the property where they would most likely be found.

At the west end of the lawn area is a stone retaining wall and a steep bank dominated by English ivy and a few scattered Douglas fir trees. At the top of the steep bank the property flattens out. This is where the house is located. The house is surrounded by a manicured lawn and ornamental plantings. In front of the house, to the west, is a long driveway directing north and south. The driveway is bordered to the west by another retained sloped bank dominated by ivy. There are a few Douglas fir and big leaf maples in the overstory and a few scattered snowberry and sword fern mixed in with the ivy on the slope. The driveway circles a second house

on tax lot 990, located above the slope, in a north and south direction. The driveways meet west of the second house and then direct west to Old River Road. The second house, located on tax lot 990 was surrounded by ornamental landscape as well. HCA mapping basically stops east of the house on tax lot 990 except at the southeast corner of the lot where it extends a little further west past the house.

Upon site observation and site information gathered prior to the site visit, we contend that there was a mapping error and there is no actual HCA within any of the tax lots on the subject property. What was observed was vast lawns, retaining walls, ivy dominated slopes, buildings with non-native landscapes and asphalt or gravel driveways. Per Google Earth aerial photos, the subject property has been like this since at least 1994 and has remained the same to date.

### **Impacts to Wetlands/Waters**

There are no wetlands or waterways onsite, therefore no impacts. The Willamette River borders tax lot 1000 to the east. There is no proposed development for tax lot 1000.

### **Impacts to the mapped HCA**

Development is proposed on tax lots 900, 990 and 1001. Medium HCA is mapped at the east boundary of tax lots 900 and 990. Proposed lot 5 will impact 725sf and lot 6 will impact 3,750sf of mapped Medium HCA. The proposed roadway ends at the east property line of tax lot 990, impacting 680sf of mapped Medium HCA. Total impact is 5,155sf of mapped Medium HCA.

Onsite investigation determined that there is no HCA on the property and most of the mapped HCA on tax lot 900 and 990 is within a steep ivy covered, rock retained slope or on a hardscape driveway. The homes on tax lot 990 and 1000 were built in 1994. Per Google Earth the property has been developed since at least 1994 and remains the same to date.

### ***28.110 APPROVAL CRITERIA***

*No application for development on property within the protection area shall be approved unless the decision-making authority finds that the following standards have been met or can be met by conditions of approval. The development shall comply with the following criteria as applicable:*

#### ***A. Development: All sites.***

*1. Sites shall first be reviewed using the HCA Map to determine if the site is buildable or what portion of the site is buildable. HCAs shall be verified by the Planning Director per CDC 28.070 and site visit. Also, "tree canopy only" HCAs shall not constitute a development limitation and may be exempted per CDC 28.070(A). The municipal code protection for trees and Chapters 55 and 85 CDC tree protection shall still apply.*

An HCA map with a development overlay is attached. As described above onsite conditions and review of historical aerials indicate a mapping error and no actual HCA was found to be onsite.



2. *HCAs shall be avoided to the greatest degree possible and development activity shall instead be directed to the areas designated “Habitat and Impact Areas Not Designated as HCAs,” consistent with subsection (A)(3) of this section.*

The attached development plan demonstrates that a majority of the proposed development is within “Habitat and Impact Areas Not Designated as HCAs”. A minimal amount of the proposed development is within mapped Medium HCA area. We believe the mapping is in error and there were no HCAs on the subject property.

3. *If the subject property contains no lands designated “Habitat and Impact Areas Not Designated as HCAs” and development within HCA land is the only option it shall be directed towards the low HCA areas first, then medium HCA areas and then to high HCA as the last choice. The goal is to, at best, avoid or, at least, minimize disturbance of the HCAs. (Water-dependent uses are exempt from this provision.)*

Most of the development is within non HCAs, and the minimal amount within mapped HCA is believed to be a mapping error.

4. *All development, including exempted activities of CDC 28.040, shall have approved erosion control measures per Clackamas County Erosion Prevention and Sediment Control Planning and Design Manual, rev. 2008, in place prior to site disturbance and be subject to the requirements of CDC 32.070 and 32.080 as deemed applicable by the Planning Director.*

This condition shall be met.

***B. Partitions, subdivisions and incentives.***

1. *When dividing a property into lots or parcels, an applicant shall verify the boundaries of the HCA on the property.*

See attached HCA map with development overlay. This map is provided for reference as the site visit has verified no actual HCA onsite.

2. *Applicant shall partition or subdivide the site so that all lots or parcels have a buildable site or envelope available for home construction located on non-HCA land or areas designated “Habitat and Impact Areas Not Designated as HCAs” per the HCA Map.*

A majority of the lots are proposed in non HCAs and all lots have a buildable site envelope located outside the mapped HCA. As identified onsite and described in this report no actual HCA was found onsite.

3. *Development of HCA-dominated lands shall be undertaken as a last resort. A planned unit development (PUD) of Chapter 24 CDC may be required.*

A minimal amount of Mapped HCA would be impacted, but we believe the HCA map is in error as described above and there is no HCA on the subject property.

4. *Incentives are available to encourage provision of public access to, and/or along, the river. By these means, planned unit developments shall be able to satisfy the shared outdoor recreation area requirements of CDC 55.100(F). Specifically, for every square foot of riverfront path, the applicant will receive credit for two square feet in calculating the required shared outdoor recreation area square footage. Applicants shall also be eligible for a density bonus under CDC 24.150(B). To be eligible to receive either of these incentives, applicants shall:*

*a. Provide a minimum 20-foot-wide all-weather public access path along the project's entire river frontage (reduced dimensions would only be permitted in response to physical site constraints such as rock outcroppings, significant trees, etc.); and*

*b. Provide a minimum 10-foot-wide all-weather public access path from an existing public right-of-way to that riverfront path or connect the riverfront path to an existing riverfront path on an adjoining property that accesses a public right-of-way;*

*c. Fencing may be required near steep dropoffs or grade changes.*

No development is proposed near the river as the tax lot bordering the river is not part of the proposed development plan. (tax lot 1000)

### **28.160 MITIGATION PLAN**

*If any HCA is permanently disturbed as a result of the proposed development of any uses or structures, the applicant shall prepare and implement a revegetation and mitigation plan pursuant to the provision of CDS 32.070 and 32.080. (Ord. 1576, 2008)*

There is a total proposed impact of 5,155sf within the mapped medium HCA.

Per above described documentation we believe the HCA map is in error and there is no HCA on the subject property, therefore, no mitigation is proposed.

### **Conclusion**

Tax lots 900, 990, 1000, 1001 and 1090 were walked to verify HCA mapping accuracy. Tax lots 1000 and 1090 border the Willamette River and are almost entirely mapped HCA. Tax lot 1001 is mapped as non HCA. Tax lots 900 and 990 are HCA mapped at their eastern property boundary. A 10 lot development plan has been proposed within tax lots 900, 990 and 100, impacting 5,155sf of mapped Medium HCA. Upon walking the site and conducting a natural resource assessment, we believe the HCA mapping is in error and there is no HCA within any of the tax lots on the subject property. This may be verified by the Planning Director per 28.070. No HCA impacts are proposed and no mitigation should be required.

## Appendices

A: Site Vicinity Map

B: Tax Map

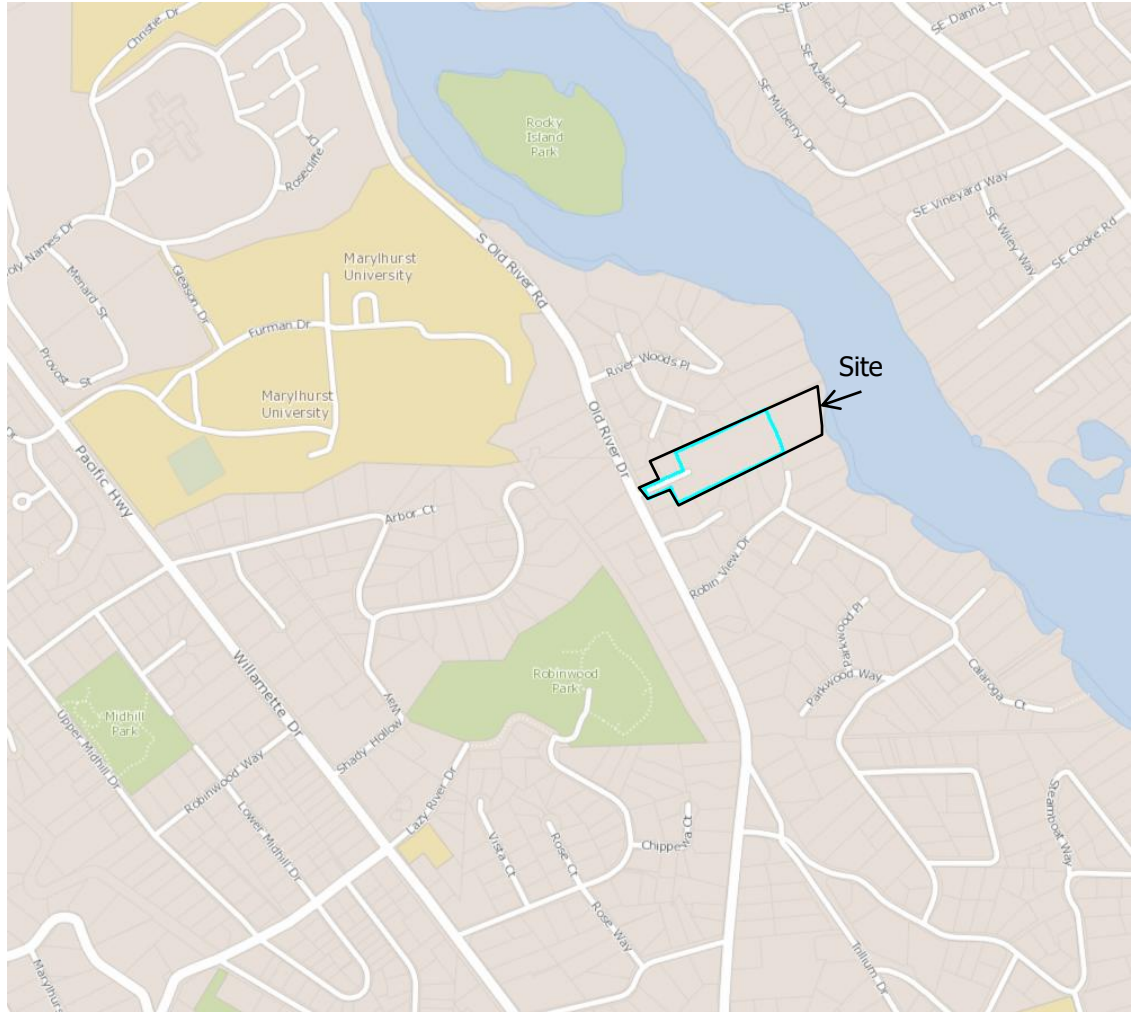
C: HCA Map

D: Aerial Photograph

E: Development Plan

F: Development Plan Overlay on HCA Map with Photo Points

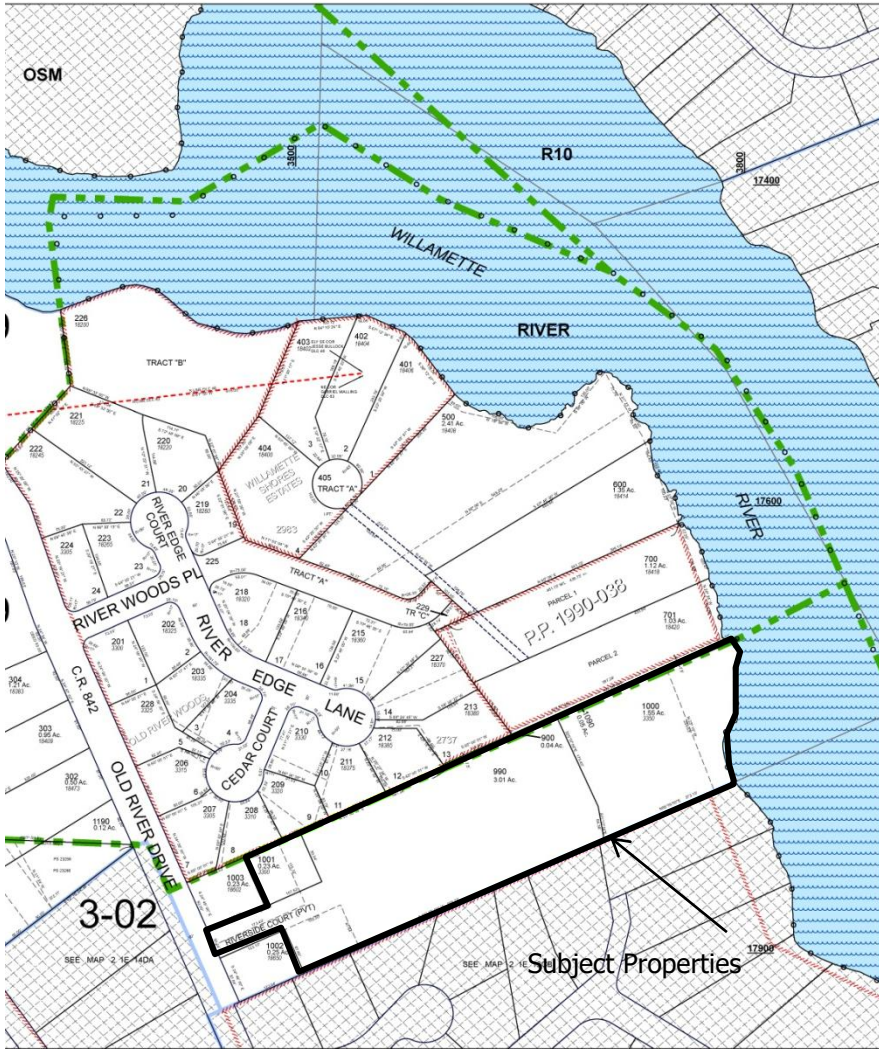
G: Ground Level Photographs



Appendix A: Site Vicinity Map  
S&A 2588  
Ferdell Estates

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





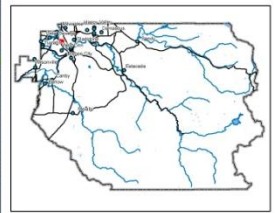
2 1 E 14AD  
WEST LINN  
S.E. 1/4 N.E. 1/4 SEC. 14 T.2S. R.1E. W.M.  
CLACKAMAS COUNTY  
1" = 100'

D. L. C.  
GABRIEL WALLING NO. 63  
JESSIE BULLOCK NO. 46

Cancelled Taxlots

100001
300
800
211
300
214
400
200

- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- TaxCodeLines
- Map Index
- WaterLines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 119th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'



THIS MAP IS FOR ASSESSMENT  
PURPOSES ONLY

2 1 E 14AD  
WEST LINN

2/11/2018

Appendix B: Tax Map (tax lots 900, 990, 1000, 1001, 1090)  
S&A 2588  
Ferdell Estates

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



**Metro 2005  
Habitat Conservation Areas (HCAs)**

**Conservation Area**

- High
- Moderate
- Low
- Habitat and Impact Areas  
no designated as HCAs

West Linn Exceptions

West Linn Exceptions include the Planning Director's land use decisions: MISC-08-19, MISC-10-26, and memo dated January 25, 2011

Data Source: Metro Data Resource Center  
 Habitat Conservation Areas Map December 15, 2005  
 Urban Growth Management Functional Plan  
 Title 13, Nature in Neighborhoods  
 Adopted Sept. 29, 2005 (Metro Ordinance No. 05 -1077C)  
 Amended Dec. 8, 2005 (Metro Ordinance No. 05 -1097A)





Appendix D: Aerial Photograph  
S&A 2588  
Ferndell Estates

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



Density Calculations			
	Area (sq. ft.)	Allowable Density	Units @1 per 10,000 sq.ft.
Gross Site Area	142,933		
Land in a boundary street right-of-way, water course, or planned open space where density transfer is not requested:	0		
Area in street right-of-way:	34,373		
Net Site Area:	108,560		
Net Area within Type I or II slopes where Developed:	4,422	50%	.22
Area within Type I or II slopes where Density Will be Transferred:	0	75%	0
Area within Water Resource Area-all development transferred.	0	50%	0
Open Space (Type III and IV Lands)	0	100%	0
Net Type III & IV Land Developed:	104,138	100%	10.41
Base Density Allowed:			10.63
TOTAL ALLOWED DENSITY:			10 UNITS

SIGNED ON: **2 FEB 18**  
**REGISTERED PROFESSIONAL LAND SURVEYOR**  
  
**OREGON JULY 13, 2004 TOBY G. BOLDEN 60377LS**  
 RENEWS: DECEMBER 31, 2018  
 Design by: Richard E. Givens, Planning Consultant  
 Survey Work by: Centerline Concepts, Inc.

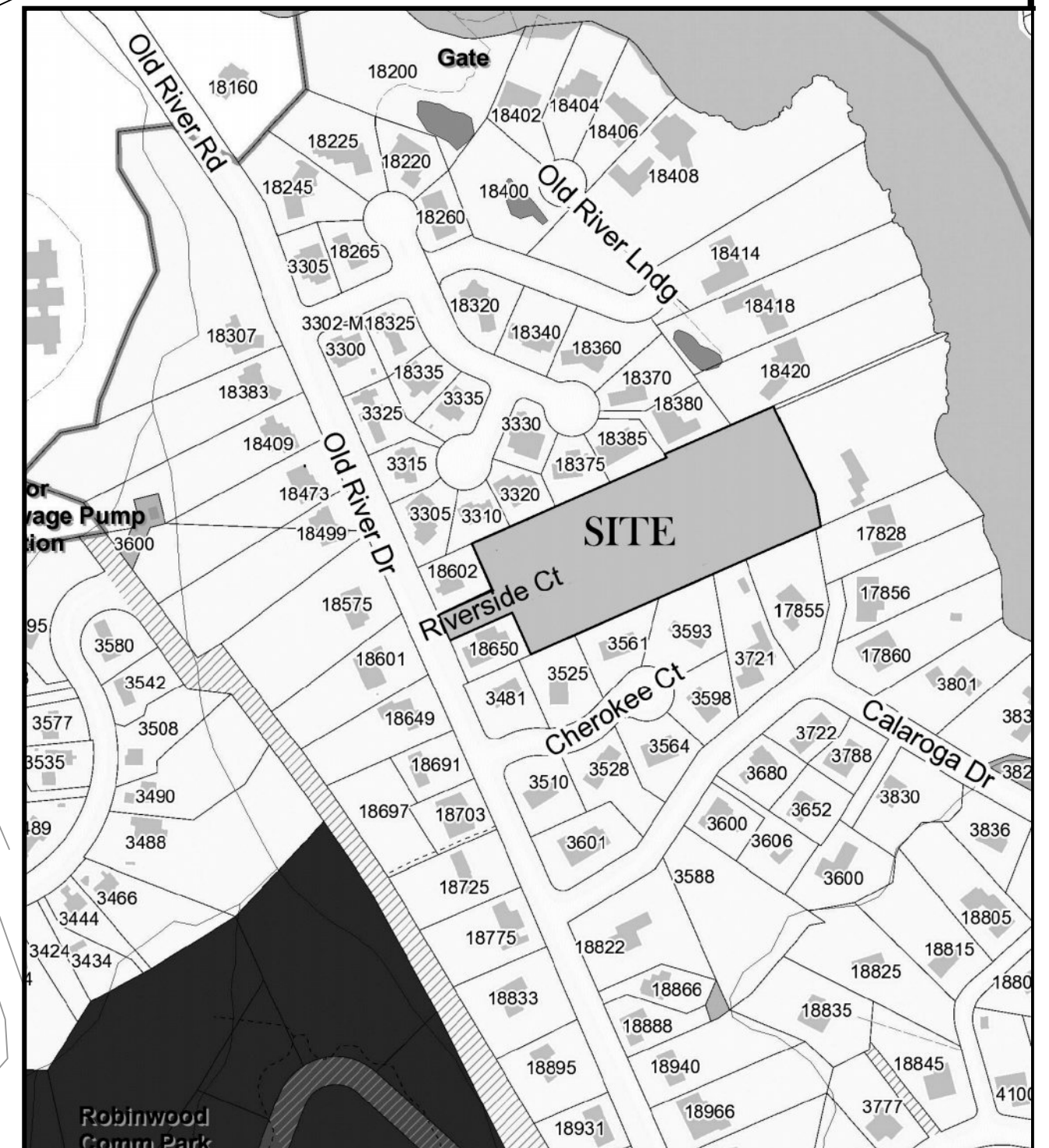
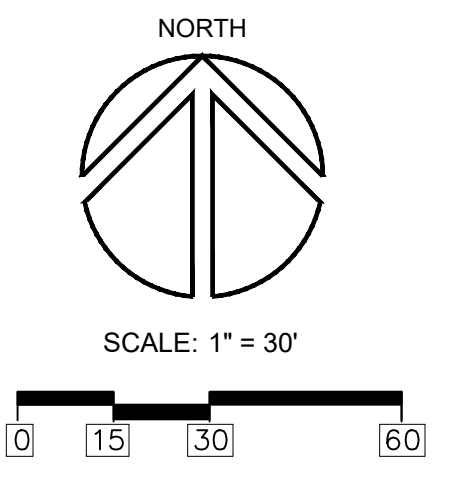
Applicant/Owner:  
 Bill Varitz  
 17828 Robin View Ct.  
 West Linn, OR 97068  
 PH: (503) 939-3803

Legal: 2-1E-14AD TL 900 & 990  
 Water: City of West Linn  
 Sewer: City of West Linn  
 Contours: Centerline Concepts, Inc.  
 Site Area: 3.28 Acres

Engineer:  
 Theta Engineering, Inc.  
 PO Box 1345  
 Lake Oswego, OR 97035  
 PH: (503) 481-8822

Surveyor:  
 Centerline Concepts, Inc.  
 700 Molalla Ave.  
 Oregon City, OR 97045  
 PH: (503) 650-0188

Zoning: R-10



DESIGNED: REG			
DRAWN: REG			
SCALE: 1" = 30'			
DATE: February 2018			
FILE: 13-VAR-100	DATE	NO.	REVISION

Richard E. Givens, Planning Consultant  
 18680 Sunblaze Dr.  
 Oregon City, OR 97045  
 PH: (503) 479-0097

APPLICANT: Greg Sams & Bill Varitz  
 18811 Trillium Drive  
 West Linn, OR 97068  
 PH: (503) 939-6015

