City of West Linn
Planning & Development • 22500 Salamo Rd #1000 • West Linn, Oregon 97068
Telephone 503.656.4211 • Fax 503.656.4106 • westlinnoregon.gov

DEVELOPMENT REVIEW APPLICATION

For Office Use Only		
STAFF CONTACT Peter Spir	PROJECT NO(S). SU-15-01	
NON-REFUNDABLE FEE(S) 500-	REFUNDABLE DEPOSIT(S) 8600-	TOTAL 9100-

Type of Review (Please check all that apply):

- ☐ Annexation (ANX)
- ☐ Appeal and Review (AP) *
- ☐ Conditional Use (CUP)
- ☐ Design Review (DR)
- ☐ Easement Vacation
- ☐ Extraterritorial Ext. of Utilities
- ☐ Final Plat or Plan (FP)
- ☐ Flood Management Area
- ☐ Hillside Protection & Erosion Control
- ☐ Historic Review
- ☐ Legislative Plan or Change
- ☐ Lot Line Adjustment (LLA) */**
- ☐ Minor Partition (MIP) (Preliminary Plat or Plan)
- ☐ Non-Conforming Lots, Uses & Structures
- ☐ Planned Unit Development (PUD)
- ☐ Pre-Application Conference (PA) */**
- ☐ Street Vacation
- ☑ Subdivision (SUB) 22lot
- ☐ Temporary Uses *
- ☐ Time Extension *
- ☐ Variance (VAR)
- ☐ Water Resource Area Protection/Single Lot (WAP)
- ☐ Water Resource Area Protection/Wetland (WAP)
- ☐ Willamette & Tualatin River Greenway (WRG)
- ☐ Zone Change

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.

RECEIVED
APR 16 2015
CITY OF WEST LINN

Site Location/Address:
22850 S Weatherhill Drive

Assessor's Map No.: 21E35A
Tax Lot(s): 01200 & 01202
Total Land Area: 4.92 acres

Brief Description of Proposal:
The Applicant is proposing a 22-lot subdivision in the R-7 zone.

Applicant Name: (please print) Jesse Nemec, JT Smith Companies — Phone: 503-730-8620
Address: 5285 Meadows Road, Suite 171 — Email: jnemec@jtsmithco.com
City State Zip: Lake Oswego, OR 97035

Owner Name (required): (please print) John C. and Virginia DeVries — Phone:
Address: 22850 S Weatherhill Drive — Email:
City State Zip: West Linn, OR 97068

Consultant Name: (please print) Andrew Tull, 3J Consulting, Inc. — Phone: 503-545-1907
Address: 5075 SW Griffith Drive, Suite 150 — Email: andrew.tull@3j-consulting.com
City State Zip: Beaverton, OR 97005

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.

Applicant's signature — Date 4/8/15
Owner's signature (required) John C DeVries — Date 4/8/15
Virginia DeVries 4.8.15

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Appendixes

GENERAL INFORMATION

Property Owner and Applicant:	**Black Diamond Properties, LLC** 5285 Meadows Road, Suite #171 Lake Oswego, OR 97035 Contact: Jesse Nemec Phone: 503-730-8620 Email: jnemec@jtsmithco.com
Applicant's Representative:	**3J Consulting, Inc.** 5075 SW Griffith Drive, Suite 150 Beaverton, OR 97005 Contact: Andrew Tull Phone: 503-545-1907 Email: andrew.tull@3j-consulting.com

SITE INFORMATION

Tax Lot Numbers:	2S1E35A01200 and 2S1E35A01202
Address:	22850 and 22848 Weatherhill Road
Size:	4.92 Acres
Zoning Designation:	R-7 (City of West Linn)
Neighborhood:	Savanna Oaks
Comprehensive Plan:	Low Density Residential
Existing Use:	There is one single-family home on the site (residential) and a metal barn.
Street Functional Classifications:	The site currently takes access from Weatherhill Road, a local street. As proposed, the lots would take access from one of two new local streets or from Weatherhill. The new north-south local street would connect to Weatherhill Road. The new east-western road would be an extension of Satter Street.
Surrounding Zoning:	Northeast- R-40 (West Linn) East and West- FU-10 (Clackamas County) South- R-7 (West Linn) North- R-3 (West Linn)

INTRODUCTION

APPLICANT'S REQUEST

The Applicant seeks approval of an application for Subdivision Preliminary Plat for the development of 22 residential lots (Weatherhill Estates). This narrative describes the proposed subdivision of the site and documents compliance with the relevant sections of the City of West Linn's Community Development Code ("CDC").

This property was annexed into the City of West Linn in 2014 (ANX 14-02). Upon annexation, the zoning designation of R-7 was applied to the property.