**Ferndell Estates**  
Tentative Plan

SHEET 1/3









Photo Point 1 facing south



Photo Point 1 facing east





Photo Point 1 facing north



Photo Point 1 facing west





Photo Point 2 facing south



Photo Point 2 facing east





Photo Point 2 facing north



Photo Point 2 facing west





Photo Point 3 facing



Photo Point 3 facing east





Photo Point 3 facing north



Photo Point 3 facing west





Photo Point 4 facing east



Photo Point 4 facing south

Appendix G: Ground Level Photographs  
S&A 2588  
Ferndell Estates

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





Photo Point 4 facing west



Photo Point 4 facing north





Photo Point 5 facing north



Photo Point 5 facing west





Photo Point 5 facing south



Photo Point 5 facing east



Density Calculations			
	Area (sq. ft.)	Allowable Density	Units @1 per 10,000 sq.ft.
Gross Site Area	142,933		
Land in a boundary street right-of-way, water course, or planned open space where density transfer is not requested:	0		
Area in street right-of-way:	34,373		
Net Site Area:	108,560		
Net Area within Type I or II slopes where Developed:	4,422	50%	.22
Area within Type I or II slopes where Density Will be Transferred:	0	75%	0
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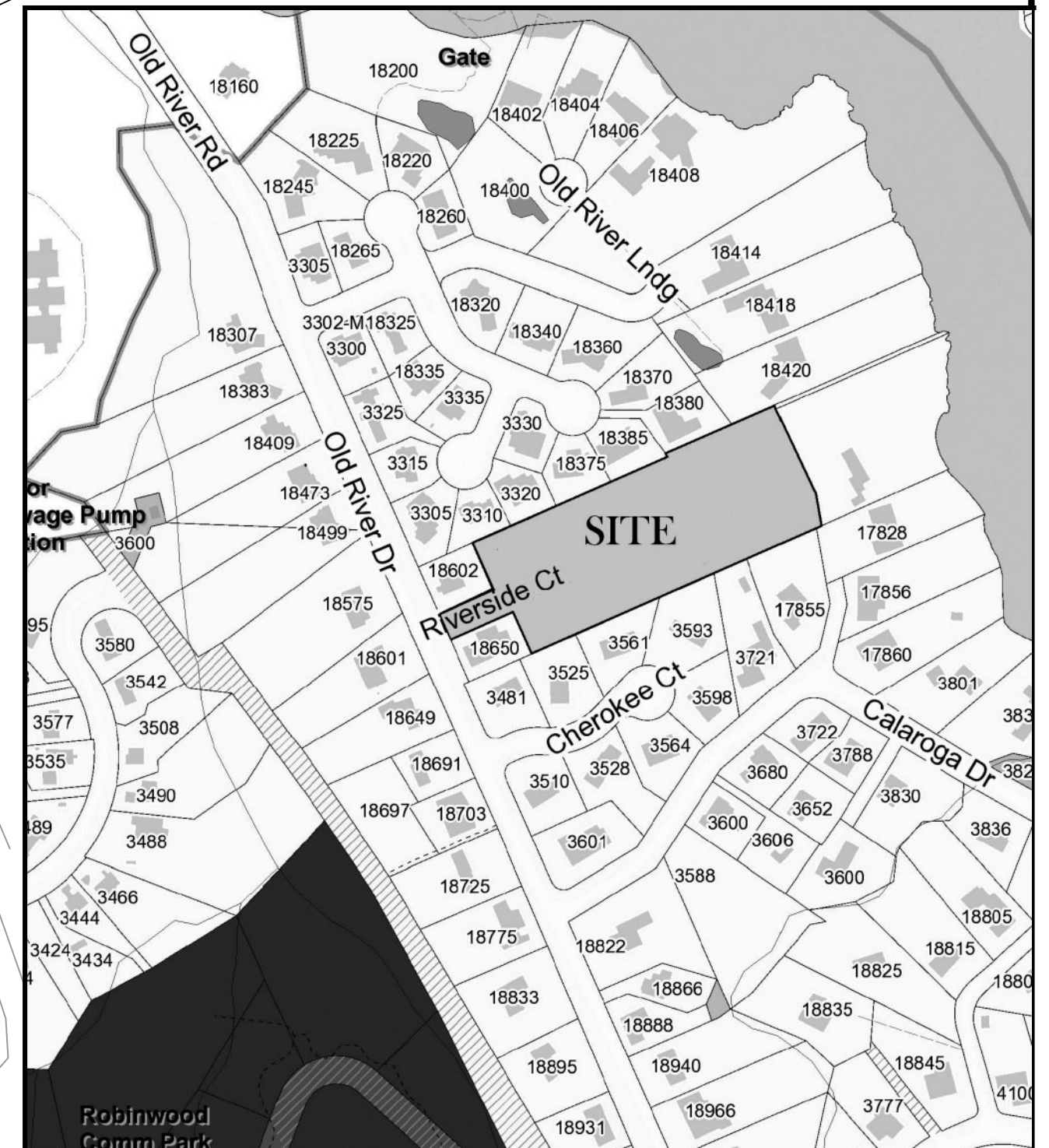
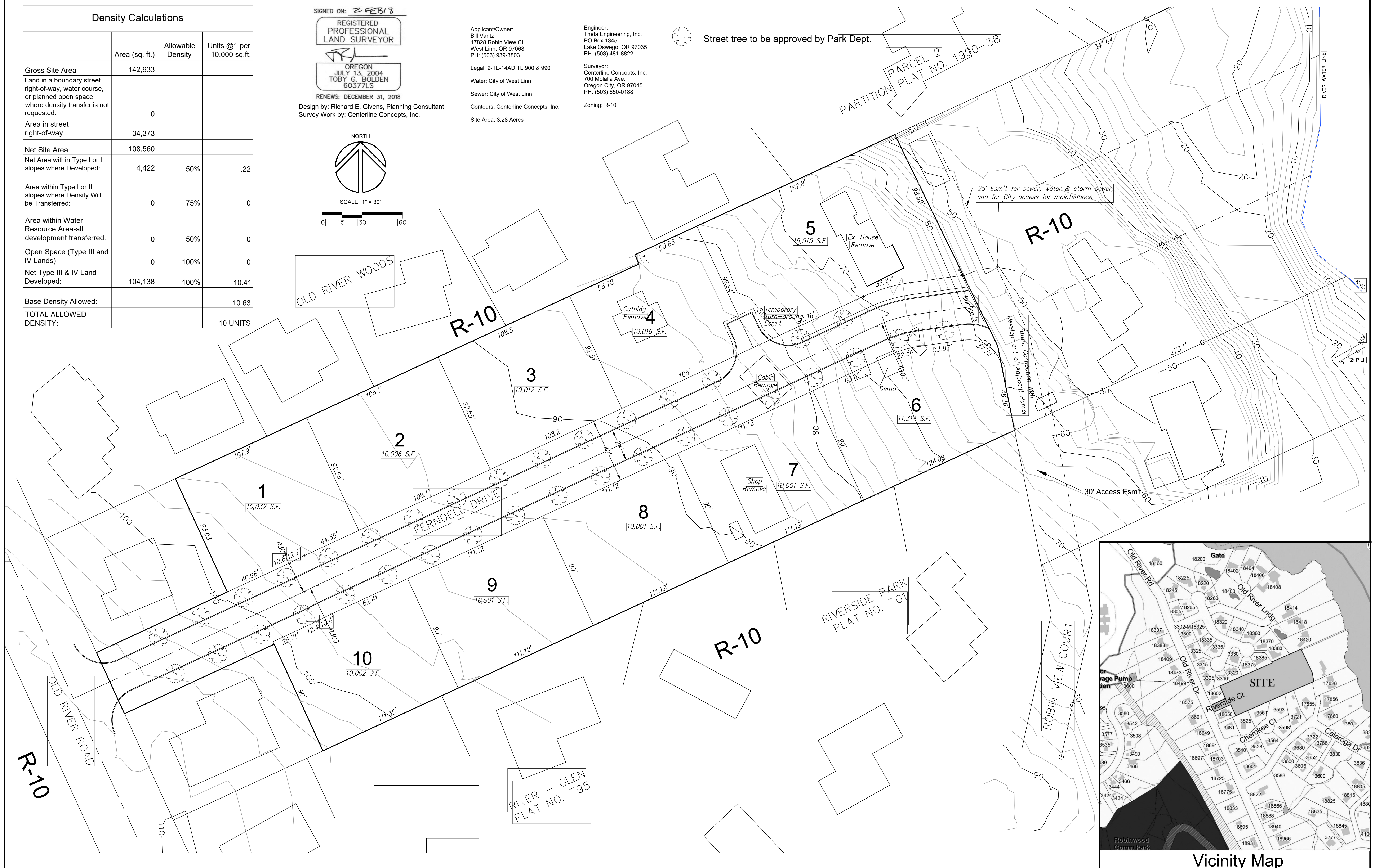
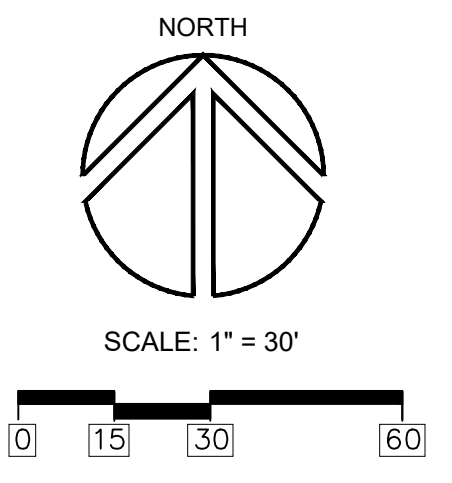
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Legal: 2-1E-14AD TL 900 & 990  
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 700 Molalla Ave.  
 Oregon City, OR 97045  
 PH: (503) 650-0188

Zoning: R-10



DESIGNED:	REG	5-3-2018	1	Added street trees, re-development plan for TL 1000, access & utility esm't on TL 1000
DRAWN:	REG			
SCALE:	1" = 30'			
DATE:	February 2018			
FILE:	13-VAR-100	DATE	NO.	REVISION

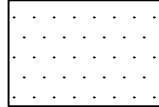
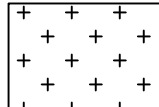
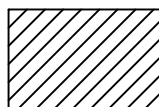
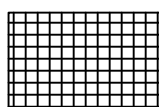
Richard E. Givens, Planning Consultant  
 18680 Sunblaze Dr.  
 Oregon City, OR 97045  
 PH: (503) 479-0097

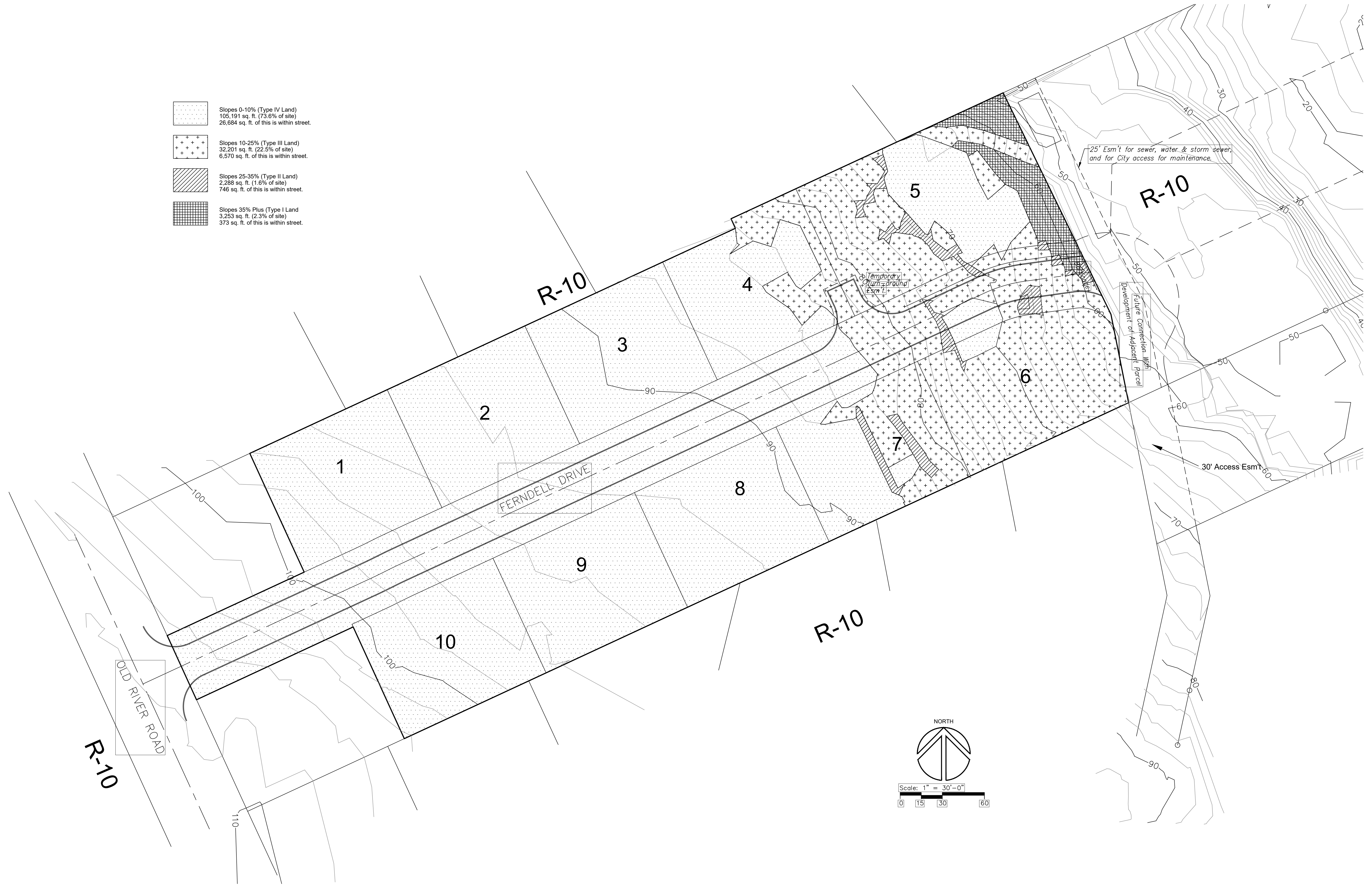
APPLICANT: Greg Sams & Bill Varitz  
 18811 Trillium Drive  
 West Linn, OR 97068  
 PH: (503) 939-6015

**Ferndell Estates**  
Tentative Plan

SHEET 1/3



-  Slopes 0-10% (Type IV Land)  
 105,191 sq. ft. (73.6% of site)  
 26,684 sq. ft. of this is within street.
-  Slopes 10-25% (Type III Land)  
 32,201 sq. ft. (22.5% of site)  
 6,570 sq. ft. of this is within street.
-  Slopes 25-35% (Type II Land)  
 2,288 sq. ft. (1.6% of site)  
 746 sq. ft. of this is within street.
-  Slopes 35% Plus (Type I Land)  
 3,253 sq. ft. (2.3% of site)  
 373 sq. ft. of this is within street.



DESIGNED: REG			
DRAWN: REG			
SCALE: 1" = 30'			
DATE: February 2018			
FILE: 16-VAR-100	DATE	NO.	REVISION

Richard E. Givens, Planning Consultant  
 18680 Sunblaze Dr.  
 Oregon City, OR 97045  
 PH: (503) 479-0097

APPLICANT: Bill Varitz & Greg Sams  
 18811 Trillium Drive  
 West Linn, OR 97068  
 PH: (503) 939-6015

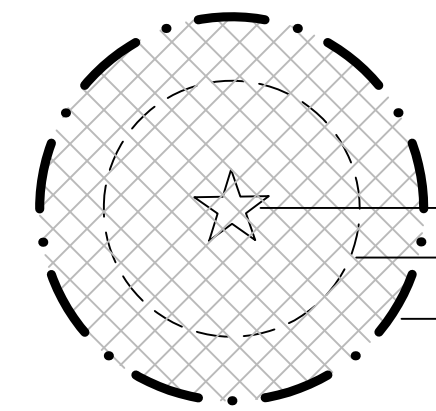
## Ferndell Estates Slope Analysis



Tag	Species	Diameter	Rating	Condition
1	Port Orford Cedar	13	2	added
2	Douglas Fir	34	1	co-dominant stem cut; decay present
3	big leaf maple	21	2	dead branches
4	western red cedar	18	2	viable
5	sweet cherry	16	2	ivy
6	big leaf maple	14	2	viable
7	big leaf maple	15	2	viable
8	western red cedar	33	2	co-dominant @ 35'
9	western red cedar	16	2	3' off-site; added
10	sweet cherry	13	2	added
11	sweet cherry	12	2	added
12	red alder	12	1	trunk decay; added
13	red alder	12	2	trunk swoop; added
14	big leaf maple	30	1	basal decay
15	western red cedar	14	2	
16	big leaf maple	16	2	
17	big leaf maple	12,13	2	co-dominant; added
18	western red cedar	25	2	co-dominant @ 25'
19	sweet cherry	14	2	added
20	big leaf maple	22	2	
21	sweet cherry	21	2	added
22	big leaf maple	15	2	added
23	sweet cherry	12	2	ivy
24	sweet cherry	15	2	ivy
25	sweet cherry	15	2	added
26	sweet cherry	13	2	added
27	big leaf maple	17	2	added
28	western red cedar	36	2	2' off-site; added
29	sweet cherry	18	2	
30	grand fir	40	3	
31	western red cedar	22	2	
32	big leaf maple	17	2	
33	big leaf maple	12	2	added
34	big leaf maple	18	2	

35	big leaf maple	36	1	multiple stems; basal decay; past failures
36	Douglas Fir	39	2	very tall
37	red alder	14	1	trunk decay; added
38	big leaf maple	14	2	added
39	sweet cherry	13	2	added
40	big leaf maple	17	2	co-dominant from base; added
41	big leaf maple	26	2	multiple stems; added
42	big leaf maple	22	2	multiple stems; added
43	big leaf maple	21	2	multiple stems; added
44	big leaf maple	25	2	multiple stems; added
45	big leaf maple	33	2	multiple stems; added
46	big leaf maple	44	1	multiple stems; added
47	big leaf maple	15	2	added
48	big leaf maple	13	2	added
49	sweet cherry	15	2	
50	big leaf maple	18	2	added
51	red alder	13	2	
52	big leaf maple	17	2	
53	sweet cherry	12	2	added
54	big leaf maple	18	1	basal decay
55	big leaf maple	27	2	added
56	big leaf maple	14	2	added
57	big leaf maple	16	2	added
58	Douglas Fir	26	2	very tall
59	Douglas Fir	40	2	very tall
60	Douglas Fir	49	2	very tall
61	Douglas Fir	33	2	very tall; shares stump with 162
62	western red cedar	21	2	shares stump with 163
63	big leaf maple	16	2	codominant from 1'; added
64	big leaf maple	13	2	
65	big leaf maple	15	2	
66	Douglas Fir	33	2	very tall
67	big leaf maple	17	2	added
68	big leaf maple	20	2	added
69	sweet cherry	12	2	added

70	Douglas Fir	19	2	poor trunk taper
71	Douglas Fir	30	2	
72	Douglas Fir	22	2	poor trunk taper
73	Douglas Fir	30	2	
74	Douglas Fir	26	2	
75	big leaf maple	13	2	added
76	Douglas Fir	17	2	
77	Douglas Fir	27	2	
78	big leaf maple	17	2	
79	big leaf maple	13	1	co-dominant stem is cut; basal decay
80	big leaf maple	20	2	
81	big leaf maple	26	2	co-dominant from 3'
82	Douglas Fir	34	2	
83	Douglas Fir	32	2	
84	Douglas Fir	27	2	
85	Douglas Fir	29	2	added
86	big leaf maple	17	2	
87	Douglas Fir	40	2	
88	big leaf maple	21	2	
89	big leaf maple	15	2	added
90	big leaf maple	13	2	added
91	sweet cherry	13	2	added
92	big leaf maple	12	2	added
93	big leaf maple	13	2	added
94	big leaf maple	20	2	
95	Douglas Fir	36	2	within 1' of out building
96	sweet cherry	20	2	
97	Douglas Fir	47	2	
98	sweet cherry	13	2	added
99	sweet cherry	13	2	added
100	Douglas Fir	40	2	
101	Douglas Fir	24	2	
102	western red cedar	30	2	
103	sweet cherry	15	2	trunks swoop; added
104	western red cedar	19	2	



Significant Trees to be protected.

Drip Line

Drip Line Plus 10'



Significant Trees to be retained where feasible.



Significant Trees to be removed.



105	sweet cherry	12	2	added
106	big leaf maple	18	1	trunk and basal decay; added
107	big leaf maple	12	2	added
108	western red cedar	26	2	<1' off-site; added
109	sweet cherry	13	2	added
110	big leaf maple	12	2	added
111	big leaf maple	21	1	multiple stems; added
112	big leaf maple	18	2	
113	Douglas Fir	39,33	2	co-dominant from base
114	western red cedar	29	2	trunk decays; co-dominant @ 20'
115	big leaf maple	20	2	
116	big leaf maple	15	2	added
117	Douglas Fir	33	2	
118	Douglas Fir	31	2	
119	western red cedar	26	2	
120	light pole	9	N/A	not a tree
121	red alder	19	2	
122	big leaf maple	16	2	
123	Douglas Fir	27	2	
124	Douglas Fir	30	2	
125	Douglas Fir	40	2	
126	sweet cherry	23	2	co-dominant; included bark
127	big leaf maple	12	2	added
128	big leaf maple	21	2	added
129	big leaf maple	15	2	
130	big leaf maple	19	2	
131	western red cedar	41	2	
132	sweet cherry	16,14	2	co-dominant from base
133	sweet cherry	16	2	added
134	western red cedar	30	2	
135	Scouler willow	14	2	added
136	big leaf maple	40	2	co-dominant @ 5'
137	red alder	12	2	added
138	Douglas Fir	40	2	
139	western red cedar	34	2	


140	chestnut	13	2	added
141	western red cedar	30	2	
142	big leaf maple	27	2	co-dominant @ 3'
143	Douglas Fir	45	2	
144	western red cedar	13	2	
145	sweet cherry	12	2	added
146	big leaf maple	16	2	
147	big leaf maple	17	2	
148	western red cedar	18	2	
149	big leaf maple	18	2	
150	big leaf maple	27	2	co-dominant @ 3'; added
151	big leaf maple	16	2	
152	incense cedar	18	2	multiple tops
153	western red cedar	32	2	
154	Douglas Fir	35	2	
155	Douglas Fir	50	2	
156	western red cedar	32	2	7' off-site
157	western red cedar	36	2	5' off-site
158	Douglas Fir	45	2	
159	big leaf maple	26	2	co-dominant @ 3'
160	Douglas Fir	59	1	P. schweinitzii root disease; co-dominant stems
161	western red cedar	14	2	hedgerow; added
162	western red cedar	13	2	hedgerow; added
163	western red cedar	12	2	hedgerow; added
164	western red cedar	19	2	hedgerow; added
165	western red cedar	12	2	hedgerow; added
166	sweet cherry	15	2	
167	Douglas Fir	27	2	
168	Pacific madrone	6	2	added
169	Douglas Fir	27	1	red-ring rot
170	Douglas Fir	23	2	
171	Douglas Fir	35	2	
172	big leaf maple	30	2	added
173	sweet cherry	13	2	added
174	big leaf maple	14,14	2	added

DESIGNED:	REG			
DRAWN:	REG			
SCALE:	1" = 30'			
DATE:	February 2018			
FILE:	16-VAR-100	DATE	NO.	REVISION

Richard E. Givens, Planning Consultant  
 18680 Sunblaze Dr.  
 Oregon City, OR 97045  
 PH: (503) 479-0097

APPLICANT: Bill Varitz & Greg Sams  
 18811 Trillium Drive  
 West Linn, OR 97068  
 PH: (503) 939-6015





June 29, 2018

Mr. Peter Spir, Associate Planner  
City of West Linn  
22500 Salamo Rd.  
West Linn, Oregon 97068

**Rick Givens**  
**Planning Consultant**  
18680 Sunblaze Dr.  
Oregon City, Oregon 97045

RE: Ferndell Estates - Second Incompleteness Letter

Dear Peter:

I believe that we have now addressed or come to an agreement on the responses to the issues listed in your May 21, 2018 letter of incompleteness for the Ferndell Estates project. I will summarize our response or understanding with respect to these issues below:

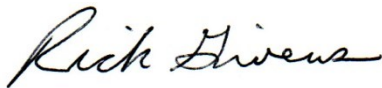
1. The question of the need for inclusion of TL 1000/1090 in the subdivision – As you know, there is no proposal to divide TL 1000/1090 at this time. This property is a separate legal lot of record that is owned by Mr. Varitz. The Ferndell Estates subdivision site is owned by a trust. We have agreed with staff that the storm water treatment facility should be included in the subdivision that it serves. To that end, we have filed a property line adjustment application to include it as Tract A on the Tentative Plan. The storm sewer outfall to the Willamette River will be within a storm sewer easement across Tax Lot 1000 that will be granted to the City prior to final plat approval.
2. Local street standard applicable to Ferndell Drive – We have revised the Tentative Plan and preliminary engineering documents to comply with Erich Lais's request that a 52' right-of-way/28' paved width be used on this street. The 50' access strip area will be a 50' right-of-way/26' paved width with curb-tight sidewalks and no parking in that section of the road.
3. Turn-around requirements – The Tentative Plan shows a temporary emergency vehicle turn-around that has been reviewed and approved by TVF&R. Tax Lot 1000/1090 will not be a part of the subdivision, but Mr. Varitz has agreed to dedicate 30' of right-of-way from the end of Ferndell Drive out to Robin View Ct. so as to ensure that this looped street will take place when TL 1000 is developed.
4. Planter strip width – The planter strip width specified in the City's local street diagram is 6 feet, but this is shown on the cross-section as being measured from the face of the curb. The actual width will be 5.5' (6' sidewalk + 5.5' planter + .5' curb + 28' paved width + .5' curb + 5.5' planter + 6' sidewalk = 52'). The construction plans will conform to this standard.
5. Storm water treatment facility location - The storm water treatment facility shown on plans submitted with this application is not located within the sanitary sewer easement existing along the north boundary of the subject property or within the 100 year flood plain boundary. Since the location does not need to be moved, there is no need to revise

the geotechnical report. The “rain gardens” proposed for this project are intended to provide for storm water treatment only. They will not have any infiltration function because the site is so close to the Willamette River, but instead will have an outflow to the storm sewer system. For this reason, there is no concern with siting them on slopes over 10% grade.

6. Schott & Associates HCA report revisions – This report has been modified to address the issues raised in the second letter of incompleteness. It now addresses TL 1000/1090.
7. Need for Flood Management Area Permit for TL 1000 storm improvements – The plan for the storm water outfall to the river has been revised to pipe the water so that the amount of soil disturbed will be under the 10 cubic yard threshold. For this reason, the FMA permit is not required.

Thank you for consideration of this letter and the revised plans and reports. Please let us know if there are any further questions.

Sincerely yours,

A handwritten signature in cursive script that reads "Rick Givens".

Rick Givens

# FERNDELL ESATES

## Ten-Lot Subdivision Application

**Bill Varitz & Greg Sams**

**Proposal:** This application requests approval of a 10-lot subdivision to be developed on property located at 3350 Riverside Court in West Linn. Also requested as a part of this application is a Willamette and Tualatin River Protection Area Permit. Finally, the application also includes a property line adjustment with the adjacent Tax Lot 1000/1090 to add area required for storm water treatment to the subdivision site.

The property is located on the east side of Old River Road at its intersection with the unconstructed Riverside Court. The subject property is described as Tax Lots 900 and 990 of Clackamas County Assessor's Map 21E14AD. The site is 3.35 acres (after property line adjustment) in area. It is presently developed with a single-family detached home and outbuildings. The home and outbuildings will be removed to allow for the development of the site. The subject property is zoned R-10.

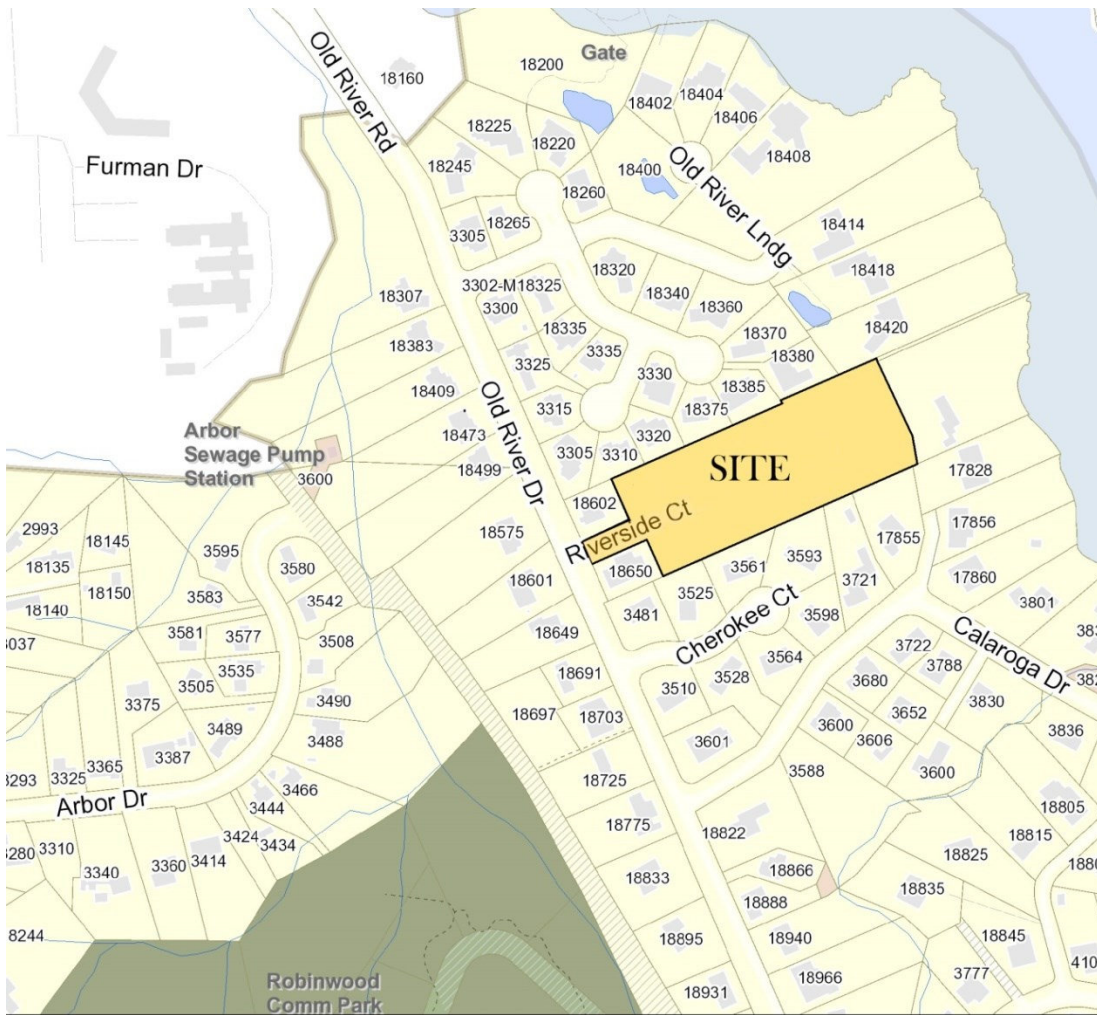


Figure 1: Vicinity Map





Figure 2: Aerial Photograph

The proposed development conforms to the applicable provisions of the CDC as follows:

#### DIVISION 8. LAND DIVISION

### Chapter 85 GENERAL PROVISIONS

#### 85.170 C. Grading.

A grading plan is included with this submittal. However, recent changes to this section of the Community Development Code now require a geologic report when certain slope conditions exist:

3. *The grading plan must identify proposed building sites and include tables and maps identifying acreage, location and type of development constraints due to site characteristics such as slope, drainage and geologic hazards. For Type I, II, and III lands (refer to definitions in Chapter 02 CDC), the applicant must provide a geologic report, with text, figures and attachments as needed to meet the industry standard of practice, prepared by a certified engineering geologist and/or a geotechnical professional engineer, that includes:*
  - a. *Site characteristics, geologic descriptions and a summary of the site investigation conducted;*
  - b. *Assessment of engineering geological conditions and factors;*
  - c. *Review of the City of West Linn's Natural Hazard Mitigation Plan and applicability to the site; and*

- d. *Conclusions and recommendations focused on geologic constraints for the proposed land use or development activity, limitations and potential risks of development, recommendations for mitigation approaches and additional work needed at future development stages including further testing and monitoring.*

Comment: Chapter 02 of the CDC defines Type I, II, and III lands as follows:

*Type I lands. Lands that have severe constraints that preclude the use of standard development techniques and technical criteria. Type I lands exist in one or more of the following areas:*

1. *Slope: Land that has slopes of 35 percent or more over more than 50 percent of the site, as shown on the RLIS topography GIS layer.*
2. *Drainage: All lands within the designated floodway as shown on the appropriate FEMA flood panel.*
3. *Geological hazard: All landslide areas shown on the City's Natural Hazard Mitigation Plan ("NHMP") and identified as "landslide potential exists" on Map 16 of the NHMP, or areas outside Map 16, but within Map 17, Landslide Vulnerable Analysis Area.*

Comment: As shown on the Slope Analysis map submitted with this application, there is a small area of slopes of 35% or greater grade on the eastern edge of the subdivision. This area amounts to only 2.3% of the site and does not trigger designation as Type I land. The site is not in the 100 year flood plain, let alone the floodway. Map 16 and Map 17 of the NHMP do not indicate any landslide or "landslide potential" areas on the property. Conclusion: The site does not contain Type I lands since slopes are not 35% or greater on more than 50% of the site.

*Type II lands. Lands which have constraints that are sufficient to preclude most standard types of development. Constraints in these areas generally do not constitute a health or safety hazard, but require the use of non-standard technical design criteria. Type II lands exist in one or more of the following areas:*

1. *Slope: Land that has slopes over 25 percent on more than 50 percent of the site, as shown on the RLIS topography GIS layer.*
2. *Drainage: All drainage courses identified on the water resource area maps or areas identified as protected Goal 5 Wetlands, and areas outside the floodway, but within the floodway fringe, also known as the 100-year floodplain.*
3. *Geology: All known mineral and aggregate deposits identified on the Comprehensive Plan map as protected Goal 5 resources.*

Comment: The Slope Analysis map indicates that only 1.6% of the site contains slopes in the 25% to 35% range. When aggregated with the 2.3% of slopes greater than 35% grade, the total percentage of the site having slopes greater than 25% grade is 3.9%. There are no water resources or wetlands on the property. There are no known mineral and aggregate deposits shown for this site on the Comprehensive Plan Map.

Conclusion: The site does not contain Type II lands because slopes are not greater than 25% on more than 50% of the site and the other criteria are also not met.

*Type III lands. These lands are considered within the major portion of the City's developable lands. Standard development criteria can be applied through normal implementation measures. Type III lands have slopes over 10 percent on more than 50 percent of the site, as shown on the RLIS topography GIS layer.*

Comment: The Slope Analysis map shows that 22.5 percent of the site contains slopes in the 10% to 25% range. When aggregated with the 2.3% of slopes greater than 35% grade and 1.6% of the site having slopes in the 15-35% range, the total percentage of the site having slopes greater than 10% grade is 26.4%. Conclusion: The site does not contain Type III lands since slopes are not greater than 10 percent grade on over 50 percent of the site.

## **85.200 APPROVAL CRITERIA**

*No tentative subdivision or partition plan shall be approved unless adequate public facilities will be available to provide service to the partition or subdivision area prior to final plat approval and the Planning Commission or Planning Director, as applicable, finds that the following standards have been satisfied, or can be satisfied by condition of approval.*

### **A. Streets.**

Comment: The subject property will extend Ferndell Drive (presently identified as Riverside Ct.) through the property from Old River Drive to the east boundary of the site. This extension was suggested by staff as a means of potentially allowing for a future connection to Robin View Ct. if Tax Lot 1000 is further divided. This will allow for a looped street configuration with improved connectivity in the surrounding neighborhood. A reserve strip will be provided at the end of Ferndell Drive, consistent with City standards. No cul-de-sac streets are proposed so the provisions of Section 85.200(A)11 are not applicable. A temporary turn-around has been provided in the site plan and has been approved by Tualatin Valley Fire & Rescue as meeting design requirements.

The proposed street name, Ferndell Drive, is not used elsewhere in the City. Consistent with City standards, the maximum street grade is 15%. This occurs at the east end of Ferndell Drive as the street traverses down a short hillside area to the lower bench that TL 1000 is situated on. No alleys are proposed. All proposed streets have sidewalks and planter strips, consistent with City standards. All proposed streets will be dedicated without any reservations or restrictions. All lots in the subdivision have access to a public street, as shown on the Tentative Plan. No gated streets or special entry designs are proposed.

### **B. Blocks and lots.**

Comment: No new blocks having a length of more than 800 feet are proposed. The distance along Ferndell Drive to the eventual connection with Robin View Ct. is a little over 700 feet. Due to terrain and surrounding development patterns, it is not



practicable to make blocks that are shorter. The proposed lots have property lines that are perpendicular to the street; contain sufficient area to meet the requirements of the R-10 zone, and provide for building envelopes that will meet required setbacks. The lots have buildable depths that do not exceed 2.5 times their width.

The development conforms to the provisions of Chapter 48, as discussed below in this report.

85.200(B) (5). No double frontage lots are proposed. The proposed lot lines within the development are approximately at right angles to the streets on which they front, as required by Section 85.200(B)(6). No flag lots are proposed. The proposed lots are not large enough to allow for future re-division under the provisions of the R-10 zone.

C. Pedestrian and bicycle trails.

Comment: No pedestrian or bicycle trails are proposed in this development. No bicycle improvements were listed on the Bicycle Master Plan.

D. Transit facilities.

Comment: Not applicable. No transit facilities are proposed or required as there is no TriMet service in this area.

E. Lot grading.

Comment: Grading of the proposed building site will conform to City standards. Preliminary grading plans for the street area is shown on the Preliminary Grading Plan submitted with this application. Compliance for individual homes will be reviewed at the time of building permit application.

F. Water.

Comment: City water is available in Old River Drive. The proposed project site is in the Robinwood water pressure zone, which has adequate volume and pressure of water to serve the subdivision. The new water main to be installed in Ferndell Drive will be 8" ductile iron and will be connected through to the water line in Robin View Ct. in order to provide a looped system.

G. Sewer.

Comment: As shown on the Preliminary Utility Plan, there is an existing public sewer line in an easement along the north side of the site. The sewer developed within the new street will connect to this line.

H. Storm.

Comment: As shown on the Preliminary Utility Plan, storm sewer will be installed in the new street and piped to a small treatment facility to be located in Tract A on the the eastern border of the site. Storm water will be released to the Willamette River via an easement across Tax Lot 1000, as shown on the Tentative Plan. No storm

water detention is proposed because of the proximity to the river. Please refer to the attached storm report for more detail.

We have been advised by Planning staff that the Planning Commission has recently stated a position that storm water detention facilities be considered a major utility, which would require approval of a conditional use permit. The proposed facility differs from the storm detention facility that was discussed at the November 15, 2017 Planning Commission hearing in several ways:

- The proposed facility is not a stormwater detention pond. No water will be detained at this facility. Rather, it is a facility containing vegetative media through which storm water will pass in order to filter sediments and pollutants out of the water prior to discharge to the Willamette River. Because the facility detains no water, it would have a lesser impact on a neighborhood than a facility where there would be standing water for some period of time.
- The scale of the facility is much smaller than the detention pond that was discussed at that hearing (less than 1,000 sq. ft. vs. nearly 9,000 sq. ft.). This small scale again means lesser potential for impact upon neighboring properties in terms of visibility and amount of storm water involved.
- The location of the proposed facility near the river means that there are fewer neighbors involved and that any overflow would go directly to the river so that there is not the same potential to impact neighbors as with a detention facility.

For all of these reasons, we believe that the Planning Commission can find that this is a minor utility that does not require Conditional Use approval.

Finally, in order to preserve all appeal rights, we must raise an objection to the Planning Commission's characterization of storm water detention and, potentially, treatment facilities, as major utilities. They are, in fact, an accessory or ancillary use to residential development. Per the provisions of Chapter 92 of the Community Development Code, as well as the City's Public Works Standards, residential development must provide for storm water detention and treatment. To make storm water facilities that are required in order to develop residential properties a conditional use would have the effect of making residential development itself a de facto conditional use, which would violate Statewide Planning Goal 10 and the Metropolitan Housing Rule.

- I. Utility easements. Utility easements are shown on the plans submitted with this application.
- J. Supplemental provisions.
  1. Wetland and natural drainageways. Comment: There are no wetlands or natural drainageways on or abutting the subject property.
  2. Willamette and Tualatin Greenways. Comment: See discussion of Chapter 48, below.

3. Street trees. Comment: Street trees will be provided as required, as shown on the Tentative Plan.
4. Lighting. Comment: Prior to final plat approval, an analysis of existing street lighting will be conducted and, if necessary, improvements made to comply with these standards. The preliminary design for streetlight placement within the subdivision is shown on the preliminary utility plan. To reduce ambient light and glare, high or low pressure sodium light bulbs will be provided for all streetlights within the subdivision. The lights will be shielded so that the light is directed downwards rather than omni-directional.
5. Dedications and exactions. Comment: No new dedications or exactions to service off-site properties are anticipated in conjunction with this application.
6. Underground utilities. Comment: All utilities within the development will be placed underground, as required by this section.
7. Density requirement. Comment: The density calculations submitted with this application demonstrate that the maximum density permitted on this site is 10 units. The minimum allowable density would be 8 units. The proposed density of 10 units satisfies both the maximum and minimum density standard.

#### Density Calculations

	Area (sq. ft.)	Allowable Density	Units @1 per 10,000 sq.ft.
Gross Site Area	145,907		
Land in a boundary street right-of-way, water course, or planned open space where density transfer is not requested:	0		
Area in street right-of-way:	36,709		
Net Site Area:	109,198		
Net Area within Type I or II slopes where Developed:	4,422	50%	.22
Area within Type I or II slopes where Density Will be Transferred:	0	75%	0
Area within Water Resource Area-all development transferred.	0	50%	0
Open Space (Type III and IV Lands)	0	100%	0
Type III & IV Land Developed:	104,776	100%	10.48
Base Density Allowed:			10.70
Total Allowed Density:			10 Units

8. Mix requirement. Comment: Not applicable. This requirement only applies in the R-2.1 and R-3 zones. The subject property is zoned R-10.
9. Heritage trees/significant tree and tree cluster protection. Comment: No heritage trees, as defined in the Municipal Code, are present on the site. Other



existing trees are mapped on the Tree Plan, including those identified by the City Arborist as “significant”. Please see discussion of Chapter 55, below.

10. Annexation and street lights. Comment: Not applicable. The subject property is within the city limits.

## Chapter 48 - ACCESS, EGRESS AND CIRCULATION

### 48.025 ACCESS CONTROL

#### B. Access control standards.

1. Traffic impact analysis requirements. *The City or other agency with access jurisdiction may require a traffic study prepared by a qualified professional to determine access, circulation and other transportation requirements. (See also CDC 55.125, Traffic Impact Analysis.)*

Comment: The trip generation rate for single-family homes is approximately 10 vehicle trips per day according to Institute of Transportation Engineers data. One of these trips will occur in the am peak hour and one will occur in the pm peak hour. The proposed subdivision will add five new dwellings (additionally, the existing home on the property will be replaced with a new dwelling, which will generate the same traffic as the existing home would). A total of 90 new trips per day would be expected from this development, with 9 occurring in the am peak hour and 9 occurring in the pm peak hour. Because of the small size and limited amount of traffic to be generated by this development, a Traffic Impact Analysis is not required for this project.

2. *The City or other agency with access permit jurisdiction may require the closing or consolidation of existing curb cuts or other vehicle access points, recording of reciprocal access easements (i.e., for shared driveways), development of a frontage street, installation of traffic control devices, and/or other mitigation as a condition of granting an access permit, to ensure the safe and efficient operation of the street and highway system. Access to and from off-street parking areas shall not permit backing onto a public street.*

Comment: Access to the subdivision will from the extension of Ferndell Drive through the property from Old River Drive to the east boundary of the site. When property to the east (Tax Lot 1000) is partitioned, this will provide for an eventual connection of Riverside Drive to Robin View Ct., which loops back out to Old River Drive. One of the applicants, Mr. Varitz, is also the owner of Tax Lots 1000 and TL 21E13CB00500 and he has agreed to dedicate street right-of-way for the eventual completion of this connection prior to final plat approval. Street improvements within this right-of-way would not occur until Tax Lot 1000 is developed.

3. Access options. *When vehicle access is required for development (i.e., for off-street parking, delivery, service, drive-through facilities, etc.), access shall be provided by one of the following methods (planned access shall be consistent with*

adopted public works standards and TSP). These methods are “options” to the developer/subdivider.

- a) Option 1. Access is from an existing or proposed alley or mid-block lane. If a property has access to an alley or lane, direct access to a public street is not permitted.
- b) Option 2. Access is from a private street or driveway connected to an adjoining property that has direct access to a public street (i.e., “shared driveway”). A public access easement covering the driveway shall be recorded in this case to assure access to the closest public street for all users of the private street/drive.
- c) Option 3. Access is from a public street adjacent to the development lot or parcel. If practicable, the owner/developer may be required to close or consolidate an existing access point as a condition of approving a new access. Street accesses shall comply with the access spacing standards in subsection (B)(6) of this section.

Comment: All lots will take access from the new Ferndell Drive within the subdivision.

4. Subdivisions fronting onto an arterial street. New residential land divisions fronting onto an arterial street shall be required to provide alleys or secondary (local or collector) streets for access to individual lots. When alleys or secondary streets cannot be constructed due to topographic or other physical constraints, access may be provided by consolidating driveways for clusters of two or more lots (e.g., includes flag lots and mid-block lanes).

Comment: The site plan provides local street access for all lots. The site does not abut an arterial street.

5. Double-frontage lots. When a lot or parcel has frontage onto two or more streets, access shall be provided first from the street with the lowest classification. For example, access shall be provided from a local street before a collector or arterial street. When a lot or parcel has frontage opposite that of the adjacent lots or parcels, access shall be provided from the street with the lowest classification.

Comment: No double-frontage lots are proposed.

6. Access spacing.

- a. The access spacing standards found in Chapter 8 of the adopted Transportation System Plan (TSP) shall be applicable to all newly established public street intersections and non-traversable medians.
- b. Private drives and other access ways are subject to the requirements of CDC 48.060.

Comment: Old River Drive is designated as a Neighborhood Route by the West Linn Transportation Systems Plan. The minimum spacing distance listed between intersections on a Neighborhood Route is 150 feet. The proposed Ferndell Drive intersection is 233' north of Cherokee Ct., and 600' south of Riverwoods Place. This standard is met.

*7. Number of access points. For single-family (detached and attached), two-family, and duplex housing types, one street access point is permitted per lot or parcel, when alley access cannot otherwise be provided; except that two access points may be permitted corner lots (i.e., no more than one access per street), subject to the access spacing standards in subsection (B)(6) of this section. The number of street access points for multiple family, commercial, industrial, and public/institutional developments shall be minimized to protect the function, safety and operation of the street(s) and sidewalk(s) for all users. Shared access may be required, in conformance with subsection (B)(8) of this section, in order to maintain the required access spacing, and minimize the number of access points.*

Comment: Each proposed lot will have one access point, as specified in this section.

*8. Shared driveways. The number of driveway and private street intersections with public streets shall be minimized by the use of shared driveways with adjoining lots where feasible. The City shall require shared driveways as a condition of land division or site design review, as applicable, for traffic safety and access management purposes in accordance with the following standards:*

Comment: Not applicable. No shared accesses are proposed.

*C. Street connectivity and formation of blocks required. In order to promote efficient vehicular and pedestrian circulation throughout the City, land divisions and large site developments shall produce complete blocks bounded by a connecting network of public and/or private streets, in accordance with the following standards:*

*1. Block length and perimeter. The maximum block length shall not exceed 800 feet or 1,800 feet along an arterial.*

Comment: No block lengths in excess of 800 feet are proposed. The block length from Old River Drive to the eventual connection with Robin View is approximately 700 feet.

*2. Street standards. Public and private streets shall also conform to Chapter 92 CDC, Required Improvements, and to any other applicable sections of the West Linn Community Development Code and approved TSP.*

Comment: Proposed streets will comply with the public street standards of Chapter 92 (see below).

*3. Exception. Exceptions to the above standards may be granted when blocks are divided by one or more pathway(s), in conformance with the provisions of CDC 85.200(C), Pedestrian and Bicycle Trails, or cases where extreme*



*topographic (e.g., slope, creek, wetlands, etc.) conditions or compelling functional limitations preclude implementation, not just inconveniences or design challenges. (Ord. 1635 § 25, 2014; Ord. 1636 § 33, 2014)*

Comment: No exceptions to block length are necessary.

#### **48.030 MINIMUM VEHICULAR REQUIREMENTS FOR RESIDENTIAL USES**

*A. Direct individual access from single-family dwellings and duplex lots to an arterial street, as designated in the transportation element of the Comprehensive Plan, is prohibited for lots or parcels created after the effective date of this code where an alternate access is either available or is expected to be available by imminent development application. Evidence of alternate or future access may include temporary cul-de-sacs, dedications or stubouts on adjacent lots or parcels, or tentative street layout plans submitted at one time by adjacent property owner/developer or by the owner/developer, or previous owner/developer, of the property in question.*

Comment: All lots will take access from the internal local street system. No arterial streets are located in this area.

*B. When any portion of any house is less than 150 feet from the adjacent right-of-way, access to the home is as follows:*

- 1. One single-family residence, including residences with an accessory dwelling unit as defined in CDC 02.030, shall provide 10 feet of unobstructed horizontal clearance. Dual-track or other driveway designs that minimize the total area of impervious driveway surface are encouraged.*
- 2. Two to four single-family residential homes equals a 14- to 20-foot-wide paved or all-weather surface. Width shall depend upon adequacy of line of sight and number of homes.*
- 3. Maximum driveway grade shall be 15 percent. The 15 percent shall be measured along the centerline of the driveway only. Variations require approval of a Class II variance by the Planning Commission pursuant to Chapter [75](#) CDC. Regardless, the last 18 feet in front of the garage shall be under 12 percent grade as measured along the centerline of the driveway only. Grades elsewhere along the driveway shall not apply.*
- 4. The driveway shall include a minimum of 20 feet in length between the garage door and the back of sidewalk, or, if no sidewalk is proposed, to the paved portion of the right-of-way.*

Comment: All lots will have individual driveways that conform to these standards. Driveways will be reviewed at the time of building permit application.

*C. When any portion of one or more homes is more than 150 feet from the adjacent right-of-way, the provisions of subsection B of this section shall apply in addition to the following provisions.*

- 1. A turnaround may be required as prescribed by the Fire Chief.*
- 2. Minimum vertical clearance for the driveway shall be 13 feet, six inches.*
- 3. A minimum centerline turning radius of 45 feet is required unless waived by the Fire Chief.*

4. *There shall be sufficient horizontal clearance on either side of the driveway so that the total horizontal clearance is 20 feet.*

Comment: No lots will have portions of the homes located more than 150 feet for the adjacent right-of-way.

*D. Access to five or more single-family homes shall be by a street built to full construction code standards. All streets shall be public. This full street provision may only be waived by variance.*

Comment: The proposed street will be built to full City standards for local streets, with 52 feet of right-of-way and 28' of paving. A reduced section of 50' of right-of-way with 26' of pavement is proposed at the entrance to the site due to the constraints of the existing 50' access strip. This standard still exceeds the minimum standard for local streets of 48' of right-of-way and 24' of pavement. No parking will be allowed within this reduced width strip.

*E. Access and/or service drives for multi-family dwellings shall be fully improved with hard surface pavement:*

Comment: Not applicable. No multi-family dwellings are proposed.

*F. Where on-site maneuvering and/or access drives are necessary to accommodate required parking, in no case shall said maneuvering and/or access drives be less than that required in Chapters 46 and 48 CDC.*

Comment: Not applicable. All lots are for single-family homes and all parking will be provided on the home's driveway.

*G. The number of driveways or curb cuts shall be minimized on arterials or collectors. Consolidation or joint use of existing driveways shall be required when feasible.*

Comment: No driveways onto arterial or collector streets are proposed.

*H. In order to facilitate through traffic and improve neighborhood connections, it may be necessary to construct a public street through a multi-family site.*

Comment: Not applicable. No multi-family development is proposed.