PROPOSED SITE IMPROVEMENTS

The project site consists of a total of 4.92 acres. The property is located between Weatherhill Road to the north, Crestview Drive to the south, and west of Salamo Road. There is one single-family detached home with a metal barn in the middle of the property that will be demolished as part of this project.

The intent of this subdivision is to provide twenty-two (22) buildable lots, each a minimum of 7,000 square feet in size, for development with single-family homes, a use permitted outright in the R-7 zone.

APPLICABLE CRITERIA

The following sections of the CDC have been extracted as they have been deemed to be applicable to the proposal. Following each applicable criteria or design standard, the Applicant has provided a series of draft findings. The intent of providing code and detailed responses and findings is to document that the proposed development has satisfied the approval criteria for Subdivision Preliminary Plat.

DIVISION 8. LAND DIVISION

CHAPTER 85. GENERAL PROVISIONS

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, to the generalized or reasonable layout of streets on adjacent undeveloped lot or parcels, to topographical conditions, to public convenience and safety, to accommodate various types of transportation (automobile, bus, pedestrian, bicycle), and to the proposed use of land to be served by the streets. The functional class of a street aids in defining the primary function and associated design standards for the facility. The hierarchy of the facilities within the network in regard to the type of traffic served (through or local trips), balance of function (providing access and/or capacity), and the level of use (generally measured in vehicles per day) are generally dictated by the functional class. The street system shall assure an adequate traffic or circulation system with intersection angles, grades, tangents, and curves appropriate for the traffic to be carried. Streets should provide for the continuation, or the appropriate projection, of existing principal streets in surrounding areas and should not impede or adversely affect development of adjoining lands or access thereto.

To accomplish this, the emphasis should be upon a connected continuous pattern of local, collector, and arterial streets rather than discontinuous curvilinear streets and cul-de-sacs. Deviation from this pattern of connected streets should only be permitted in cases of extreme topographical challenges including excessive slopes (35 percent-plus), hazard areas, steep drainageways, wetlands, etc. In such cases, deviations may be allowed but the connected continuous pattern must be reestablished once the topographic challenge is passed. Streets should be oriented with consideration of the sun, as site conditions allow, so that over 50 percent of the front building lines of homes are oriented within 30 degrees of an east-west axis.

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 City Engineer. Additional travel lanes may be required to be

consistent with adjacent road widths or to be consistent with the adopted Transportation System Plan (TSP) and any adopted updated plans.

An applicant may submit a written request for a waiver of abutting street improvements if the TSP prohibits the street improvement for which the waiver is requested. Those areas with numerous (particularly contiguous) under-developed or undeveloped tracts will be required to install street improvements. When an applicant requests a waiver of street improvements and the waiver is granted, the applicant shall pay an in-lieu fee equal to the estimated cost, accepted by the City Engineer, of the otherwise required street improvements. As a basis for this determination, the City Engineer shall consider the cost of similar improvements in recent development projects and may require up to three estimates from the applicant. The amount of the fee shall be established prior to the Planning Commission's decision on the associated application. The in-lieu fee shall be used for in kind or related improvements. Streets shall also be laid out to avoid and protect tree clusters and significant trees, but not to the extent that it would compromise connectivity requirements per this subsection (A)(1), or bring the density below 70 percent of the maximum density for the developable net area. The developable net area is calculated by taking the total site acreage and deducting Type I and II lands; then up to 20 percent of the remaining land may be excluded as necessary for the purpose of protecting significant tree clusters or stands as defined in CDC 55.100(B)(2).

Applicant's Finding:

This site is located on Weatherhill Road, a local street. Weatherhill Road adjacent to this site connects to Bland Circle to the west and with Salamo Road to the east. The connectivity of this local street will not be changed. The current right-of-way width of Weatherhill Road adjacent to the subject site is 30 feet, inadequate based on the requirements of Section 2, below. The Applicant proposes 13-feet of additional right-of-way along the property's frontage on Weatherhill Road, for a total right-of-way width of 43 feet. Sidewalks and planter strips are also proposed.

This section requires the developer be responsible for the construction of internal streets. Two internal streets are proposed, one running north-south and providing access to Weatherhill Road and one running east-west, south of and parallel to Weatherhill Road. The east-west street (Satter Street) will be stubbed to the east and west for future connectivity. The Applicant proposes full responsibility for construction of these internal streets, with a total right-of-way width of 48 feet per street. The paved surfaces will be 24 feet in width and 6-foot sidewalks and 6-foot planter strips will be provided on each side of the paved surfaces.

The requirements of this section have been satisfied.