*I. Gated accessways to residential development other than a single-family home are prohibited. (Ord. 1408, 1998; Ord. 1463, 2000; Ord. 1513, 2005; Ord. 1584, 2008; Ord. 1590 § 1, 2009; Ord. 1636 § 34, 2014)*

Comment: Not applicable. No gated accesses are proposed.

## **Chapter 55 - DESIGN REVIEW**

As required by this chapter, the applicant retained the services of an arborist (Multnomah Tree Experts) to identify the size, species, and condition of existing trees on



the subject property. The trees were surveyed and mapped by Centerline Concepts, Inc., as shown on the Existing Conditions Map submitted with this application. Subsequently, the City Arborist visited the site and determined that 38 of these trees are significant trees. These trees are shown on the Tree Preservation Plan submitted with this application. The following provisions of Chapter 55 relating to tree preservation are applicable to this proposal:

**B. Relationship to the natural and physical environment.**

*1. The buildings and other site elements shall be designed and located so that all heritage trees, as defined in the municipal code, shall be saved. Diseased heritage trees, as determined by the City Arborist, may be removed at his/her direction.*

Comment: No heritage trees are located on the subject property.

*2. All heritage trees, as defined in the municipal code, all trees and clusters of trees ("cluster" is defined as three or more trees with overlapping driplines; however, native oaks need not have an overlapping dripline) that are considered significant by the City Arborist, either individually or in consultation with certified arborists or similarly qualified professionals, based on accepted arboricultural standards including consideration of their size, type, location, health, long term survivability, and/or numbers, shall be protected pursuant to the criteria of subsections (B)(2)(a) through (f) of this section. In cases where there is a difference of opinion on the significance of a tree or tree cluster, the City Arborist's findings shall prevail. It is important to acknowledge that all trees are not significant and, further, that this code section will not necessarily protect all trees deemed significant.*

*a. Non-residential and residential projects on Type I and II lands shall protect all heritage trees and all significant trees and tree clusters by either the dedication of these areas or establishing tree conservation easements. Development of Type I and II lands shall require the careful layout of streets, driveways, building pads, lots, and utilities to avoid heritage trees and significant trees and tree clusters, and other natural resources pursuant to this code. The method for delineating the protected trees or tree clusters ("dripline + 10 feet") is explained in subsection (B)(2)(b) of this section. Exemptions of subsections (B)(2)(c), (e), and (f) of this section shall apply.*

Comment: Only one of the significant trees identified by the City Arborist is located on slopes that are consistent with Type I or II lands. That tree is proposed to be preserved. It must be noted, however, that per the definitions of Type I and II lands in Chapter 2 of the Community Development Code, there are no such lands on the subject property. The percentage of the site that they occupy (1.6%-Slopes 25-35%, and 2.3%-Slopes 35% plus) is far lower than the 50% threshold set in the definition.

*b. Non-residential and residential projects on non-Type I and II lands shall set aside up to 20 percent of the area to protect trees and tree clusters that are determined to be significant, plus any heritage trees. Therefore,*

*in the event that the City Arborist determines that a significant tree cluster exists at a development site, then up to 20 percent of the non-Type I and II lands shall be devoted to the protection of those trees, either by dedication or easement. The exact percentage is determined by establishing the driplines of the trees or tree clusters that are to be protected. In order to protect the roots which typically extend further, an additional 10-foot measurement beyond the dripline shall be added. The square footage of the area inside this "dripline plus 10 feet" measurement shall be the basis for calculating the percentage (see figure below). The City Arborist will identify which tree(s) are to be protected. Development of non-Type I and II lands shall also require the careful layout of streets, driveways, building pads, lots, and utilities to avoid significant trees, tree clusters, heritage trees, and other natural resources pursuant to this code. Exemptions of subsections (B)(2)(c), (e), and (f) of this section shall apply. Please note that in the event that more than 20 percent of the non-Type I and II lands comprise significant trees or tree clusters, the developer shall not be required to save the excess trees, but is encouraged to do so.*

Comment: The entire site is wooded and, as shown on the Tree Plan submitted with this application, Significant Trees impact every lot in the subdivision, as well as the proposed street. This makes full compliance with the 20 percent aspirational standard impracticable while maintaining reasonable building sites. A total of 17,725 sq. ft. of the site is proposed to be placed in tree preservation easement, as shown on the tree plan. This amounts to approximately 12.1% of site area. This does not mean that all of the Significant Trees located outside of these tree protection areas will be removed; rather it means that it will be necessary to build closer to some of these trees than the dripline-plus-10 standard. Where Significant Trees are located on lot lines or rear yard areas and it is practicable to save the trees, they will be retained.

- c. Where stubouts of streets occur on abutting properties, and the extension of those streets will mean the loss of significant trees, tree clusters, or heritage trees, it is understood that tree loss may be inevitable. In these cases, the objective shall be to minimize tree loss. These provisions shall also apply in those cases where access, per construction code standards, to a lot or parcel is blocked by a row or screen of significant trees or tree clusters.*

Comment: Ferndell Drive will be stubbed to the east property line of the subject property. This street will be extended through the site to connect with Robin View Ct. in the future when Tax Lot 1000 is divided, as shown on the shadow plat on the Tentative Plan. This extension will result in the loss of 4 trees located within the street right-of-way. As is apparent from the slope analysis drawing, it is not practicable to relocate the street so that it would avoid these trees.

- d. For both non-residential and residential development, the layout shall achieve at least 70 percent of maximum density for the developable net*

*area. The developable net area excludes all Type I and II lands and up to 20 percent of the remainder of the site for the purpose of protection of stands or clusters of trees as defined in subsection (B)(2) of this section.*

Comment: The density calculations submitted with this application demonstrate that the project will achieve more than 70% of maximum density. The maximum density allowed is ten lots and that is the density proposed (100% of maximum density).

- e. For arterial and collector street projects, including Oregon Department of Transportation street improvements, the roads and graded areas shall avoid tree clusters where possible. Significant trees, tree clusters, and heritage tree loss may occur, however, but shall be minimized.*

Comment: Not applicable. The site does not abut an arterial or collector street.

- f. If the protection of significant tree(s) or tree clusters is to occur in an area of grading that is necessary for the development of street grades, per City construction codes, which will result in an adjustment in the grade of over or under two feet, which will then threaten the health of the tree(s), the applicant will submit evidence to the Planning Director that all reasonable alternative grading plans have been considered and cannot work. The applicant will then submit a mitigation plan to the City Arborist to compensate for the removal of the tree(s) on an "inch by inch" basis (e.g., a 48-inch Douglas fir could be replaced by 12 trees, each four-inch). The mix of tree sizes and types shall be approved by the City Arborist.*

Comment: Trees located in the protected portions of the site will not be impacted by site grading.

## **Chapter 92: REQUIRED IMPROVEMENTS**

### **92.010 PUBLIC IMPROVEMENTS FOR ALL DEVELOPMENT**

*The following improvements shall be installed at the expense of the developer and meet all City codes and standards:*

- A. Streets within subdivisions.*
  - 1. All streets within a subdivision, including alleys, shall be graded for the full right-of-way width and improved to the City's permanent improvement standards and specifications which include sidewalks and bicycle lanes, unless the decision-making authority makes the following findings:*

Comment: As shown on the Tentative Plan, the developer proposes to construct Ferndell Drive to City local street standards, with a 52' right-of-way, 28' paved section, 6 foot sidewalks and 5' planter strips. The road will be 50' of right-of-way and 26' of pavement, with curb-tight sidewalks at the entrance to the subdivision from Old River Road. This reduced width is due to the constraints of the width of the access strip. The curb-tight sidewalks in that area are needed because of grading constraints imposed by cross slopes.



2. *When the decision-making authority makes these findings, the decision-making authority may impose any of the following conditions of approval:*

Comment: Not applicable. This subsection applies only when an applicant is proposing to construct less than full standard streets.

- B. *Extension of streets to subdivisions. The extension of subdivision streets to the intercepting paving line of existing streets with which subdivision streets intersect shall be graded for the full right-of-way width and improved to a minimum street structural section and width of 24 feet.*

Comment: As shown on the Grading Plan submitted with this requirement will be met.

- C. *Local and minor collector streets within the rights-of-way abutting a subdivision shall be graded for the full right-of-way width and approved to the City's permanent improvement standards and specifications. The City Engineer shall review the need for street improvements and shall specify whether full street or partial street improvements shall be required. The City Engineer shall also specify the extent of storm drainage improvements required. The City Engineer shall be guided by the purpose of the City's systems development charge program in determining the extent of improvements which are the responsibility of the subdivider.*

Comment: As shown on the Grading Plan submitted with this application, the proposed streets will be graded for the full right-of-way and improved to City standards.

- D. *Monuments. Upon completion of the first pavement lift of all street improvements, monuments shall be installed and/or reestablished at every street intersection and all points of curvature and points of tangency of street centerlines with an iron survey control rod. Elevation benchmarks shall be established at each street intersection monument with a cap (in a monument box) with elevations to a U.S. Geological Survey datum that exceeds a distance of 800 feet from an existing benchmark.*

Comment: Monumentation will be installed and/or reestablished at street intersections in accordance with this subsection.

- E. *Surface drainage and storm sewer system. A registered civil engineer shall prepare a plan and statement which shall be supported by factual data that clearly shows that there will be no adverse impacts from increased intensity of runoff off site of a 100-year storm, or the plan and statement shall identify all off-site impacts and measures to mitigate those impacts commensurate to the particular land use application. Mitigation measures shall maintain pre-existing levels and meet buildout volumes, and meet planning and engineering requirements.*

Comment: The project engineer has prepared a storm drainage plan, as shown on the Utility Plan, and a storm report for this project. Please refer to those documents.

- F. *Sanitary sewers. Sanitary sewers shall be installed to City standards to serve the subdivision and to connect the subdivision to existing mains.*
  1. *If the area outside the subdivision to be directly served by the sewer line has reached a state of development to justify sewer installation at the time, the*

*Planning Commission may recommend to the City Council construction as an assessment project with such arrangement with the subdivider as is desirable to assure financing his share of the construction.*

2. *If the installation is not made as an assessment project, the City may reimburse the subdivider an amount estimated to be a proportionate share of the cost for each connection made to the sewer by property owners outside of the subdivision for a period of 10 years from the time of installation of the sewers. The actual amount shall be determined by the City Administrator considering current construction costs.*

Comment: Sanitary sewers are available to this project from an existing line in an easement that crosses the subject property. This sewer will be extended to service all lots within the development, as required by this subsection.

- G. *Water system.* *Water lines with valves and fire hydrants providing service to each building site in the subdivision and connecting the subdivision to City mains shall be installed. Prior to starting building construction, the design shall take into account provisions for extension beyond the subdivision and to adequately grid the City system. Hydrant spacing is to be based on accessible area served according to the City Engineer's recommendations and City standards. If required water mains will directly serve property outside the subdivision, the City may reimburse the developer an amount estimated to be the proportionate share of the cost for each connection made to the water mains by property owners outside the subdivision for a period of 10 years from the time of installation of the mains. If oversizing of water mains is required to areas outside the subdivision as a general improvement, but to which no new connections can be identified, the City may reimburse the developer that proportionate share of the cost for oversizing. The actual amount and reimbursement method shall be as determined by the City Administrator considering current or actual construction costs.*

Comment: A water line will be installed within Ferndell Drive and will be looped to connect to existing lines Robin View Ct.

H. *Sidewalks.*

1. *Sidewalks shall be installed on both sides of a public street and in any special pedestrian way within the subdivision, except that in the case of primary or secondary arterials, or special type industrial districts, or special site conditions, the Planning Commission may approve a subdivision without sidewalks if alternate pedestrian routes are available. In the case of the double-frontage lots, provision of sidewalks along the frontage not used for access shall be the responsibility of the developer. Providing front and side yard sidewalks shall be the responsibility of the land owner at the time a request for a building permit is received. Additionally, deed restrictions and CC&Rs shall reflect that sidewalks are to be installed prior to occupancy and it is the responsibility of the lot or homeowner to provide the sidewalk, except as required above for double-frontage lots.*

Comment: As required by this subsection, sidewalks will be installed along all street frontages in this development.

2. *On local streets serving only single-family dwellings, sidewalks may be constructed during home construction, but a letter of credit shall be required from the developer to ensure construction of all missing sidewalk segments within four years of final plat approval pursuant to CDC 91.010(A)(2).*

Comment: Sidewalks will be constructed during home construction on each lot. The required letter of credit will be provided.

3. *The sidewalks shall measure at least six feet in width and be separated from the curb by a six-foot minimum width planter strip. Reductions in widths to preserve trees or other topographic features, inadequate right-of-way, or constraints, may be permitted if approved by the City Engineer in consultation with the Planning Director.*

Comment: Sidewalks will be installed to City specifications.

4. *Sidewalks should be buffered from the roadway on high volume arterials or collectors by landscape strip or berm of three and one-half-foot minimum width.*

Comment: Not applicable. The site does not abut an arterial or collector street.

5. *The City Engineer may allow the installation of sidewalks on one side of any street only if the City Engineer finds that the presence of any of the factors listed below justifies such waiver:*
  - a. *The street has, or is projected to have, very low volume traffic density;*
  - b. *The street is a dead-end street;*
  - c. *The housing along the street is very low density; or*
  - d. *The street contains exceptional topographic conditions such as steep slopes, unstable soils, or other similar conditions making the location of a sidewalk undesirable.*

Comment: Sidewalks are proposed on both sides of all streets within this subdivision.

- I. *Bicycle routes. If appropriate to the extension of a system of bicycle routes, existing or planned, the Planning Commission may require the installation of separate bicycle lanes within streets and separate bicycle paths.*

Comment: No bicycle routes are called for on the local streets within this subdivision.

- J. *Street name signs. All street name signs and traffic control devices for the initial signing of the new development shall be installed by the City with sign and installation costs paid by the developer.*

Comment: The developer will provide all required signs, consistent with City standards.

- K. *Dead-end street signs. Signs indicating "future roadway" shall be installed at the end of all discontinued streets. Signs shall be installed by the City per City standards, with sign and installation costs paid by the developer.*



Comment: The required sign will be installed at the end of Ferndell Drive.

- L. Signs indicating future use shall be installed on land dedicated for public facilities (e.g., parks, water reservoir, fire halls, etc.). Sign and installation costs shall be paid by the developer.

Comment: Not applicable. No public dedications are proposed.

- M. Street lights. Street lights shall be installed and shall be served from an underground source of supply. The street lighting shall meet IES lighting standards. The street lights shall be the shoe-box style light (flat lens) with a 30-foot bronze pole in residential (non-intersection) areas. The street light shall be the cobra head style (drop lens) with an approximate 50-foot (sized for intersection width) bronze pole. The developer shall submit to the City Engineer for approval of any alternate residential, commercial, and industrial lighting, and alternate lighting fixture design. The developer and/or homeowners association is required to pay for all expenses related to street light energy and maintenance costs until annexed into the City.

Comment: Street lights will be installed by the developer, consistent with the requirements of this subsection.

- N. Utilities. The developer shall make necessary arrangements with utility companies or other persons or corporations affected for the installation of underground lines and facilities. Electrical lines and other wires, including but not limited to communication, street lighting, and cable television, shall be placed underground.

Comment: The developer will coordinate with utility companies for the installation of underground facilities for electrical, cable, natural gas, telephone, and street lighting. As required by this section.

- O. Curb cuts and driveways. Curb cuts and driveway installations are not required of the subdivider at the time of street construction, but, if installed, shall be according to City standards. Proper curb cuts and hard-surfaced driveways shall be required at the time buildings are constructed.

Comment: Curb cuts will be installed at the time of home construction and will be installed to City standards.

- P. Street trees. Street trees shall be provided by the City Parks and Recreation Department in accordance with standards as adopted by the City in the Municipal Code. The fee charged the subdivider for providing and maintaining these trees shall be set by resolution of the City Council.

Comment: The developer will coordinate with the City Parks and Recreation Department regarding installation of street trees and will be responsible for paying the appropriate fee.

- Q. Joint mailbox facilities shall be provided in all residential subdivisions, with each joint mailbox serving at least two, but no more than eight, dwelling units. Joint mailbox structures shall be placed in the street right-of-way adjacent to roadway curbs.

*Proposed locations of joint mailboxes shall be designated on a copy of the tentative plan of the subdivision, and shall be approved as part of the tentative plan approval. In addition, sketch plans for the joint mailbox structures to be used shall be submitted and approved by the City Engineer prior to final plat approval.*

Comment: The developer will coordinate with the US Postal Service and the City Engineer regarding the location of joint mailbox clusters and will install them in accordance with this section.

## **CHAPTER 28 - WILLAMETTE AND TUALATIN RIVER PROTECTION**

### **28.030 APPLICABILITY**

*A. The Willamette and Tualatin River Protection Area is an overlay zone. The zone boundaries are identified on the City's zoning map, and include:*

- 1. All land within the City of West Linn's Willamette River Greenway Area.*
- 2. All land within 200 feet of the ordinary low water mark of the Tualatin River, and all land within the 100-year floodplain of the Tualatin River.*
- 3. In addition to the Willamette Greenway and Tualatin River Protection Area boundaries, this chapter also relies on the HCA Map to delineate where development should or should not occur. Specifically, the intent is to keep out of, or minimize disturbance of, the habitat conservation areas (HCAs). Therefore, if all, or any part, of a lot or parcel is in the Willamette Greenway and Tualatin River Protection Area boundaries, and there are HCAs on the lot or parcel, a Willamette and Tualatin River Protection Area permit shall be required unless the development proposal is exempt per CDC 28.040.*

Comment: The subject property is not within the Willamette River or Tualatin River Greenway. The steep bluff area on the eastern end of the site is designated Medium Habitat Conservation Area by Metro and the City's GIS map.

### **28.040 EXEMPTIONS/USES PERMITTED OUTRIGHT**

The use of Habitat Conservation Areas for residential purposes is not listed as a use that is exempt or permitted outright. However CDC 28.040AA does apply to this proposal:

*AA. Lands that are designated as an HCA only due to a forested canopy shall be exempted since trees are already protected in the municipal code and Chapters 55 and 85 CDC. Development of lands that are designated as HCA due to other variables such as wetlands, flood areas and steep slopes shall still be regulated by the provisions of this chapter and not exempted.*

Please see discussion of this provision under section 28.070, below.

### **28.050 PROHIBITED USES**

*The following are prohibited:*

- 1. Residential floating structures, also known as floating homes or houseboats.*
- 2. Permanent ski jumps.*

3. *More than one dock with or without a boat house per riverfront lot of record, except City-owned tax lots 100, 200, 300, 400, and 500 of Assessor's Map 21 East 24.*
4. *The location of any dock under any water condition that prevents what would otherwise be historic, safe, uninterrupted water passage.*
5. *Any new lawn area or garden area consisting primarily of non-native vegetation within HCA lands. A lawn area in the "Allowed Development" area is permitted.*
6. *Planting of any species identified as nuisance or prohibited plants on the Metro Native Plant List.*
7. *Non-permitted storage of hazardous materials as defined by the Oregon Department of Environmental Quality and dumping of any materials of any kind.*
8. *Excessive trimming or removal of existing native vegetation within the HCA unless it is to reestablish native vegetation in place of non-native or invasive vegetation. (Ord. 1576, 2008)*

Comment: None of the uses listed in this section are proposed within the Habitat Conservation Area.

#### **28.060 ADMINISTRATION AND APPROVAL PROCESS**

*An application for a protection area permit shall be processed pursuant to the provisions of Chapter 99 CDC, Procedures for Decision-Making: Quasi-Judicial.*

Comment: The application is being processed quasi-judicially, in accordance with the provisions of Chapter 99 of the CDC.

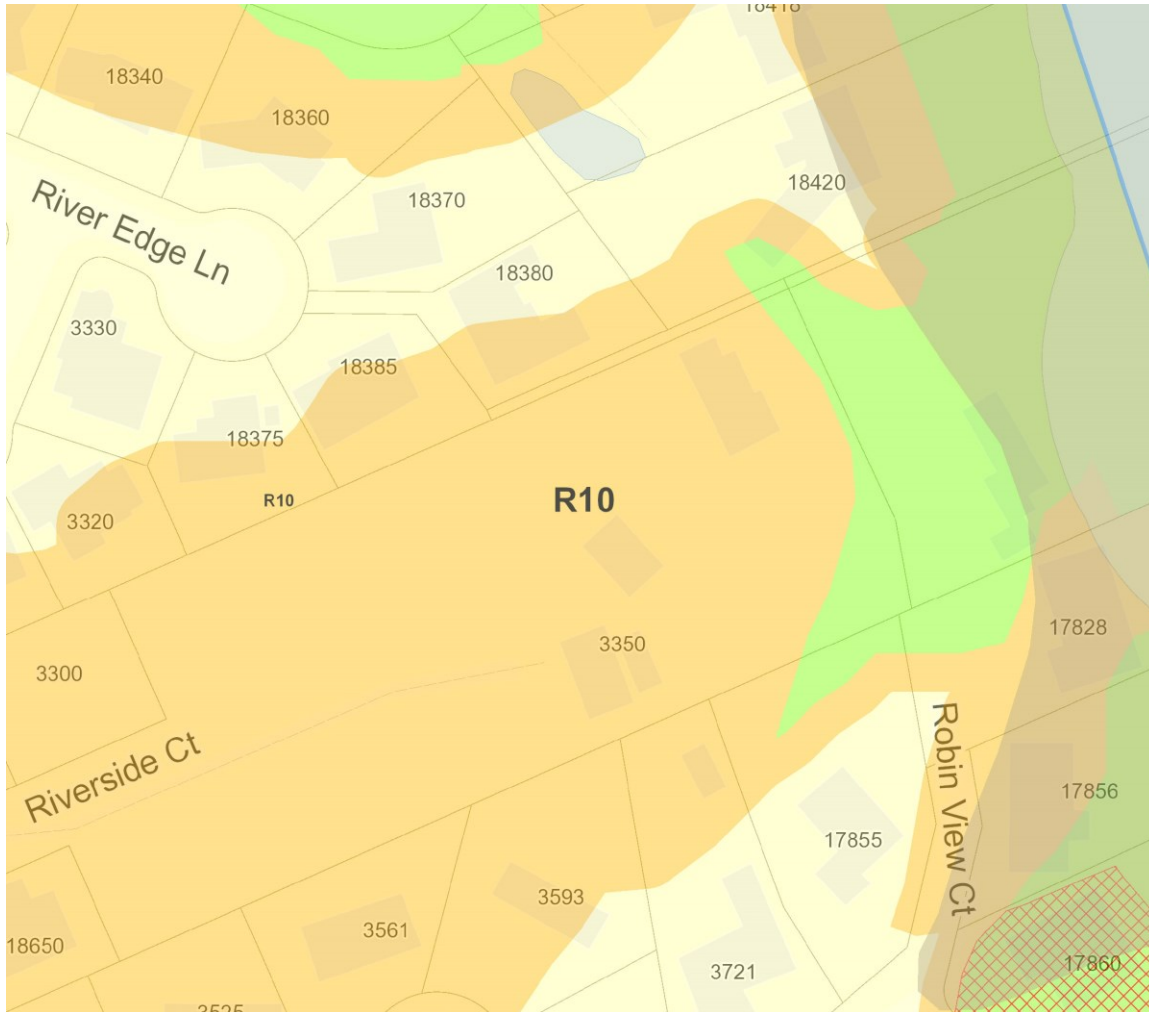
#### **28.070 PLANNING DIRECTOR VERIFICATION OF METRO HABITAT PROTECTION MAP BOUNDARIES**

A. *The HCA Map is the basis for identifying and designating the habitat conservation areas in the City. A copy of the latest, updated HCA Map is on file at the City and is adopted by reference for use with this chapter.*

*It is inevitable, given the large area that Metro's HCA Map covers, that there may be some errors. In cases where, for example, three properties share the same contours and the same natural features but the map shows the middle lot with an HCA designation on it, it is reasonable to question the accuracy of that HCA designation. Using tree overstory as the sole basis for HCA designation will also allow a change in designation since trees are already protected in the municipal code and Chapters 55 and 85 CDC.*

The map below shows the location of the HCA per the City of West Linn GIS mapping system.





The areas that are designated HCA due strictly to forested tree canopy are shown in tan. As noted in section 28.070(F) “Lands that are designated as an HCA only due to a forested overstory are exempt under CDC 28.040, Exemptions, since trees are already protected in the municipal code and Chapters 55 and 85 CDC.” Therefore, the areas mapped in tan are not subject to the provisions of Chapter 28.

It is unclear as to why the HCA area mapped in green has received this designation as a moderate value HCA. An analysis of this area of the site was conducted by Schott & Associates and it has been determined that there are no HCA resources on the subject site or Tax Lot 1000. Please refer to that report.

*B. The Planning Director shall verify the appropriate HCA or non-HCA designation by site visits or consultations with Metro or by other means. Determination is based on whether the Metro criteria are met or whether the Metro designation was based solely on tree overstory in which case a redesignation is appropriate. In cases where the determination is that the map is incorrect, the Planning Director will make a written finding of this as well as the site conditions that led to that conclusion.*

Comment: Please refer to the Schott & Associates report for justification of removal of the HCA designation from the subject property and Tax Lot 1000.

*C. Class B public notice, per Chapter 99 CDC, shall be required prior to issuance of the redesignation decision if it involves redesignation of the HCA boundary to allow the construction of, or addition to, a house.*

Comment: The required notice will be provided.

*D. This determination and findings shall become part of the City record and part of the record for any associated land use application. The Planning Director shall also include in the record the revised map boundary. The Planning Director's determination and map revisions shall also be sent to Metro so that their map may be corrected as necessary.*

Comment: If approved, this requirement will be met by the City.

*E. The Planning Director determination is appealable to the City Council per Chapter 99 CDC.*

Comment: The applicant recognizes that the determination is appealable.

*F. Lands that are designated as an HCA only due to a forested overstory are exempt under CDC 28.040, Exemptions, since trees are already protected in the municipal code and Chapters 55 and 85 CDC. Similar exemptions apply to lands that exhibit no constraints. (Ord. 1576, 2008; Ord. 1604 §§ 25 – 28, 2011)*

Comment: The areas shown in tan are exempt due to this provision as there are no habitat resources in those areas other than forested overstory.

### **28.110 APPROVAL CRITERIA**

*No application for development on property within the protection area shall be approved unless the decision-making authority finds that the following standards have been met or can be met by conditions of approval. The development shall comply with the following criteria as applicable:*

Comment: Upon approval of a change in designation, these provisions will no longer apply.

**NATURAL RESOURCE ASSESSMENT**  
**Within**  
**Habitat Conservation Area**

**FOR**

**Ferndell Estates**

Prepared for:  
**Bill Varitz**  
**17828 Robin View Ct**  
**West Linn, OR 97068**

Prepared by:  
**Schott and Associates**

June 2018  
Project #: 2588



## **INTRODUCTION**

### **Site Location**

Schott and Associates was contracted to conduct a wetland delineation and natural resource assessment on the subject property located east of Old River Road in West Linn, Clackamas County, Oregon. The property consists of 3 main tax lots (T2S R1E Sec.14AD 990, 1000, 1001) with two narrow strips attached to the north that are considered tax lots as well (T2S R1E Sec.14AD TL#900 and 1090 ).

### **Site Description**

The rectangular shaped subject property is situated east of Old River Road and west of the Willamette River. The property is bordered by residential housing to the north, south and west. The Willamette River binds the property to the east. The subject property is mainly gently east sloping, but toward the eastern portion sloping is steeper and terraced.

The properties are entered by Riverside Court directing east off of Old River Road in between two tax lots at the west border of tax lots 990 and 1001 . Riverside Court is a private drive turning into a long driveway leading to a house and associated outbuildings at the east end of tax lot 990. The main driveway then winds south and east to tax lot 1000 with an associated house and attached garage.

Tax lot 1001 of 0.23 AC, tax lot 990 of 3.01 AC and the associated tax lot strip 900 of 0.04 AC are the most western tax lots. These tax lots are located just east of Old River Road and entered by Riverside Court which turns into a long private driveway. All of tax lot 1001 and tax lot 900 and the western portion of tax lot 990 are forested on both sides of the long driveway. Vegetation consisted of an overstory of Douglas fir (*Pseudotsuga menziesii*) and big leaf maple (*Acer macrophyllum*) and some ornamental tree varieties. The understory consisted of English ivy (*Hedera helix*) with some snowberry (*Symphoricarpos albus*) and sword fern (*Polystichum munitum*) mixed in. North or south of the driveway, in the forested area, is one large shop and a smaller storage shed prior to the house located at the east end of tax lot 990. The house is mainly surrounded by a maintained lawn and ornamental landscaping. The driveway then loops north and south around the house entering onto the most eastern tax lot 1000.

Tax lots 1000 and 1090 are fully developed. The driveway ends at a large house with an attached garage. The house is surrounded by a manicured lawn and ornamental landscape. East of the house is a stone retaining wall and a lower terraced area that is entirely lawn bordering the Willamette River to the east.

### **Project Objectives**

The applicant proposes a 10 lot residential subdivision entirely within tax lots 900, 990 and 1001. Tax lots 1000 and 1090 will not be part of the subdivision, but will have a storm sewer built across them at the northern end to serve the 10 lot residential subdivision. Main access will be from Riverside Ct, entered from Old River Road to the west and through the middle of the development. As shown on the HCA Map, the subject properties contain Habitat Conservation Areas (HCAs). The east end of the proposed roadway and the east end of proposed lots 5 and 6 are mapped within Medium HCA. The storm sewer improvement is proposed within Mapped Medium and High HCA. This report will provide HCA map verification and a description of site findings.

## **METHODS**

A wetland and natural resource assessment were conducted on April 12, 2018. As per 28.030, 28.070 Habitat Conservation Area boundaries were determined and documented in this report.

Prior to visiting, site information was gathered, including recent and historical aerial photographs provided by Google Earth, the soil survey (NRCS web soil survey), the Local Wetland Inventory (LWI), the National Wetland Inventory (NWI), the Water Resource Area (WRA) map and the Habitat Conservation Area (HCA) map. The USGB topography map was also reviewed prior to the site visit.

The wetland delineation field work was conducted using the *1987 Manual and Regional Supplement to the Corps of Engineers Delineation Manual: Western Mountains, Valleys and Coast Region* to determine presence or absence of State of Oregon wetland boundaries and the Federal jurisdictional wetlands.

## **SENSITIVE AREA CONDITIONS**

### **Waterway**

There were no waterways onsite. The Willamette River bordered tax lot 1000 to the east and defines the property boundary. The waterway is not within the defined project area boundary.

### **Wetland**

Based on soil, vegetation and hydrology data taken in the field no wetlands were found on the subject property. Sample plots were placed where geomorphic location or vegetation indicated the possibility of wetlands. Three sample plots were dug within the lowest lying areas located in the most eastern location of tax lot 1000 on a lower terrace bordering the Willamette River. The sample plots were all located within a mowed area of facultative grasses. Soils were mainly sand with a matrix color mix of 10YR 3/2, 3/3 and 4/4. No redoximorphic features were present and soils were dry. No hydrology indicators were present. No wetlands were present within the subject property.

The LWI, as well as the NWI and the WRA map, documented the Willamette River bordering the subject property to the east. The maps did not document any wetlands or waterways within the subject property. Onsite findings resulted in the same information.

The Web Soil Survey for Clackamas County mapped Cloquato silt loam and Woodburn silt loam 3 to 8% slopes within the subject property. Neither is considered a hydric soil.

### **HCA**

#### ***28.070 PLANNING DIRECTOR VERIFICATION OF METRO HABITAT PROTECTION MAP BOUNDARIES***

*A. The HCA Map is the basis for identifying and designating the habitat conservation areas in the City. A copy of the latest, updated HCA Map is on file at the City and is adopted by reference for use with this chapter.*

*It is inevitable, given the large area that Metro's HCA Map covers, that there may be some errors. In cases where, for example, three properties share the same contours and the same natural features but the map shows the middle lot with an HCA designation on it, it is reasonable to question the accuracy of that HCA designation. Using tree overstory as the sole basis for HCA designation will also allow a change in designation since trees are already protected in the municipal code and Chapters 55 and 85 CDC.*

*B. The Planning Director shall verify the appropriate HCA or non-HCA designation by site visits or consultations with Metro or by other means. Determination is based on*

*whether the Metro criteria are met or whether the Metro designation was based solely on tree overstory in which case a redesignation is appropriate. In cases where the determination is that the map is incorrect, the Planning Director will make a written finding of this as well as the site conditions that led to that conclusion.*

*C. Class B public notice, per Chapter 99 CDC, shall be required prior to issuance of the redesignation decision if it involves redesignation of the HCA boundary to allow the construction of, or addition to, a house.*

*D. This determination and findings shall become part of the City record and part of the record for any associated land use application. The Planning Director shall also include in the record the revised map boundary. The Planning Director's determination and map revisions shall also be sent to Metro so that their map may be corrected as necessary.*

*E. The Planning Director determination is appealable to the City Council per Chapter 99 CDC.*

*F. Lands that are designated as an HCA only due to a forested overstory are exempt under CDC 28.040, Exemptions, since trees are already protected in the municipal code and Chapters 55 and 85 CDC. Similar exemptions apply to lands that exhibit no constraints. (Ord. 1576, 2008; Ord. 1604 §§ 25 – 28, 2011)*

### HCA Map description

Most of tax lot 1000 and 1090 are mapped HCA. The eastern 2/3rds of tax lots 1000 and 1090 are mapped High HCA. The western 1/3 is mainly mapped Medium HCA. The east edge of tax lots 900 and 990 are mapped Medium HCA. The remaining area of these tax lots, as well as tax lot 1001, is mapped Habitat and Impact Areas not designated as HCAs. A 10 lot subdivision is proposed within tax lots 900, 990 and 1001. Only the very eastern property boundary of tax lots 900 and 990 are mapped Medium HCA, covering 5,155sf of area. No development is proposed in tax lots 1000 and 1090 where the majority of the HCA is mapped. However, a storm sewer is proposed at the north end of the property to serve the proposed subdivision. Two manholes of 3.14sf per and a Storm treatment facility of 600sf will be located in the approximate northwest corner of tax lots 1000, 1090. An open swale of 400sf will be located in the northeast corner of the property adjacent to the Willamette River. Total permanent impacts to the mapped HCA are 1,006.28sf. An underground discharge pipe will parallel the north property line connecting the storm treatment facility and the open swale. Temporary impacts caused by pipe installation will be approximately 2,650sf.

### HCA on site findings

The site was visited and information documented in April of 2018. Tax lots 1000 and 1090 are located the furthest east within the subject property. They are bordered by the Willamette River to the east, therefore, within the City of West Linn Willamette Greenway Area. A majority of tax lots 1000 and 1090 are mapped High HCA and Medium HCA.

HCA mapping also covers a small area (5,155sf) within tax lots 900 and 990 at their eastern property line. Upon site investigation we have determined that there was a mapping error and there are no actual Habitat Conservation Areas within the subject property.

Tax lot 1000 and 1090 do border the Willamette River along the east property line, but the vegetation consists of a vast mowed lawn area vegetated with non-native grasses. The lawn area bordering the river is the lowest lying area within the subject property. From the river the lawn area varies in width to the west, from 50 to a 100' as the property angles at the eastern property line. Three sample plots were dug within the lowest lying areas and soils consisted of sand with a mixed matrix of 10YR3/3, 3/2 and 4/4. There were no redoximorphic features present. There were no hydrology indicators observed. It was determined that no wetlands were in the lowest area of the property where they would most likely be found.

At the west end of the lawn area is a stone retaining wall and a steep bank dominated by English ivy and a few scattered Douglas fir trees. At the top of the steep bank the property flattens out. This is where the house is located. The house is surrounded by a manicured lawn and ornamental plantings. In front of the house, to the west, is a long driveway directing north and south. The driveway is bordered to the west by another retained sloped bank dominated by ivy. There are a few Douglas fir and big leaf maples in the overstory and a few scattered snowberry and sword fern mixed in with the ivy on the slope. The driveway circles a second house on tax lot 990, located above the slope, in a north and south direction. The driveways meet west of the second house and then direct west to Old River Road. The second house, located on tax lot 990 was surrounded by ornamental landscape as well. HCA mapping basically stops east of the house on tax lot 990 except at the southeast corner of the lot where it extends a little further west past the house.

Upon site observation and site information gathered prior to the site visit, we contend that there was a mapping error and there is no actual HCA within any of the tax lots on the subject properties. What was observed was vast lawns, retaining walls, ivy dominated slopes, buildings with non-native landscapes and asphalt or gravel driveways. Per Google Earth aerial photos, the subject properties has been like this since at least 1994 and have remained the same to date.

### **Impacts to Wetlands/Waters**

There are no wetlands or waterways onsite, therefore no impacts. The Willamette River borders tax lot 1000 and 1090 to the east. There is no proposed development for these two tax lots but proposed storm sewer improvements at the northern extent.

### **Impacts to the mapped HCA**

Development is proposed on tax lots 900, 990 and 1001. Medium HCA is mapped at the east boundary of tax lots 900 and 990. Proposed lot 5 will impact 725sf and lot 6 will impact 3,750sf of mapped Medium HCA. The proposed roadway ends at the east property line of tax lot 990, impacting 680sf of mapped Medium HCA. Total impact is 5,155sf of mapped Medium HCA.

Additionally, storm sewer improvements are proposed through tax lots 1000 and 1090 at the northern extent. A storm treatment facility (600sf), two manholes (6.28sf) and an open swale (400sf) will permanently impact 1,006.28sf of combined Mapped Medium and High HCA. The discharge pipe connecting the Storm treatment facility in the NW corner to the open swale in the NE corner will temporarily impact approximately 2,600sf Mapped Medium and High HCA. The impacts are minor and temporary. As the area will be trenched and backfilled it will be put back to good condition and overseeded with a native upland seed mix.

Onsite investigation determined that there is no HCA on the property and most of the mapped HCA on tax lot 900 and 990 is within a steep ivy covered, rock retained slope or on a hardscape driveway.

The mapped HCA on tax lots 1000 and 1090 is mainly non-native grasses on the eastern half and developed landscaped property on the western portion and should not be considered HCA. However, the property does border the Willamette River to the east.

The homes on tax lot 990 and 1000 were built in 1994. Per Google Earth the properties have been developed since at least 1994 and remain the same to date.



## 28.110 APPROVAL CRITERIA

No application for development on property within the protection area shall be approved unless the decision-making authority finds that the following standards have been met or can be met by conditions of approval. The development shall comply with the following criteria as applicable:

### A. Development: All sites.

1. Sites shall first be reviewed using the HCA Map to determine if the site is buildable or what portion of the site is buildable. HCAs shall be verified by the Planning Director per CDC 28.070 and site visit. Also, "tree canopy only" HCAs shall not constitute a development limitation and may be exempted per CDC 28.070(A). The municipal code protection for trees and Chapters 55 and 85 CDC tree protection shall still apply.

An HCA map with a development overlay is attached. As described above onsite conditions and review of historical aerials indicate a mapping error and no actual HCA was found to be onsite.

2. HCAs shall be avoided to the greatest degree possible and development activity shall instead be directed to the areas designated "Habitat and Impact Areas Not Designated as HCAs," consistent with subsection (A)(3) of this section.

The attached development plan demonstrates that a majority of the proposed development is within "Habitat and Impact Areas Not Designated as HCAs". A minimal amount of the proposed development is within mapped Medium HCA area. The storm sewer improvements will be contained at the northern extent of tax lots 1000 and 1090. The impacts will extend through some Mapped HCA that actually consists of all non-native grasses. We believe the mapping is in error and there were no HCAs on the subject properties.

3. If the subject property contains no lands designated "Habitat and Impact Areas Not Designated as HCAs" and development within HCA land is the only option it shall be directed towards the low HCA areas first, then medium HCA areas and then to high HCA as the last choice. The goal is to, at best, avoid or, at least, minimize disturbance of the HCAs. (Water-dependent uses are exempt from this provision.)

Most of the development is within non HCAs, and the minimal amount within mapped HCA is believed to be a mapping error.

4. All development, including exempted activities of CDC 28.040, shall have approved erosion control measures per Clackamas County Erosion Prevention and Sediment Control Planning and Design Manual, rev. 2008, in place prior to site disturbance and be subject to the requirements of CDC 32.070 and 32.080 as deemed applicable by the Planning Director.

This condition shall be met.

### B. Partitions, subdivisions and incentives.

1. When dividing a property into lots or parcels, an applicant shall verify the boundaries of the HCA on the property.

See attached HCA map with development overlay. This map is provided for reference as the site visit has verified no actual HCA onsite.

2. Applicant shall partition or subdivide the site so that all lots or parcels have a buildable site or envelope available for home construction located on non-HCA land or areas designated "Habitat and Impact Areas Not Designated as HCAs" per the HCA Map.

A majority of the lots are proposed in non HCAs and all lots have a buildable site envelope located outside the mapped HCA. The proposed storm sewer improvements are at the northern extent of tax lots 1000 and 1090. Impacts will be minimal. As identified onsite and described in this report no actual HCA was found onsite.

3. Development of HCA-dominated lands shall be undertaken as a last resort. A planned unit development (PUD) of Chapter 24 CDC may be required.

A minimal amount of Mapped HCA would be impacted, but we believe the HCA map is in error as described above and there is no HCA on the subject property.

4. Incentives are available to encourage provision of public access to, and/or along, the river. By these means, planned unit developments shall be able to satisfy the shared outdoor recreation area requirements of CDC 55.100(F). Specifically, for every square foot of riverfront path, the applicant will receive credit for two square feet in calculating the required shared outdoor recreation area square footage. Applicants shall also be eligible for a density bonus under CDC 24.150(B). To be eligible to receive either of these incentives, applicants shall:

a. Provide a minimum 20-foot-wide all-weather public access path along the project's entire river frontage (reduced dimensions would only be permitted in response to physical site constraints such as rock outcroppings, significant trees, etc.); and

b. Provide a minimum 10-foot-wide all-weather public access path from an existing public right-of-way to that riverfront path or connect the riverfront path to an existing riverfront path on an adjoining property that accesses a public right-of-way;

c. Fencing may be required near steep dropoffs or grade changes.

No development is proposed near the river as the tax lot bordering the river is not part of the proposed development plan. (tax lot 1000) However, a storm sewer is proposed at the northern extent of tax lots 1000 and 1090 that will end near the river, but is a temporary impact only.

### **28.160 MITIGATION PLAN**

*If any HCA is permanently disturbed as a result of the proposed development of any uses or structures, the applicant shall prepare and implement a revegetation and mitigation plan pursuant to the provision of CDS 32.070 and 32.080. (Ord. 1576, 2008)*

There is a total proposed impact of 5,155sf within the mapped medium HCA for development.

Per above described documentation we believe the HCA map is in error and there is no HCA on the subject property within tax lots 900 and 990 therefore, no mitigation is proposed.

A storm sewer is proposed at the northern end of tax lots 1000 and 1090 through Mapped HCA to serve the proposed subdivision. The impacts are minor. The temporary impacts, which require trenching and backfill will be brought to good condition by overseeding with a native grass seed mix.

## Conclusion

Tax lots 900, 990, 1000, 1001 and 1090 were walked to verify HCA mapping accuracy. Tax lots 1000 and 1090 border the Willamette River and are almost entirely mapped HCA. Tax lot 1001 is mapped as non HCA. Tax lots 900 and 990 are HCA mapped at their eastern property boundary. A 10 lot development plan has been proposed within tax lots 900, 990 and 100, impacting 5,155sf of mapped Medium HCA. A storm sewer is proposed at the north end of tax lots 1000 and 1090 impacting 1,006.28sf of mapped HCA. Installation of a discharge pipe will impact approximately 2,600sf of Mapped HCA. The temporary impacts will be brought to good condition and overseeded with a native seed mix. Upon walking the site and conducting a natural resource assessment, we believe the HCA mapping is in error and there is no HCA within any of the tax lots on the subject properties. This may be verified by the Planning Director per 28.070. No HCA impacts are proposed and no mitigation should be required with the exception of overseeding with a native grass seed mix for the temporary impacts caused by the discharge pipe for the storm sewer installation.

## Appendices

A: Site Vicinity Map

B: Tax Map

C: HCA Map

D: Aerial Photograph

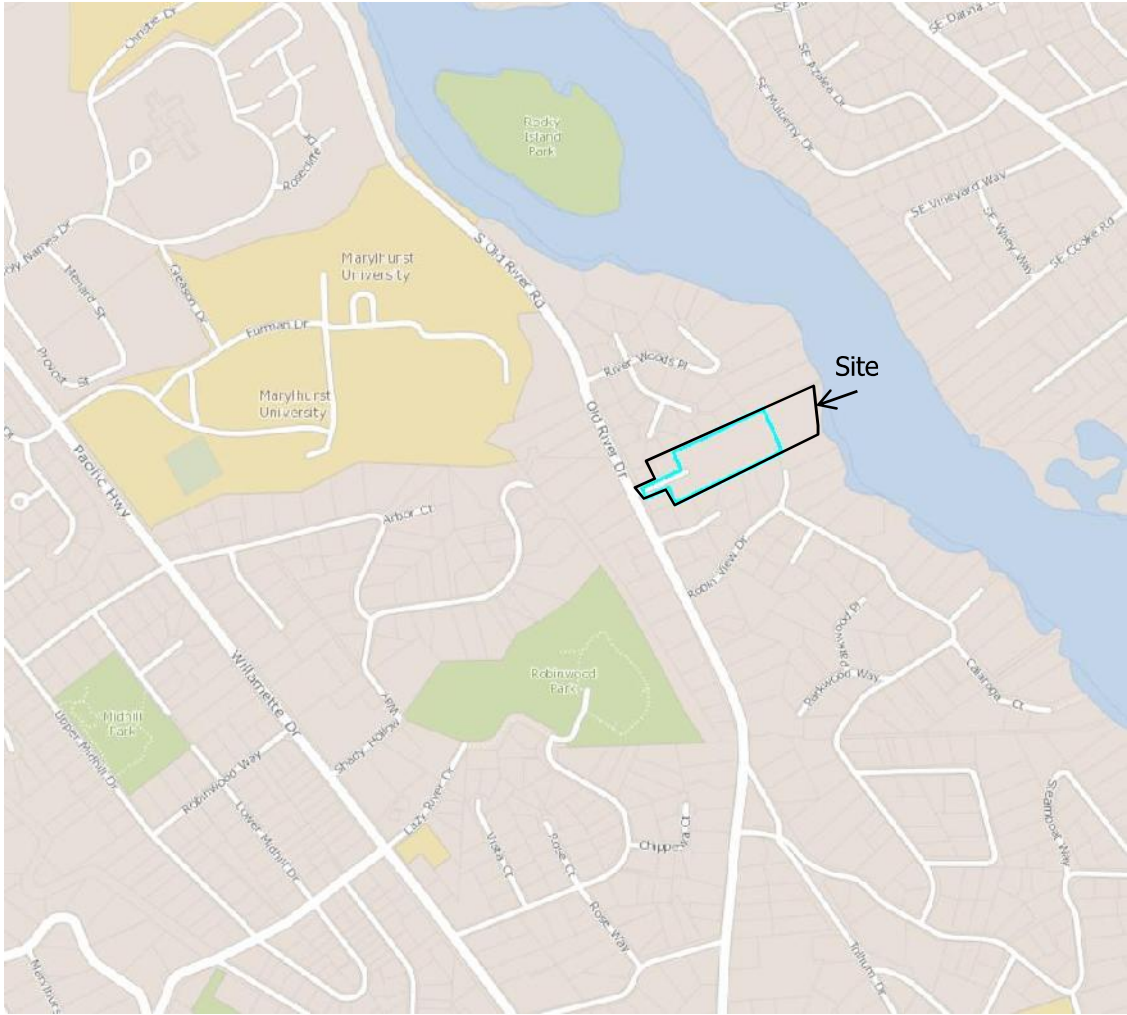
E: Development Plan

F: Development Plan Overlay on HCA Map with Photo Points

G: Ground Level Photographs

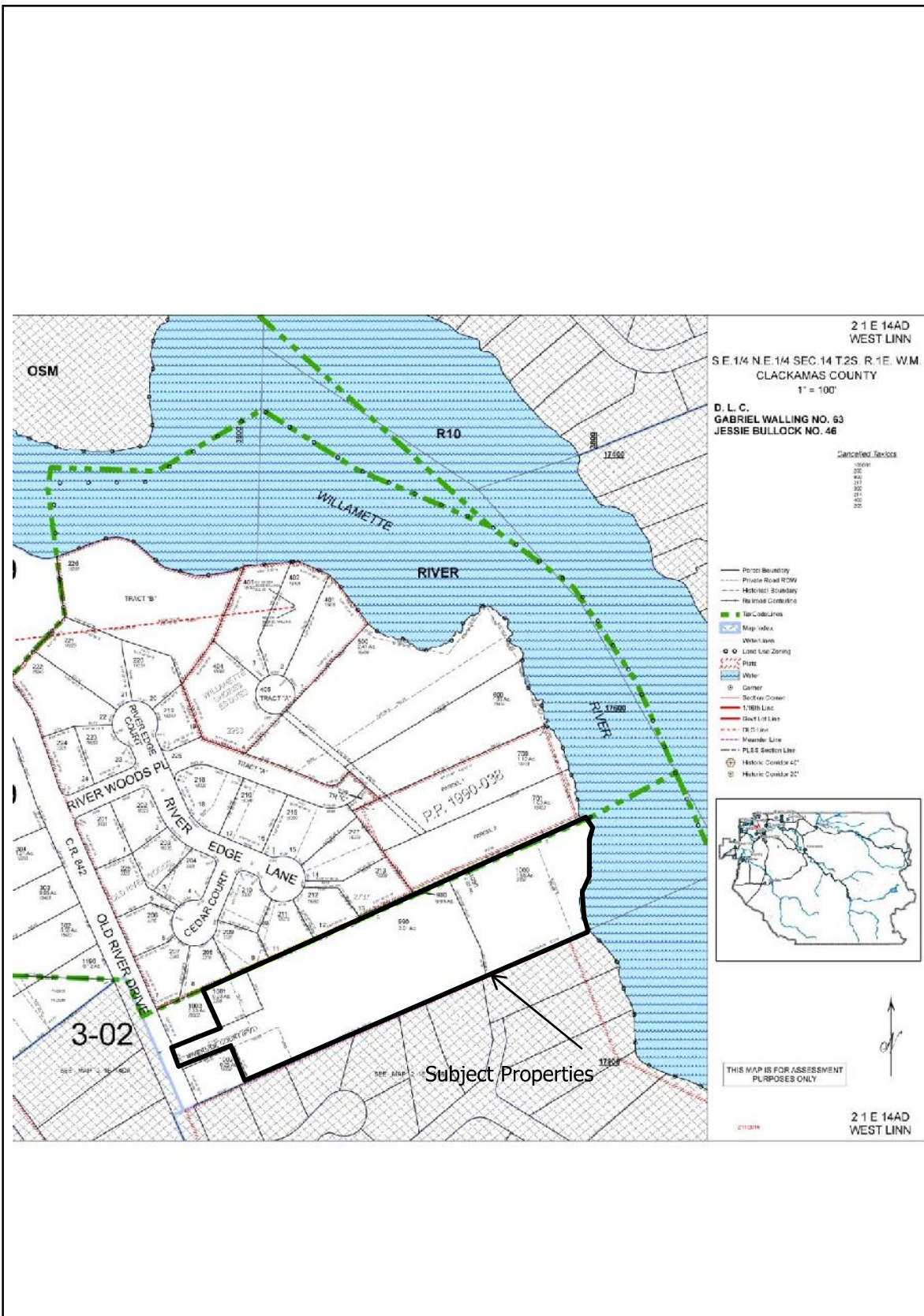
H: Utility plan





Appendix A: Site Vicinity Map  
S&A 2588  
Ferndell Estates

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



Appendix B: Tax Map (tax lots 900, 990, 1000, 1001, 1090)  
S&A 2588  
Ferndell Estates