2. Right-of-way and roadway widths. In order to accommodate larger tree-lined boulevards and sidewalks, particularly in residential areas, the standard right-of-way widths for the different street classifications shall be within the range listed below. But instead of filling in the right-of-way with pavement, they shall accommodate the amenities (e.g., boulevards, street trees, sidewalks). The exact width of the right-of-way shall be determined by the City Engineer or the approval authority. The following ranges will apply:

Street Classification	Right-of-Way
Local street	40' – 60'

Additional rights-of-way for slopes may be required. Sidewalks shall not be located outside of the right-of-way unless to accommodate significant natural features or trees.

Applicant's Finding: As discussed above, the Applicant proposes the dedication of 13 feet of right-of-way along Weatherhill Road to increase the right-of-way width from 30 feet to 43 feet. From centerline, the right-of-way will increase from 15 feet to 28 feet. This will accommodate a total right-of-way of 56 feet when the property to the north develops in the future. This dedication is consistent with the City Engineer's requirements for the construction of Weatherhill road, as described within the Pre-application Conference Notes for the project.

The Applicant further proposes two new local streets, each with a 48 foot right-of-way and 24 foot pavement width.

The requirements of this section have been satisfied.

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.

Applicant's Finding: As discussed above, the width of the paved section of the new local streets will be 24 feet, per the TSP standard for a local street with no on-street parking.

The requirements of this section have been satisfied.

4. The decision-making body shall consider the City Engineer'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 City Engineer of the following criteria:

- **a. The type of road as set forth in the Transportation Master Plan.**
- **b. The anticipated traffic generation.**
- **c. On-street parking requirements.**
- **d. Sidewalk and bikeway requirements.**
- **e. Requirements for placement of utilities.**
- **f. Street lighting.**
- **g. Drainage and slope impacts.**
- **h. Street trees.**
- **i. Planting and landscape areas.**
- **j. Existing and future driveway grades.**
- **k. Street geometry.**
- **l. Street furniture needs, hydrants.**

Applicant's Finding: The City's Development Engineer has reviewed the proposal and made recommendations to the applicant, which are incorporated into the proposed roadway configuration.

The requirements of this section have been satisfied.

5. Additionally, when determining appropriate street width, the decision-making body shall consider the following criteria:

a. When a local street is the only street serving a residential area and is expected to carry more than the normal local street traffic load, the designs with two travel and one parking lane are appropriate.

b. Streets intended to serve as signed but unstriped bike routes should have the travel lane widened by two feet.

c. Collectors should have two travel lanes and may accommodate some parking. Bike routes are appropriate.

d. Arterials should have two travel lanes. On-street parking is not allowed unless part of a Street Master Plan. Bike lanes are required as directed by the Parks Master Plan and Transportation Master Plan.

Applicant's Finding: The proposed streets and Weatherhill Road will serve the 22 proposed lots, no more than a normal Local Street traffic load. The dedication of right-of-way and street improvements will result in adequate facilities on Weatherhill Road. No arterials are adjacent to this proposal.

The requirements of this section have been satisfied.

6. Reserve strips. Reserve strips or street plugs controlling the access to streets are not permitted unless owned by the City.

Applicant's Finding: The applicant does not propose reserve strips or street plugs with this application. All rights-of-way will be dedicated to the edge of the adjoining properties.

The requirements of this section have been satisfied.

7. Alignment. All streets other than local streets or cul-de-sacs, as far as practical, shall be in alignment with existing streets by continuations of the centerlines thereof. The staggering of street alignments resulting in "T" intersections shall, wherever practical, leave a minimum distance of 200 feet between the centerlines of streets having approximately the same direction and otherwise shall not be less than 100 feet.

Applicant's Finding: The new proposed street does not continue on the north side of Weatherhill Road. The "T" intersection created will be more than 100 feet from the next intersection point along Weatherhill.

The requirements of this section have been satisfied.

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.)

Applicant's Finding: The Applicant proposes an east-west street parallel to Weatherhill Road that will extend to the east and west boundaries of the subdivision and provide future connectivity. The dead-end streets that result will not have permanent turnarounds; however, the alignment of the driveways on lots 5, 6 and 10 will provide the necessary temporary turnaround for Fire Department and homeowner's use.

The requirements of this section have been satisfied.

9. Intersection angles. Streets shall be laid out to intersect angles as near to right angles as practical, except where topography requires lesser angles, but in no case less than 60 degrees unless a special intersection design is approved. Intersections which are not at right angles shall have minimum corner radii of 15 feet along right-of-way lines which form acute angles. Right-of-way lines at intersections with arterial streets shall have minimum curb radii of not less than 35 feet. Other street intersections shall have curb radii of not less than 25 feet. All radii shall maintain a uniform width between the roadway and the right-of-way lines. The intersection of more than two streets at any one point will not be allowed unless no alternative design exists.

Applicant's Finding: The new north-south public local street will intersect Weatherhill Road at a right angle. The proposed north-south street intersects the proposed east-west street at a right angle. The curb radii at the intersection will exceed 25 feet.