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



**Metro 2005  
Habitat Conservation Areas (HCAs)**

**Conservation Area**

- High
  - Moderate
  - Low
  - Habitat and Impact Areas no designated as HCAs
- West Linn Exceptions

West Linn Exceptions include the Planning Director's land use decisions: MISC-08-19, MISC-10-26, and memo dated January 25, 2011

Data Source: Metro Data Resource Center  
 Habitat Conservation Areas Map December 15, 2005  
 Urban Growth Management Functional Plan  
 Title 13, Nature in Neighborhoods  
 Adopted Sept. 29, 2005 (Metro Ordinance No. 05 -1077C)  
 Amended Dec. 8, 2005 (Metro Ordinance No. 05 -1097A)

Appendix C: HCA Map  
 S&A 2588  
 Ferndell Estates

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





Appendix D: Aerial Photograph  
S&A 2588  
Ferndell Estates

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



Density Calculations

	Area (sq. ft.)	Allowable Density	Units @1 per 10,000 sq.ft.
Gross Site Area	142,933		
Land in a boundary street right-of-way, water course, or planned open space where density transfer is not requested:	0		
Area in street right-of-way:	36,708		
Net Site Area:	106,225		
Net Area within Type I or II slopes where Developed:	4,422	50%	.22
Area within Type I or II slopes where Density Will be Transferred:	0	75%	0
Area within Water Resource Area-all development transferred:	0	50%	0
Open Space (Type III and IV Lands)	0	100%	0
Net Type III & IV Land Developed:	101,803	100%	10.18
Base Density Allowed:			10.40
TOTAL ALLOWED DENSITY:			10 UNITS

SIGNED ON: 2-15-2018  
 REGISTERED  
 PROFESSIONAL  
 LAND SURVEYOR

Richard E. Givens  
 JULY 13, 2004  
 (OR) C. 10120  
 0057/L.S.

MAILED: DECEMBER 31, 2018  
 Design by: Richard E. Givens, Planning Consultant  
 Survey Work by: Centerline Concepts, Inc.

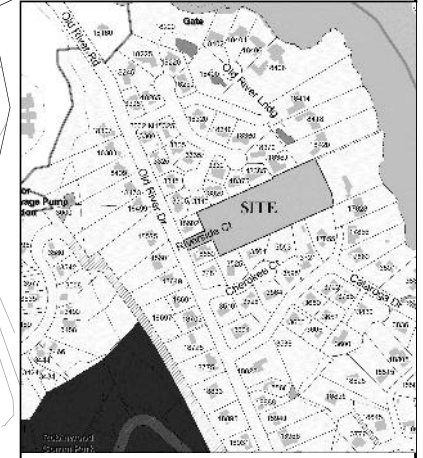
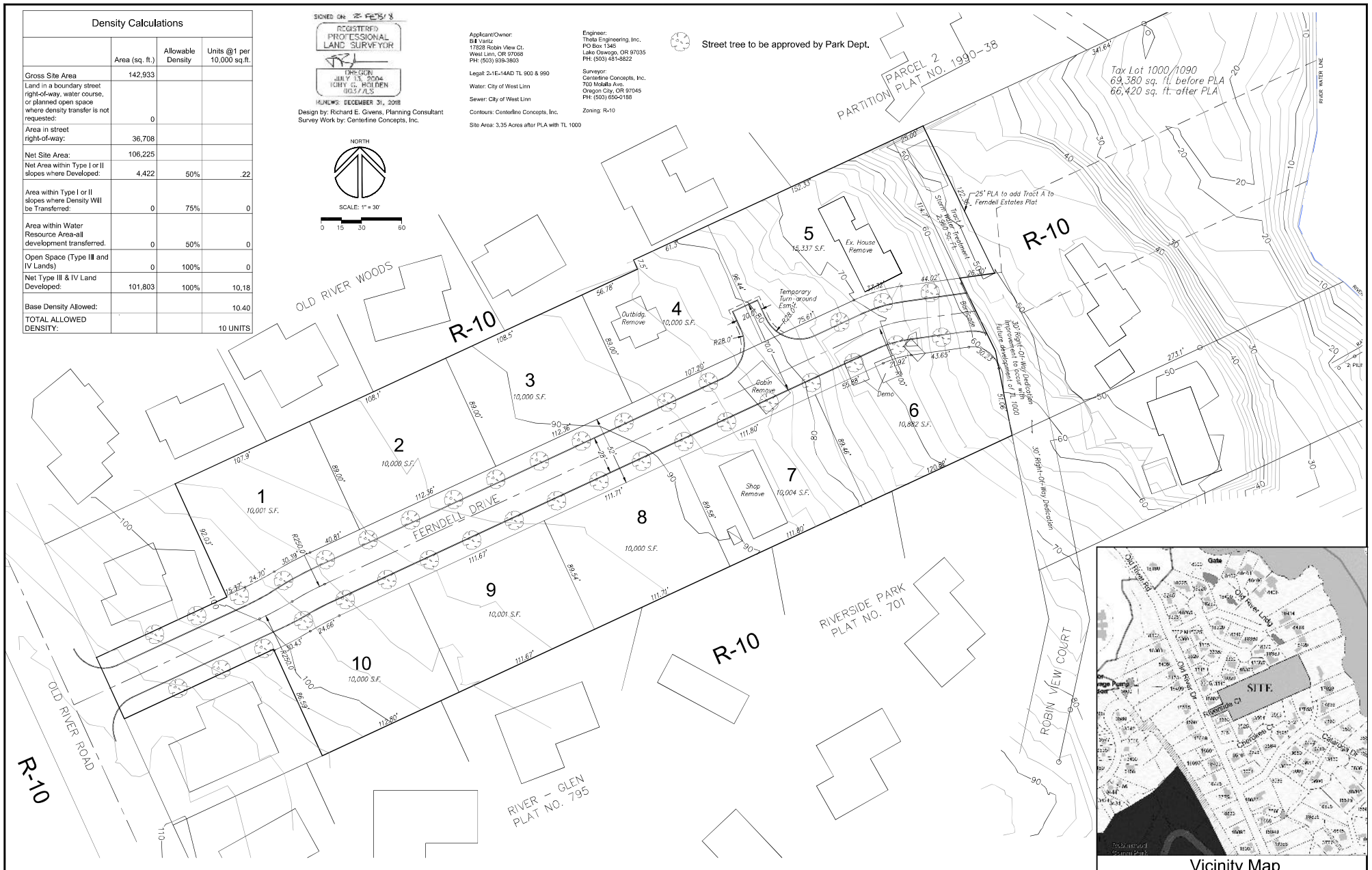


Applicant/Owner:  
 Bill Varitz  
 17829 Robin View Ct.  
 West Linn, OR 97068  
 PH: (503) 939-3803

Engineer:  
 Thola Engineering, Inc.  
 P.O. Box 1345  
 Lake Oswego, OR 97035  
 PH: (503) 451-8822

Legal: 2-1E-14AD TL 900 & 990  
 Water: City of West Linn  
 Sewer: City of West Linn  
 Contours: Centerline Concepts, Inc.  
 Zoning: R-10  
 Site Area: 3.35 Acres after PLA with TL 1000

Street tree to be approved by Park Dept.



DESIGNED:	REG	5-3-2018	1	Add street trees, re-development plan for TL 1000, access & utility easement on TL 1000
DRAWN:	REG	6-6-2018	2	Widened street to 52'28" pavement.
SCALE:				1" = 30'
DATE:		February 2018		
FILE:		13-VAR-100		

Richard E. Givens, Planning Consultant  
 18680 Sunblaze Dr.  
 Oregon City, OR 97045  
 PH: (503) 479-0097

APPLICANT: Greg Sams & Bill Varitz  
 18811 Trillium Drive  
 West Linn, OR 97068  
 PH: (503) 939-6015

**Ferndell Estates**  
 Tentative Plan

SHEET:  
**1/3**



DESIGNED: REG	PP= Photo Point
DRAWN: REG	
SCALE: 1" = 30'	
DATE: April 2018	
FILE: 16-VAR-100	DATE NO. REVISION

Richard E. Givens, Planning Consultant  
 18680 Sunblaze Dr.  
 Oregon City, OR 97045  
 PH: (503) 479-0097

APPLICANT: Bill Varitz & Greg Sams  
 18811 Trillium Drive  
 West Linn, OR 97068  
 PH: (503) 939-6015

**Ferndell Estates**  
 HCA Analysis

SHEET  
 4/4





Photo Point 1 facing north



Photo Point 1 facing west

Appendix G: Ground Level Photographs  
S&A 2588  
Ferndell Estates

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





Photo Point 2 facing south



Photo Point 2 facing east

Appendix G: Ground Level Photographs  
S&A 2588  
Ferndell Estates

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





Photo Point 2 facing north



Photo Point 2 facing west

Appendix G: Ground Level Photographs  
S&A 2588  
Ferndell Estates

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





Photo Point 3 facing



Photo Point 3 facing east

Appendix G: Ground Level Photographs  
S&A 2588  
Ferndell Estates

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





Photo Point 3 facing north



Photo Point 3 facing west

Appendix G: Ground Level Photographs  
S&A 2588  
Ferndell Estates

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





Photo Point 4 facing east



Photo Point 4 facing south

Appendix G: Ground Level Photographs  
S&A 2588  
Ferndell Estates

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





Photo Point 4 facing west



Photo Point 4 facing north

Appendix G: Ground Level Photographs  
S&A 2588  
Ferndell Estates

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





Photo Point 5 facing north



Photo Point 5 facing west

Appendix G: Ground Level Photographs  
S&A 2588  
Ferndell Estates

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





Photo Point 5 facing south



Photo Point 5 facing east

Appendix G: Ground Level Photographs  
S&A 2588  
Ferndell Estates

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



## Storm Addendum Memo

### Ferndell Estates

Subject: Collection and disposal of storm water

Narrative:

Discharge of storm water from the site will be directly to the Willamette River. Storm water from the impervious streets will be collected in catch basins and piped to a water quality pond facility with discharge directly to the Willamette River. Storm water from the impervious roofs from the individual lots will be collected on site and provided either a rain garden or underground infiltrator system to provide water quality and some infiltration to the extent possible for a facility sized for water quality with an overflow to the street system.

The soils in this area are not known for good infiltration rates making total onsite disposal impractical. Detention is unnecessary since the disposal is directly to the Willamette River.

Bruce D. Goldson, PE

Theta

June 29, 2018

2017-250

RE: Ferndell Estates Tentative Plan - West Linn SUB-18-01

Ty.Darby@tvfr.com  
4:02 PM

To: Rick Givens Cc: Peter Spir; Lais, Erich

Hi Rick,

Yes, this is acceptable. No parking fire lane signage will be needed as well.

Thank you,

Ty

**From:** Rick Givens <rickgivens@gmail.com>  
**Sent:** Wednesday, June 6, 2018 10:13 AM  
**To:** Darby, Ty M. <Ty.Darby@tvfr.com>  
**Cc:** Peter Spir <Pspir@westlinnoregon.gov>; Lais, Erich <elais@westlinnoregon.gov>  
**Subject:** Ferndell Estates Tentative Plan - West Linn SUB-18-01

Hi Ty,

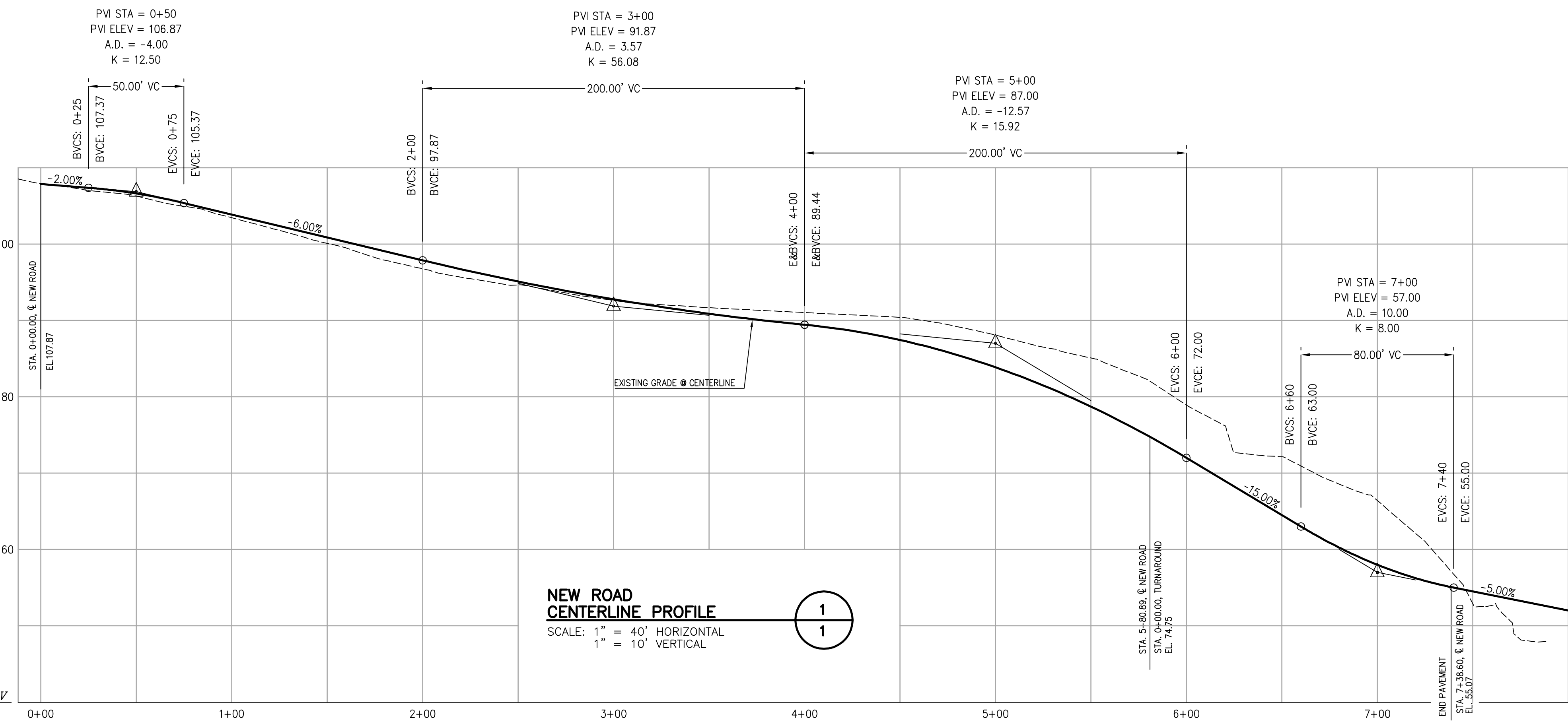
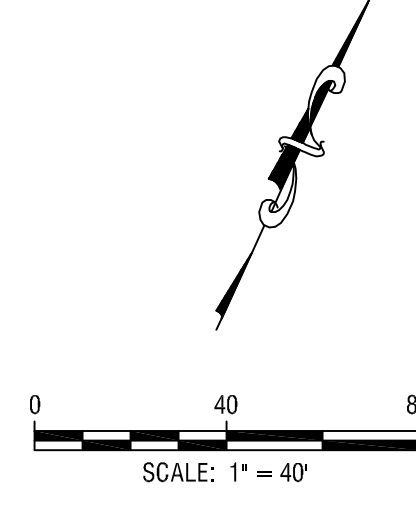
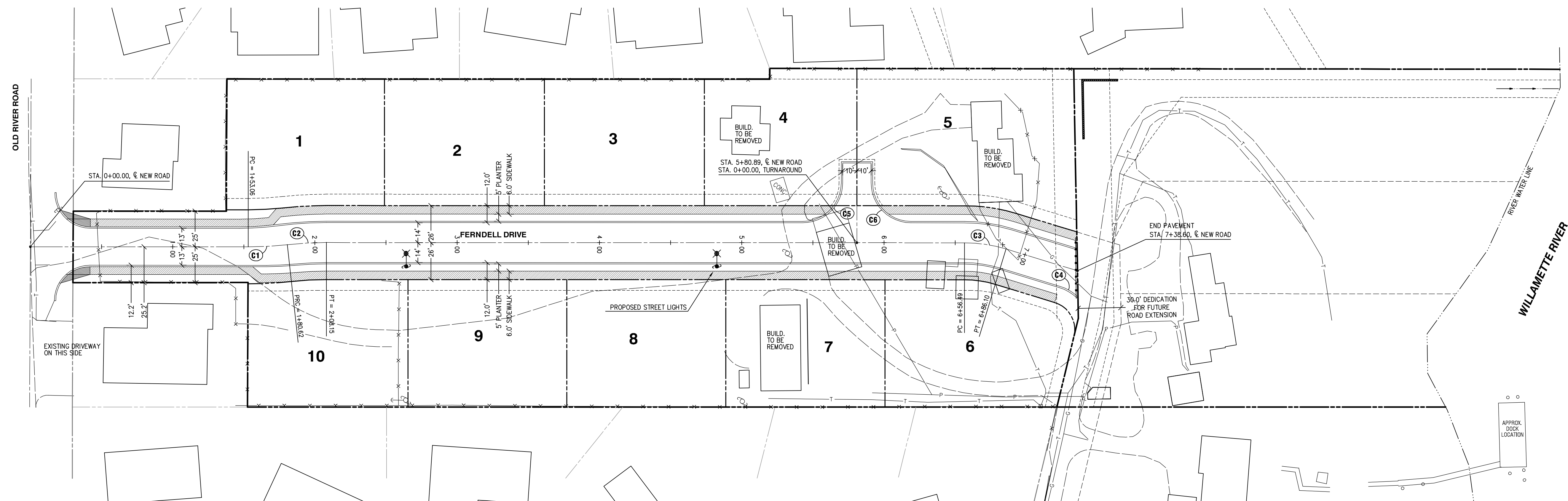
I'm attaching a revised plan for the Ferndell Estates project that you commented on in a letter dated March 7, 2018. Would you please take a look at the proposed design and location of the firetruck turn-around and let me know if it meets your standards.

Thanks,

--

Rick Givens  
Planning Consultant  
18680 Sunblaze Dr.  
Oregon City, OR 97045  
Office: (503) 479-0097  
Cell: (503) 351-8204





CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	250.00	27.56	13.80	27.55	N61°59'23"E	6°19'02"
C2	250.00	27.53	13.78	27.51	S61°59'08"W	6°18'32"
C3	100.00	29.62	14.92	29.51	S73°37'30"W	16°58'12"
C4	32.00	15.11	7.70	14.97	N84°21'45"W	27°03'18"
C5	28.00	43.99	28.01	39.60	N20°07'50"E	90°01'09"
C6	28.00	43.97	27.98	39.59	S69°52'10"E	89°58'51"

2018-250

DESIGNED:	BDG			
DRAWN:	BJS			
SCALE:	1" = 40'			
DATE:	June, 2017			
FILE:	Ferndell Estates Prelim3	DATE	NO.	REVISION

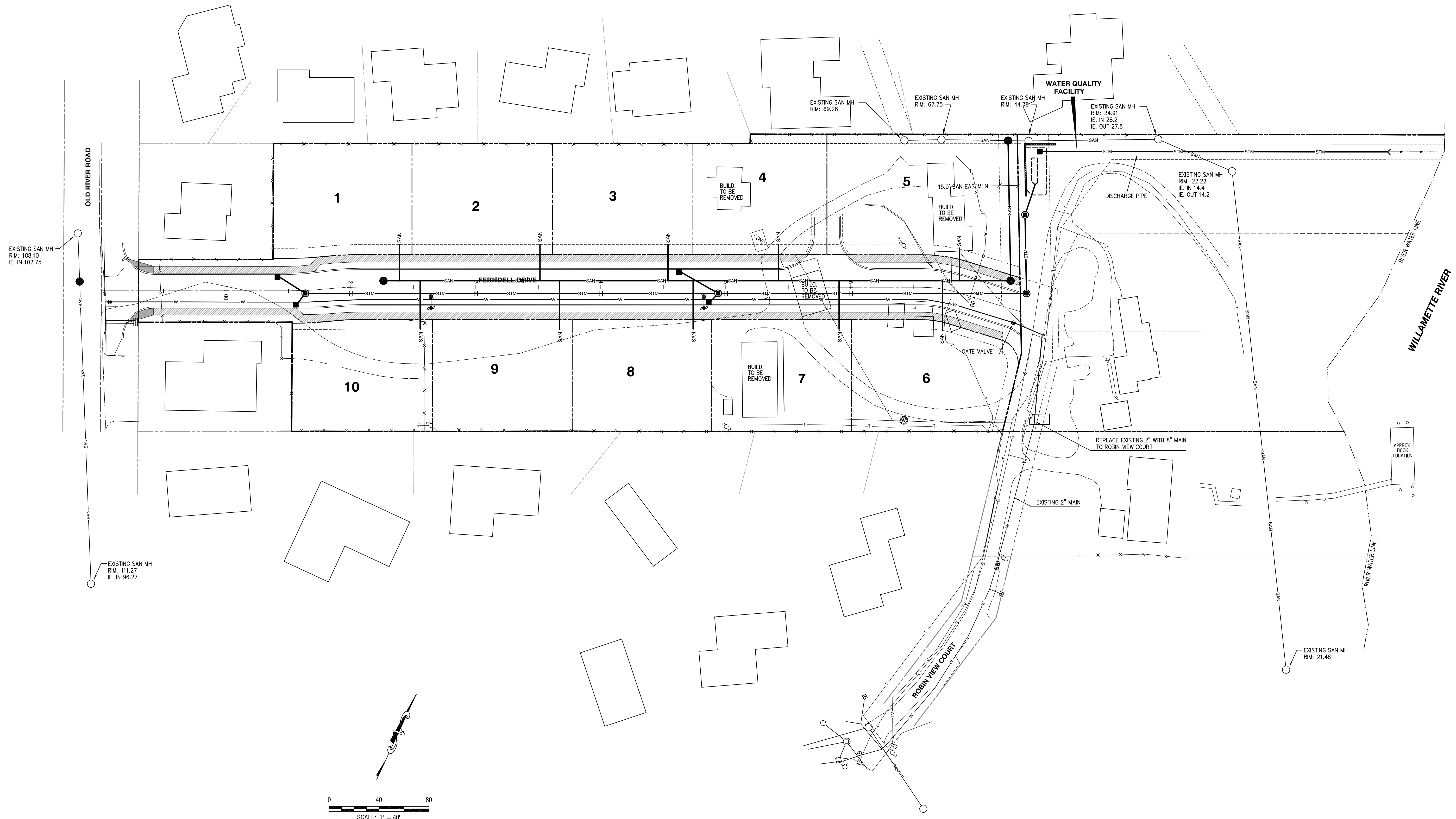
**Theta, llc**

ENGINEERING - SURVEYING - PLANNING

PO Box 1345      503/481-8822  
 Lake Oswego, Oregon 97035      email: thetaeng@comcast.net

**PRELIMINARY STREET PLAN AND PROFILE**

Ferndell Estates



2018-250

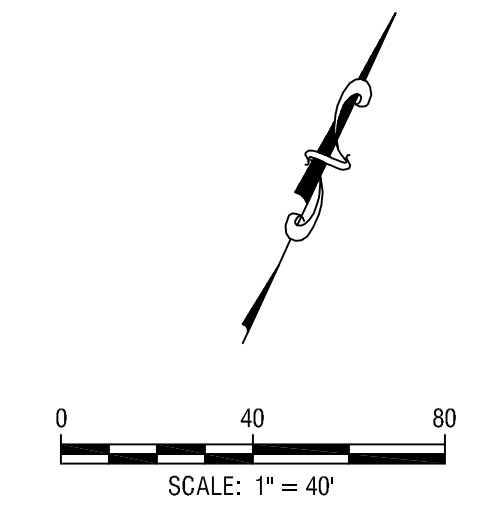
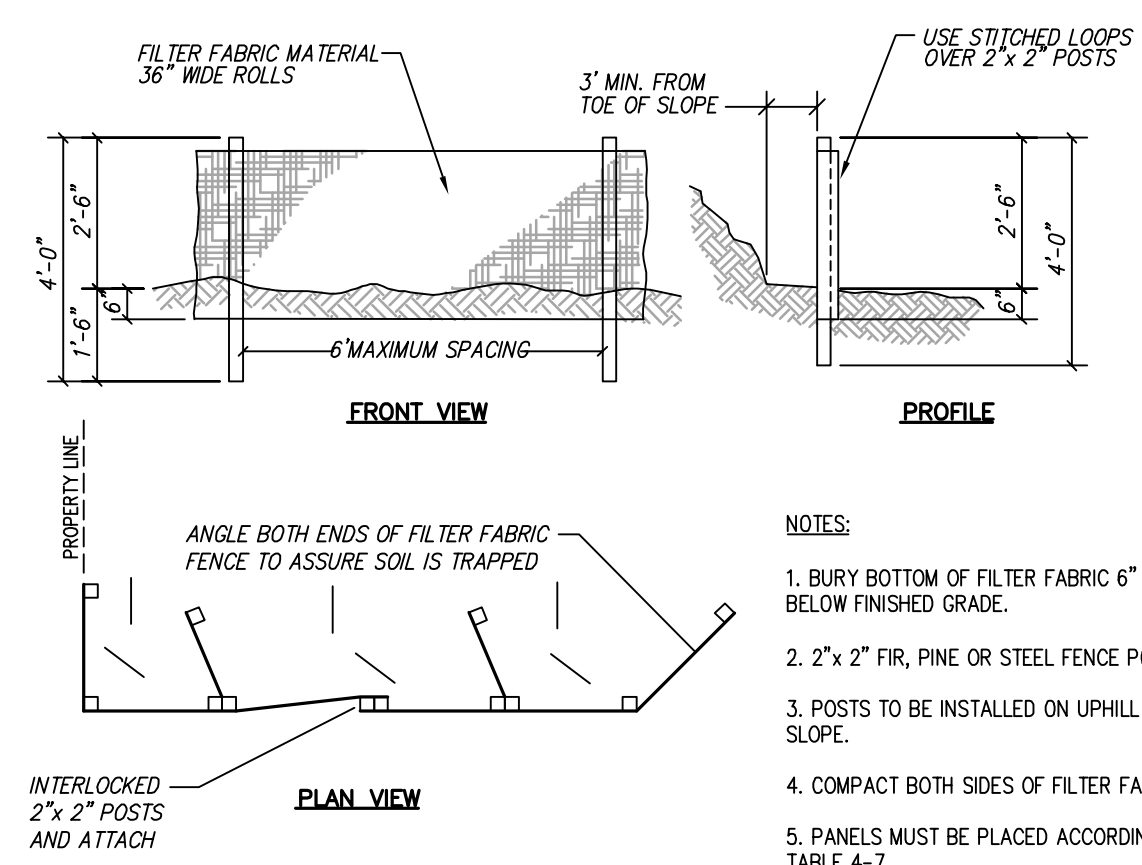
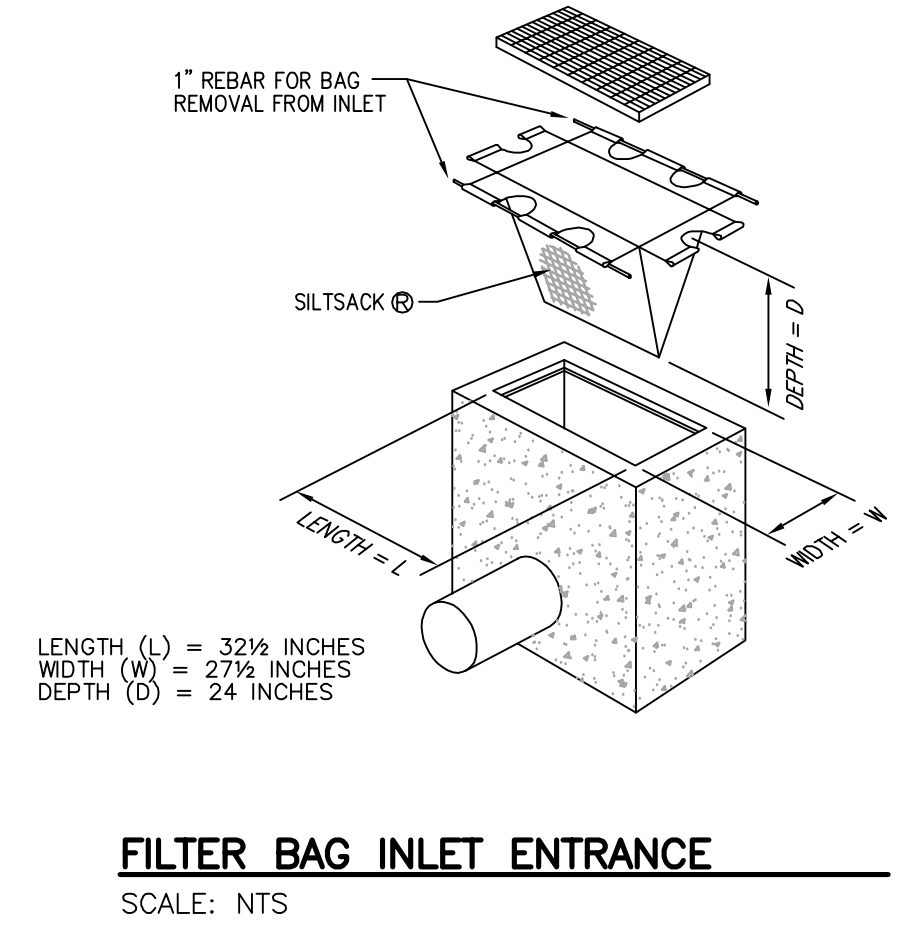
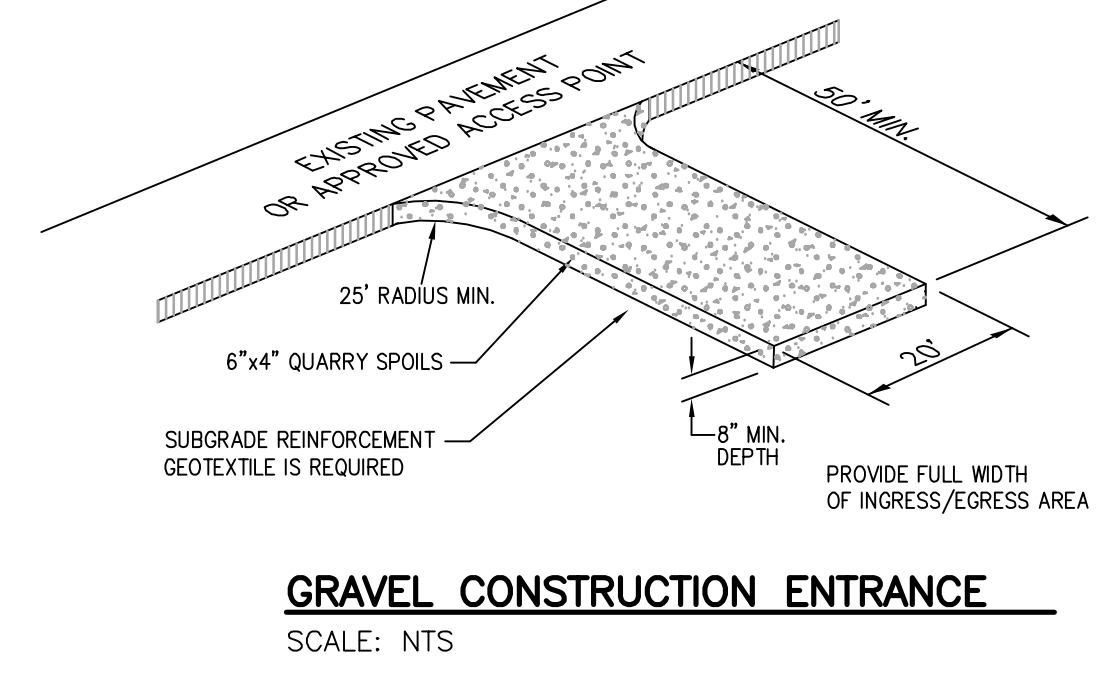
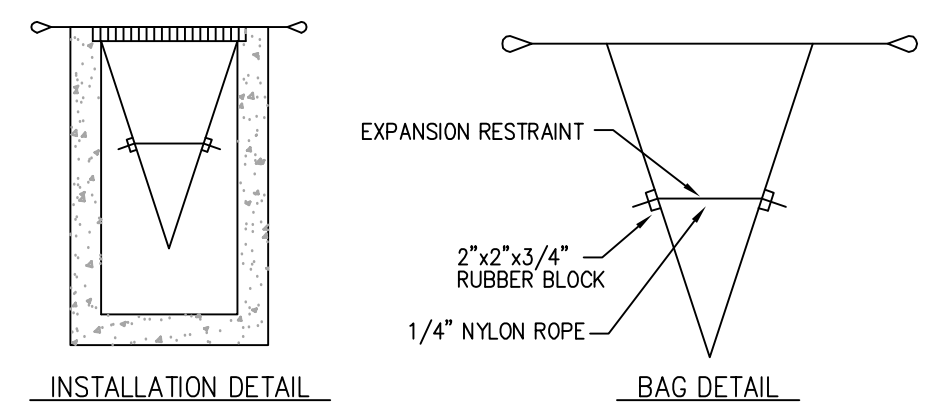
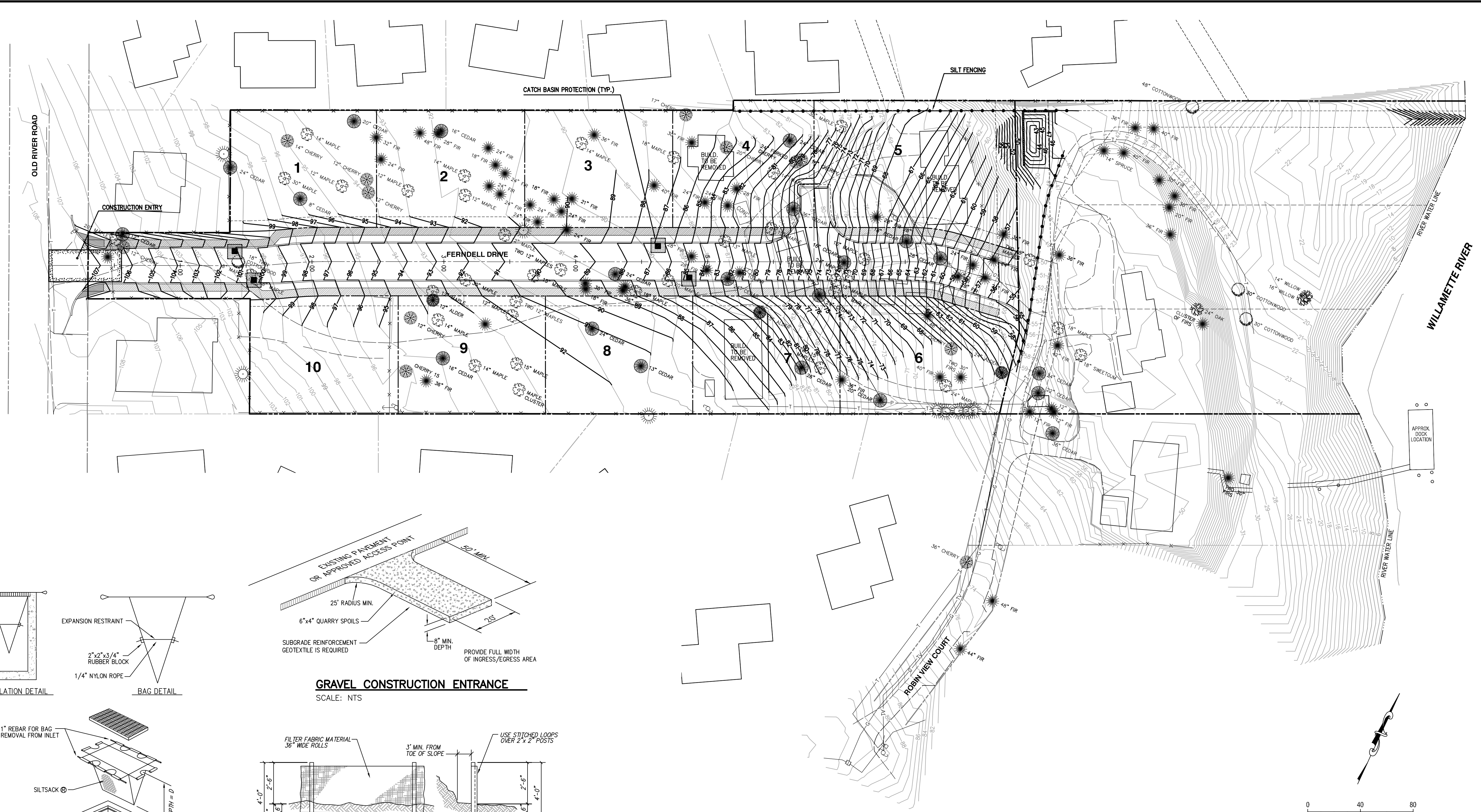
**PRELIMINARY UTILITY PLAN**

DESIGNED: BDG			
DRAWN: BJS			
SCALE: 1" = 40'			
DATE: June, 2017			
FILE: Ferndell Estates Prelim3	DATE	NO.	REVISION

**Theta, llc**  
 ENGINEERING - SURVEYING - PLANNING  
 PO Box 1345 503/481-8822  
 Lake Oswego, Oregon 97035 email: thetaeng@comcast.net

Ferndell Estates

SHEET:  
**2/3**



2017-X

DESIGNED: BDG			
DRAWN: BJS			
SCALE: 1" = 40'			
DATE: June, 2017			
FILE: Ferndell Estates Prelim3	DATE	NO.	REVISION

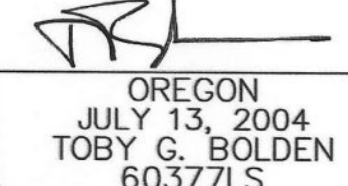
**Theta, llc**  
ENGINEERING - SURVEYING - PLANNING  
PO Box 1345  
Lake Oswego, Oregon 97035  
503/481-8822  
email: thetaeng@comcast.net

**PRELIMINARY GRADING AND EROSION CONTROL PLAN**

Ferndell Estates



Density Calculations			
	Area (sq. ft.)	Allowable Density	Units @1 per 10,000 sq. ft.
Gross Site Area	142,933		
Land in a boundary street right-of-way, water course, or planned open space where density transfer is not requested:	0		
Area in street right-of-way:	36,708		
Net Site Area:	106,225		
Net Area within Type I or II slopes where Developed:	4,422	50%	.22
Area within Type I or II slopes where Density Will be Transferred:	0	75%	0
Area within Water Resource Area-all development transferred.	0	50%	0
Open Space (Type III and IV Lands)	0	100%	0
Net Type III & IV Land Developed:	101,803	100%	10.18
Base Density Allowed:			10.40
TOTAL ALLOWED DENSITY:			10 UNITS

SIGNED ON: **2 FEB 18**  
**REGISTERED PROFESSIONAL LAND SURVEYOR**  
  
**OREGON**  
 JULY 13, 2004  
**TOBY G. BOLDEN**  
 60377LS

RENEWS: DECEMBER 31, 2018  
 Design by: Richard E. Givens, Planning Consultant  
 Survey Work by: Centerline Concepts, Inc.

Applicant/Owner:  
 Bill Varitz  
 17828 Robin View Ct.  
 West Linn, OR 97068  
 PH: (503) 939-3803

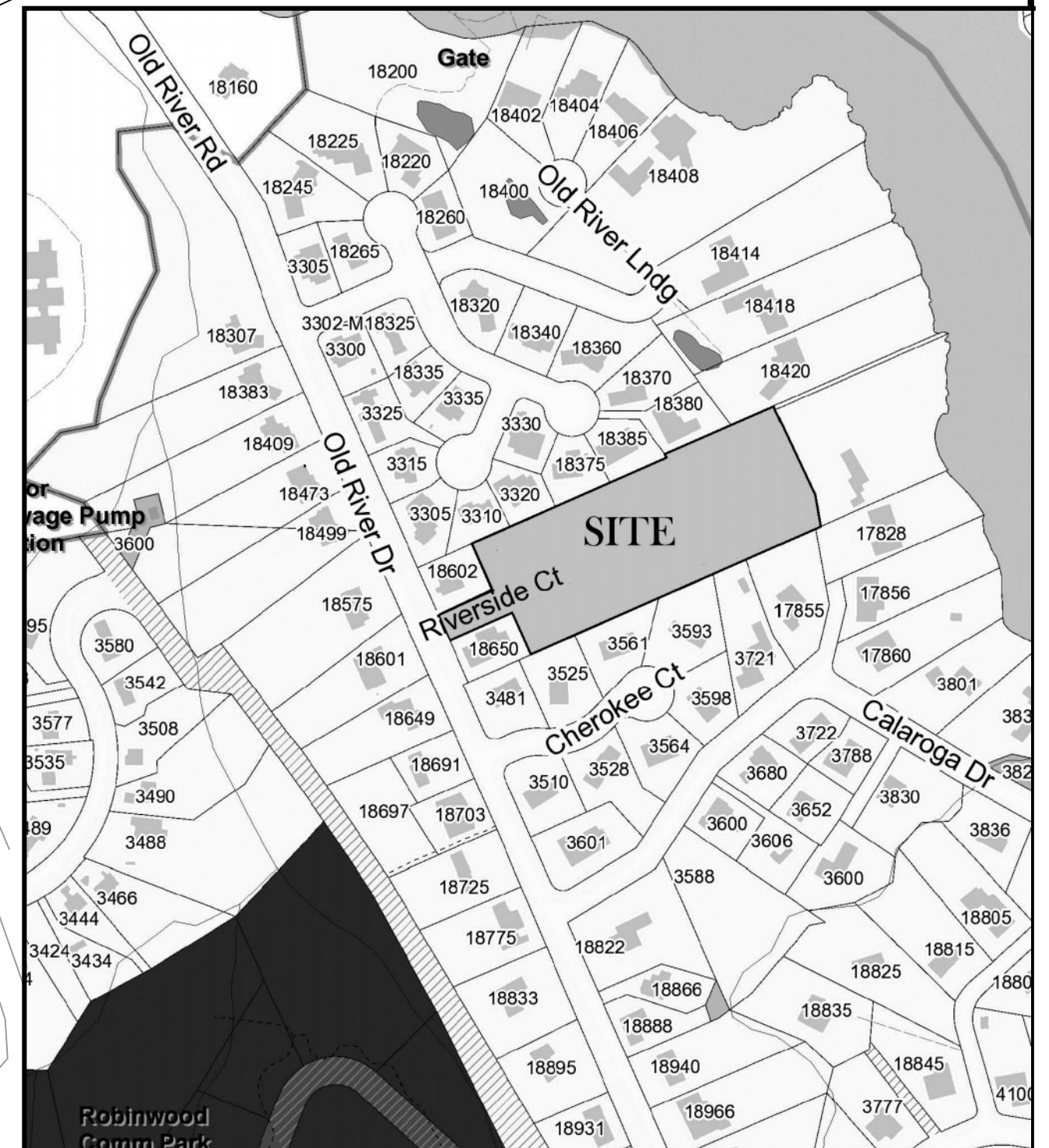
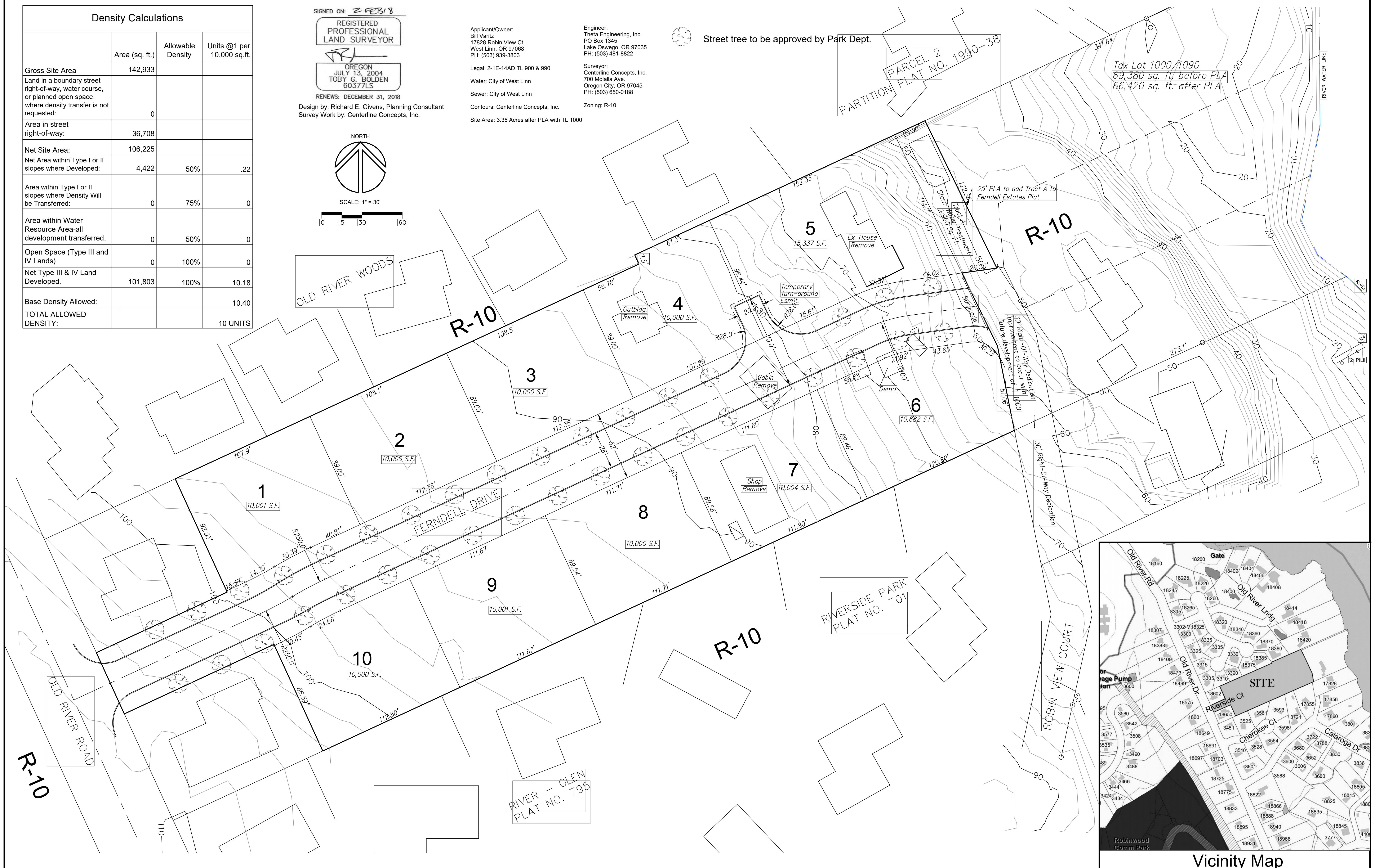
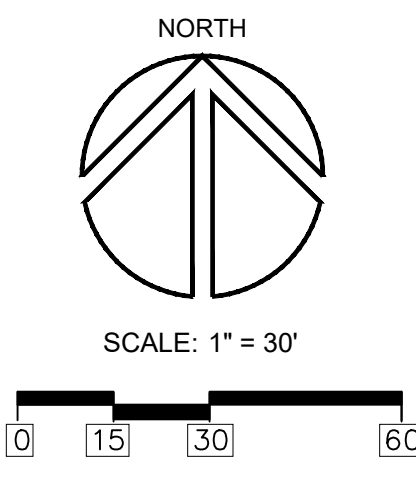
Legal: 2-1E-14AD TL 900 & 990  
 Water: City of West Linn  
 Sewer: City of West Linn

Contours: Centerline Concepts, Inc.  
 Site Area: 3.35 Acres after PLA with TL 1000

Engineer:  
 Theta Engineering, Inc.  
 PO Box 1345  
 Lake Oswego, OR 97035  
 PH: (503) 481-8822

Surveyor:  
 Centerline Concepts, Inc.  
 700 Molalla Ave.  
 Oregon City, OR 97045  
 PH: (503) 650-0188

Zoning: R-10



DESIGNED:	REG	5-3-2018	1	Added street trees, re-development plan for TL 1000, access & utility esmt on TL 1000
DRAWN:	REG	6-6-2018	2	Widened street to 52'/28' pavement.
SCALE:		1" = 30'		
DATE:		February 2018		
FILE:		13-VAR-100		

Richard E. Givens, Planning Consultant  
 18680 Sunblaze Dr.  
 Oregon City, OR 97045  
 PH: (503) 479-0097


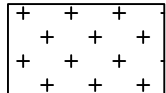
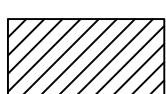

APPLICANT: Greg Sams & Bill Varitz  
 18811 Trillium Drive  
 West Linn, OR 97068  
 PH: (503) 939-6015

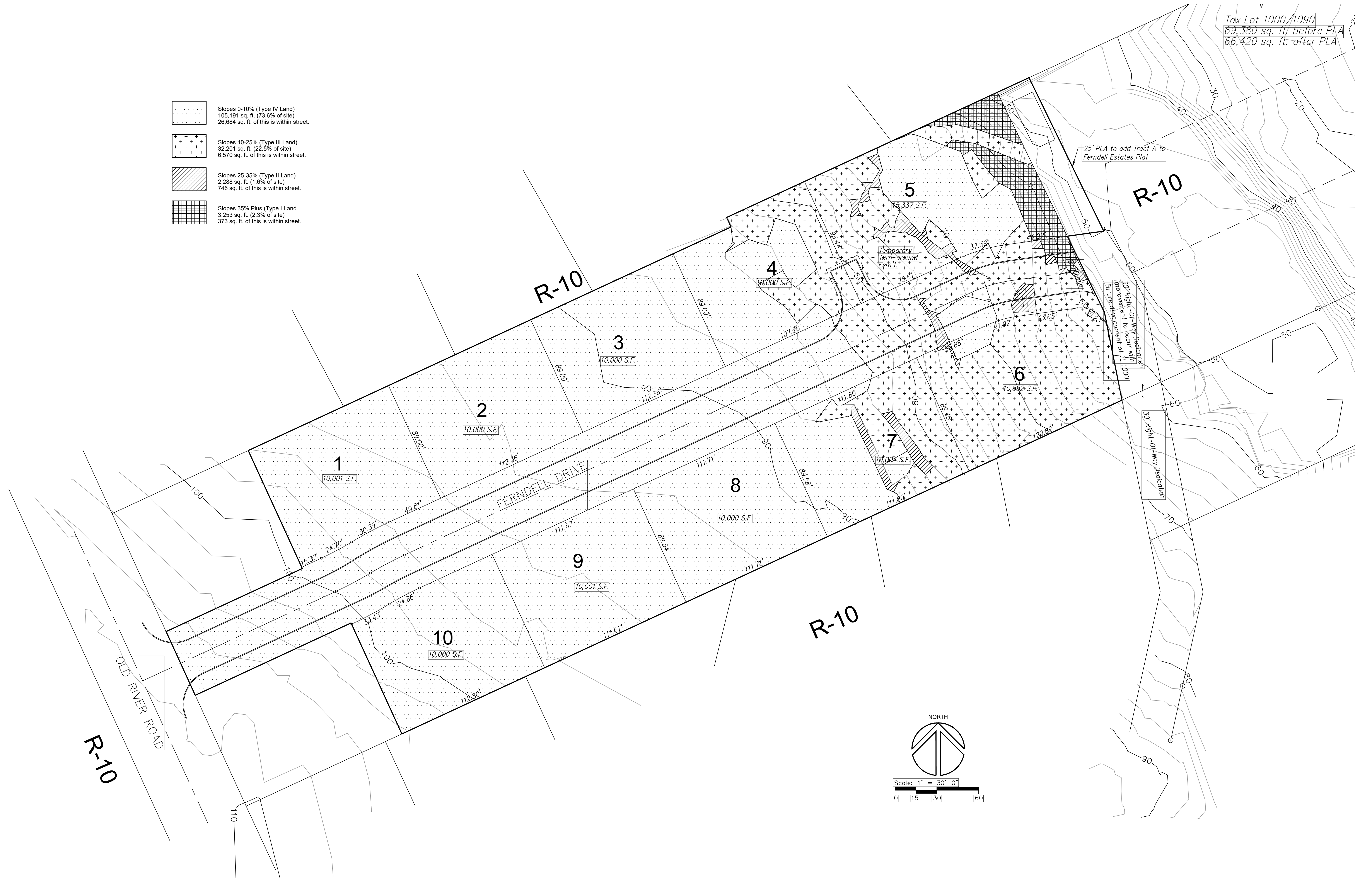
**Ferndell Estates**  
Tentative Plan

SHEET 1/3



Tax Lot 1000/1090  
 69,380 sq. ft. before PLA  
 66,420 sq. ft. after PLA

-  Slopes 0-10% (Type IV Land)  
 105,191 sq. ft. (73.6% of site)  
 26,884 sq. ft. of this is within street.
-  Slopes 10-25% (Type III Land)  
 32,201 sq. ft. (22.5% of site)  
 6,570 sq. ft. of this is within street.
-  Slopes 25-35% (Type II Land)  
 2,288 sq. ft. (1.6% of site)  
 746 sq. ft. of this is within street.
-  Slopes 35% Plus (Type I Land)  
 3,253 sq. ft. (2.3% of site)  
 373 sq. ft. of this is within street.



DESIGNED: REG			
DRAWN: REG			
SCALE: 1" = 30'			
DATE: February 2018			
FILE: 16-VAR-100	DATE	NO.	REVISION

Richard E. Givens, Planning Consultant  
 18680 Sunblaze Dr.  
 Oregon City, OR 97045  
 PH: (503) 479-0097

APPLICANT: Bill Varitz & Greg Sams  
 18811 Trillium Drive  
 West Linn, OR 97068  
 PH: (503) 939-6015

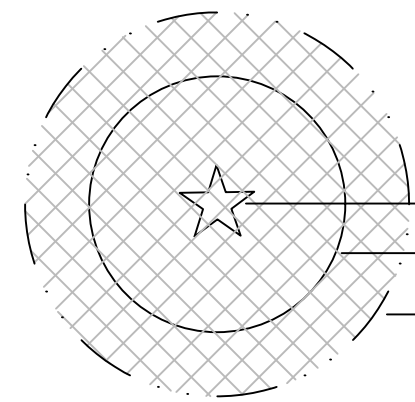
**Ferndell Estates**  
 Slope Analysis



Tag	Species	Diameter	Rating	Condition
1	Port Orford Cedar	13	2	added
2	Douglas Fir	34	1	co-dominant stem cut; decay present
3	big leaf maple	21	2	dead branches
4	western red cedar	38	2	viable
5	sweet cherry	16	2	ivy
6	big leaf maple	14	2	viable
7	big leaf maple	15	2	viable
8	western red cedar	33	2	co-dominant @ 35'
9	western red cedar	16	2	3' off-site; added
10	sweet cherry	13	2	added
11	sweet cherry	12	2	added
12	red alder	12	1	trunk decay; added
13	red alder	12	2	trunk swoop; added
14	big leaf maple	30	1	basal decay
15	western red cedar	14	2	
16	big leaf maple	16	2	
17	big leaf maple	12.13	2	co-dominant; added
18	western red cedar	25	2	co-dominant @ 25'
19	sweet cherry	14	2	added
20	big leaf maple	22	2	
21	sweet cherry	21	2	
22	big leaf maple	15	2	added
23	sweet cherry	12	2	
24	sweet cherry	15	2	ivy
25	sweet cherry	15	2	added
26	sweet cherry	13	2	added
27	big leaf maple	17	2	added
28	western red cedar	36	2	2' off-site; added
29	sweet cherry	18	2	
30	grand fir	40	3	
31	western red cedar	22	2	
32	big leaf maple	17	2	
33	big leaf maple	12	2	added
34	big leaf maple	18	2	

35	big leaf maple	36	1	multiple stems; basal decay; past failures
36	Douglas Fir	39	2	added
37	red alder	14	1	trunk decay; added
38	big leaf maple	14	2	added
39	sweet cherry	13	2	added
40	big leaf maple	17	2	co-dominant from base; added
41	big leaf maple	26	2	multiple stems; added
42	big leaf maple	22	2	multiple stems; added
43	big leaf maple	21	2	multiple stems; added
44	big leaf maple	25	2	multiple stems; added
45	big leaf maple	33	2	multiple stems; added
46	big leaf maple	44	1	multiple stems; added
47	big leaf maple	15	2	added
48	big leaf maple	13	2	added
49	sweet cherry	15	2	
50	big leaf maple	18	2	added
51	red alder	13	2	
52	big leaf maple	17	2	
53	sweet cherry	12	2	added
54	big leaf maple	18	1	basal decay
55	big leaf maple	27	2	added
56	big leaf maple	14	2	added
57	big leaf maple	16	2	added
58	Douglas Fir	26	2	very tall
59	Douglas Fir	40	2	very tall
60	Douglas Fir	49	2	very tall
61	Douglas Fir	33	2	very tall; shares stump with T62
62	western red cedar	21	2	shares stump with T61
63	big leaf maple	16	2	co-dominant from 1'; added
64	big leaf maple	13	2	
65	big leaf maple	15	2	
66	Douglas Fir	33	2	very tall
67	big leaf maple	17	2	added
68	big leaf maple	20	2	added
69	sweet cherry	12	2	added

70	Douglas Fir	19	2	poor trunk taper
71	Douglas Fir	30	2	very tall
72	Douglas Fir	22	2	poor trunk taper
73	Douglas Fir	30	2	
74	Douglas Fir	26	2	
75	big leaf maple	13	2	added
76	Douglas Fir	17	2	
77	Douglas Fir	27	2	
78	big leaf maple	17	2	
79	big leaf maple	13	1	co-dominant stem is cut; basal decay
80	big leaf maple	20	2	
81	big leaf maple	26	2	co-dominant from 3'
82	Douglas Fir	34	2	
83	Douglas Fir	32	2	
84	Douglas Fir	27	2	
85	Douglas Fir	29	2	added
86	big leaf maple	17	2	
87	Douglas Fir	40	2	
88	big leaf maple	21	2	
89	big leaf maple	15	2	added
90	big leaf maple	13	2	added
91	sweet cherry	13	2	added
92	big leaf maple	12	2	added
93	big leaf maple	13	2	added
94	big leaf maple	20	2	
95	Douglas Fir	36	2	within 1' of out building
96	sweet cherry	20	2	
97	Douglas Fir	47	2	
98	sweet cherry	13	2	added
99	sweet cherry	13	2	added
100	Douglas Fir	40	2	
101	Douglas Fir	34	2	
102	western red cedar	30	2	
103	sweet cherry	15	2	trunks swoop; added
104	western red cedar	19	2	



- ★ Significant Trees to be protected.
- Drip Line
- Drip Line Plus 10'
- ★ Significant Trees to be retained where feasible.
- ✖ Significant Trees to be removed.



105	sweet cherry	12	2	added
106	big leaf maple	18	1	trunk and basal decay; added
107	big leaf maple	12	2	added
108	western red cedar	26	2	<1' off-site; added
109	sweet cherry	13	2	added
110	big leaf maple	12	2	added
111	big leaf maple	21	1	multiple stems; added
112	big leaf maple	18	2	
113	Douglas Fir	29.33	2	co-dominant from base
114	western red cedar	29	2	trunk decay; co-dominant @ 20'
115	big leaf maple	20	2	
116	big leaf maple	15	2	added
117	Douglas Fir	33	2	
118	Douglas Fir	31	2	
119	western red cedar	26	2	
120	light pole	9	N/A	not a tree
121	red alder	19	2	
122	big leaf maple	16	2	
123	Douglas Fir	27	2	
124	Douglas Fir	30	2	
125	Douglas Fir	40	2	
126	sweet cherry	23	2	co-dominant; included bark
127	big leaf maple	12	2	added
128	big leaf maple	21	2	added
129	big leaf maple	15	2	
130	big leaf maple	19	2	
131	western red cedar	41	2	
132	sweet cherry	16.14	2	co-dominant from base
133	sweet cherry	16	2	added
134	western red cedar	30	2	
135	Scouler willow	14	2	added
136	big leaf maple	40	2	co-dominant @ 5'
137	red alder	12	2	added
138	Douglas Fir	40	2	
139	western red cedar	34	2	

140	chestnut	13	2	added
141	western red cedar	30	2	
142	big leaf maple	27	2	co-dominant @ 3'
143	Douglas Fir	45	2	
144	western red cedar	13	2	
145	sweet cherry	12	2	added
146	big leaf maple	16	2	
147	big leaf maple	17	2	
148	western red cedar	18	2	
149	big leaf maple	18	2	
150	big leaf maple	27	2	co-dominant @ 3'; added
151	big leaf maple	16	2	
152	incense cedar	18	2	multiple tops
153	western red cedar	32	2	
154	Douglas Fir	35	2	
155	Douglas Fir	50	2	
156	western red cedar	32	2	7' off-site
157	western red cedar	36	2	5' off-site
158	Douglas Fir	45	2	
159	big leaf maple	26	2	co-dominant @ 3'
160	Douglas Fir	59	1	P. schweinitzii root disease; co-dominant stems
161	western red cedar	14	2	hedgerow; added
162	western red cedar	13	2	hedgerow; added
163	western red cedar	12	2	hedgerow; added
164	western red cedar	19	2	hedgerow; added
165	western red cedar	12	2	hedgerow; added
166	sweet cherry	15	2	
167	Douglas Fir	27	2	
168	Pacific madrone	6	2	added
169	Douglas Fir	27	1	red-ring rot
170	Douglas Fir	23	2	
171	Douglas Fir	35	2	
172	big leaf maple	30	2	added
173	sweet cherry	13	2	added
174	big leaf maple	14.14	2	added

DESIGNED: REG	DATE: February 2018	NO.	REVISION
DRAWN: REG	FILE: 16-VAR-100		
SCALE: 1" = 30'			

Richard E. Givens, Planning Consultant  
 18680 Sunblaze Dr.  
 Oregon City, OR 97045  
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 18811 Trillium Drive  
 West Linn, OR 97068  
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**Ferndell Estates**  
Tree Plan

SHEET 3/3



## PC-4 PUBLIC COMMENTS



March 7, 2018

Peter Spir  
City of West Linn  
22500 Salamo Road  
West Linn, OR 97068

**Re: 10-Lot Subdivision, 3350 Riverside Ct., SUB-18-01**

Dear Peter,

Thank you for the opportunity to review the proposed site plan surrounding the above named development project. Tualatin Valley Fire & Rescue endorses this proposal predicated on the following criteria and conditions of approval:

### **FIRE APPARATUS ACCESS:**

1. **FIRE APPARATUS ACCESS ROAD DISTANCE FROM BUILDINGS AND FACILITIES:** Access roads shall be within 150 feet of all portions of the exterior wall of the first story of the building as measured by an approved route around the exterior of the building or facility. An approved turnaround is required if the remaining distance to an approved intersecting roadway, as measured along the fire apparatus access road, is greater than 150 feet. (OFC 503.1.1))
2. **DEAD END ROADS AND TURNAROUNDS:** Dead end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved turnaround. Diagrams of approved turnarounds are shown below: (OFC 503.2.5 & D103.1)
3. **FIRE APPARATUS ACCESS ROAD WIDTH AND VERTICAL CLEARANCE:** Fire apparatus access roads shall have an unobstructed driving surface width of not less than 20 feet (26 feet adjacent to fire hydrants (OFC D103.1)) and an unobstructed vertical clearance of not less than 13 feet 6 inches. The fire district will approve access roads of 12 feet for up to three dwelling units and accessory buildings. (OFC 503.2.1 & D103.1)
4. **NO PARKING SIGNS:** Where fire apparatus roadways are not of sufficient width to accommodate parked vehicles and 20 feet of unobstructed driving surface, "No Parking" signs shall be installed on one or both sides of the roadway and in turnarounds as needed. Signs shall read "NO PARKING - FIRE LANE" and shall be installed with a clear space above grade level of 7 feet. Signs shall be 12 inches wide by 18 inches high and shall have red letters on a white reflective background. (OFC D103.6)
5. **NO PARKING:** Parking on emergency access roads shall be as follows (OFC D103.6.1-2):
  1. 20-26 feet road width – no parking on either side of roadway
  2. 26-32 feet road width – parking is allowed on one side
  3. Greater than 32 feet road width – parking is not restricted
6. **PAINTED CURBS:** Where required, fire apparatus access roadway curbs shall be painted red (or as approved) and marked "NO PARKING FIRE LANE" at 25 foot intervals. Lettering shall have a stroke of not less than one inch wide by six inches high. Lettering shall be white on red background (or as approved). (OFC 503.3)

7. **FIRE APPARATUS ACCESS ROADS WITH FIRE HYDRANTS:** Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet and shall extend 20 feet before and after the point of the hydrant. (OFC D103.1)
8. **TURNOUTS:** Where access roads are less than 20 feet and exceed 400 feet in length, turnouts 10 feet wide and 30 feet long may be required and will be determined on a case by case basis. (OFC 503.2.2)
9. **SURFACE AND LOAD CAPACITIES:** Fire apparatus access roads shall be of an all-weather surface that is easily distinguishable from the surrounding area and is capable of supporting not less than 12,500 pounds point load (wheel load) and 75,000 pounds live load (gross vehicle weight). Documentation from a registered engineer that the final construction is in accordance with approved plans or the requirements of the Fire Code may be requested. (OFC 503.2.3)
10. **BRIDGES:** Private bridges shall be designed and constructed in accordance with the State of Oregon Department of Transportation and American Association of State Highway and Transportation Officials Standards *Standard Specification for Highway Bridges*. A building permit shall be obtained for the construction of the bridge if required by the building official of the jurisdiction where the bridge is to be built. The design engineer shall prepare a special inspection and structural observation program for approval by the building official. The design engineer shall give, in writing; final approval of the bridge to the fire district after construction is completed. Maintenance of the bridge shall be the responsibility of the party or parties that use the bridge for access to their property. The fire district may at any time, for due cause, ask that a registered engineer inspect the bridge for structural stability and soundness at the expense of the property owner(s) the bridge serves. Vehicle load limits shall be posted at both entrances to bridges when required by the fire code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, approved barriers, approved signs or both shall be installed and maintained when required by the fire code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, approved barriers, approved signs or both shall be installed and maintained when required by the fire code official. (OFC 503.2.6)
11. **TURNING RADIUS:** The inside turning radius and outside turning radius shall not be less than 28 feet and 48 feet respectively, measured from the same center point. (OFC 503.2.4 & D103.3)
12. **ACCESS ROAD GRADE:** Fire apparatus access roadway grades shall not exceed 12%. When fire sprinklers\* are installed, a maximum grade of 15% will be allowed.
- |        |   |
|--------|---|
| 0-12%  | Allowed   |
| 13-15% | Special consideration with submission of written Alternate Methods and Materials request. Ex: Automatic fire sprinkler (13-D) system* in lieu of grade.   |
| ≥16%   | Special consideration on a case by case basis with submission of written Alternate Methods and Materials request Ex: Automatic fire sprinkler (13-D) system* plus additional engineering controls in lieu of grade.** |
- \*The approval of fire sprinklers as an alternate shall be accomplished in accordance with the provisions of ORS 455.610(5) and OAR 918-480-0100 and installed per section 903.3.1.1, 903.3.1.2, or 903.3.1.3 of the Oregon Fire Code (OFC 503.2.7 & D103.2)
- \*\* See Forest Dwelling Access section for exceptions.
13. **ANGLE OF APPROACH/GRADE FOR TURNAROUNDS:** Turnarounds shall be as flat as possible and have a maximum of 5% grade with the exception of crowning for water run-off. (OFC 503.2.7 & D103.2)
14. **ANGLE OF APPROACH/GRADE FOR INTERSECTIONS:** Intersections shall be level (maximum 5%) with the exception of crowning for water run-off. (OFC 503.2.7 & D103.2)
15. **GATES:** Gates securing fire apparatus roads shall comply with all of the following (OFC D103.5, and 503.6):
1. Gates serving three or less single-family dwellings shall be a minimum of 12 feet in width.
  2. Gates shall be set back at minimum of 30 feet from the intersecting roadway or as approved.
  3. Electric gates shall be equipped with a means for operation by fire department personnel



4. Electric automatic gates shall comply with ASTM F 2200 and UL 325.
16. **ACCESS DURING CONSTRUCTION:** Approved fire apparatus access roadways shall be installed and operational prior to any combustible construction or storage of combustible materials on the site. Temporary address signage shall also be provided during construction. (OFC 3309 and 3310.1)

## **FIREFIGHTING WATER SUPPLIES:**

17. **MUNICIPAL FIREFIGHTING WATER SUPPLY EXCEPTIONS:** The requirements for firefighting water supplies may be modified as approved by the fire code official where any of the following apply: (OFC 507.5.1 Exceptions)
  1. Buildings are equipped throughout with an approved automatic fire sprinkler system (the approval of this alternate method of construction shall be accomplished in accordance with the provisions of ORS 455.610(5)).
  2. There are not more than three Group R-3 or Group U occupancies.
    - In areas where the water system is already developed, the maximum needed fire flow shall be either 3,000 GPM or the available flow in the system at 20 psi, whichever is greater.
    - In new developed areas, the maximum needed fire flow shall be 3,000 GPM at 20 psi.
    - Tualatin Valley Fire & Rescue does not adopt Occupancy Hazards Modifiers in section B105.4-B105.4.1
18. **SINGLE FAMILY DWELLINGS - REQUIRED FIRE FLOW:** The minimum available fire flow for one and two-family dwellings served by a municipal water supply shall be 1,000 gallons per minute. If the structure(s) is (are) 3,600 square feet or larger, the required fire flow shall be determined according to OFC Appendix B. (OFC B105.2)
19. **FIRE FLOW WATER AVAILABILITY:** Applicants shall provide documentation of a fire hydrant flow test or flow test modeling of water availability from the local water purveyor if the project includes a new structure or increase in the floor area of an existing structure. Tests shall be conducted from a fire hydrant within 400 feet for commercial projects, or 600 feet for residential development. Flow tests will be accepted if they were performed within 5 years as long as no adverse modifications have been made to the supply system. Water availability information may not be required to be submitted for every project. (OFC Appendix B)
20. **WATER SUPPLY DURING CONSTRUCTION:** Approved firefighting water supplies shall be installed and operational prior to any combustible construction or storage of combustible materials on the site. (OFC 3312.1)

## **FIRE HYDRANTS:**

21. **FIRE HYDRANTS – ONE- AND TWO-FAMILY DWELLINGS & ACCESSORY STRUCTURES:** Where a portion of a structure is more than 600 feet from a hydrant on a fire apparatus access road, as measured in an approved route around the exterior of the structure(s), on-site fire hydrants and mains shall be provided. (OFC 507.5.1)
22. **FIRE HYDRANT(S) PLACEMENT:** (OFC C104)
  - Existing hydrants in the area may be used to meet the required number of hydrants as approved. Hydrants that are up to 600 feet away from the nearest point of a subject building that is protected with fire sprinklers may contribute to the required number of hydrants. (OFC 507.5.1)
  - Hydrants that are separated from the subject building by railroad tracks shall not contribute to the required number of hydrants unless approved by the fire code official.
  - Hydrants that are separated from the subject building by divided highways or freeways shall not contribute to the required number of hydrants. Heavily traveled collector streets may be considered when approved by the fire code official.
  - Hydrants that are accessible only by a bridge shall be acceptable to contribute to the required number of hydrants only if approved by the fire code official.

23. **PRIVATE FIRE HYDRANT IDENTIFICATION:** Private fire hydrants shall be painted red in color. Exception: Private fire hydrants within the City of Tualatin shall be yellow in color. (OFC 507)
24. **FIRE HYDRANT DISTANCE FROM AN ACCESS ROAD:** Fire hydrants shall be located not more than 15 feet from an approved fire apparatus access roadway unless approved by the fire code official. (OFC C102.1)
25. **REFLECTIVE HYDRANT MARKERS:** Fire hydrant locations shall be identified by the installation of blue reflective markers. They shall be located adjacent and to the side of the center line of the access roadway that the fire hydrant is located on. In the case that there is no center line, then assume a center line and place the reflectors accordingly. (OFC 507)
26. **PHYSICAL PROTECTION:** Where fire hydrants are subject to impact by a motor vehicle, guard posts, bollards or other approved means of protection shall be provided. (OFC 507.5.6 & OFC 312)
27. **CLEAR SPACE AROUND FIRE HYDRANTS:** A 3 foot clear space shall be provided around the circumference of fire hydrants. (OFC 507.5.5)

## BUILDING ACCESS AND FIRE SERVICE FEATURES

28. **PREMISES IDENTIFICATION:** New and existing buildings shall have approved address numbers; building numbers or approved building identification 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)

If you have questions or need further clarification, please feel free to contact me at (503) 649-8577.

Sincerely,



Ty Darby  
Deputy Fire Marshal II

Cc: file