The requirements of this section have been satisfied.

10. Additional right-of-way for existing streets. Wherever existing street rights-of-way adjacent to or within a tract are of inadequate widths based upon the standards of this chapter, additional right-of-way shall be provided at the time of subdivision or partition.

Applicant's Finding: Additional right-of-way on Weatherhill Road and the new public local streets, as discussed above, will be dedicated at time of subdivision.

The requirements of this section have been satisfied.

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 5 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 :***

Applicant's Finding: No cul-de-sacs are proposed with this subdivision. The extension of Satter Street to the east and west within the development will create temporary dead-end

The requirements of this section have been satisfied.

12. Street names. No street names shall be used which will duplicate or be confused with the names of existing streets within the City. Street names that involve difficult or unusual spellings are discouraged. Street names shall be subject to the approval of the Planning Commission or Planning Director, as applicable. Continuations of existing streets shall have the name of the existing street. Streets, drives, avenues, ways, boulevards, and lanes shall describe through streets. Place and court shall describe cul-de-sacs. Crescent, terrace, and circle shall describe loop or arcing roads.

Applicant's Finding: The Applicant proposes the name Satter Street for the new street east-west local street within the development, as a continuation of Satter Street, located to the west. The Applicant has not proposed a name for the new north-south local street at this time.

The requirements of this section have been satisfied.

13. Grades and curves. Grades shall not exceed 8 percent on major or secondary arterials, 10 percent on collector streets, or 15 percent on any other street unless by variance. Willamette Drive/Highway 43 shall be designed to a minimum horizontal and vertical design speed of 45 miles per hour, subject to Oregon Department of Transportation (ODOT) approval. Arterials shall be designed to a minimum horizontal and vertical design speed of 35 miles per hour. Collectors shall be designed to a minimum horizontal and vertical design speed of 30 miles per hour. All other streets shall be designed to have a minimum centerline radii of 50 feet. Super elevations (i.e., banking) shall not exceed four percent. The centerline profiles of all streets may be provided where terrain constraints (e.g., over 20 percent slopes) may result in considerable deviation from the originally proposed alignment.

Applicant's Finding: The grade of the new local public street will not exceed 15 percent, per this standard. No street will have a centerline radius of less than 50 feet.

The requirements of this section have been satisfied.

14. Access to local streets. Intersection of a local residential street with an arterial street may be prohibited by the decision-making authority if suitable alternatives exist for providing interconnection of proposed local residential streets with other local streets. Where a subdivision or partition abuts or contains an existing or proposed major arterial street, the decision-making authority may require marginal access streets, reverse-frontage lots with suitable depth, visual barriers, noise barriers, berms, no-access reservations along side and rear property lines, and/or other measures necessary for adequate protection of residential properties from incompatible land uses, and to ensure separation of through traffic and local traffic.

Applicant's Finding: The subject property does not abut nor contain an existing or proposed Major Arterial Street, nor is an intersection of a Local Residential Street with an Arterial Street proposed.

The requirements of this section have been satisfied.

15. Alleys. Alleys shall be provided in commercial and industrial districts unless other permanent provisions for access to off-street parking and loading facilities are made as approved by the decision-making authority. While alley intersections and sharp changes in alignment should be avoided, the corners of necessary alley intersections shall have radii of not less than 10 feet. Alleys may be provided in residential subdivisions or multi-family projects. The decision to locate alleys shall consider the relationship and impact of the alley to adjacent land uses. ***

Applicant's Finding: No alleys are proposed with this subdivision.

The requirements of this section have been satisfied.

16. Sidewalks. Sidewalks shall be installed per CDC 92.010(H), Sidewalks. The residential sidewalk width is six feet plus planter strip as specified below. Sidewalks in commercial zones shall be constructed per subsection (A)(3) of this section. See also subsection C of this section. Sidewalk width may be reduced with City Engineer approval to the minimum amount (e.g., four feet wide) necessary to respond to site constraints such as grades, mature trees, rock outcroppings, etc., or to match existing sidewalks or right-of-way limitations.

Applicant's Finding: The applicant proposes to install a 6-foot sidewalk plus planter strip along the Weatherhill Road frontage of this property, and along the new public streets within the development, per this standard, with the exception of areas near existing trees where a curb tight sidewalk will allow more room for tree preservation (Lots 10, 12, and 13)

The requirements of this section have been satisfied.

17. Planter strip. The planter strip is between the curb and sidewalk providing space for a grassed or landscaped area and street trees. The planter strip shall be at least 6 feet wide to accommodate a fully matured tree without the boughs interfering with pedestrians on the sidewalk or vehicles along the curbline. Planter strip width may be reduced or eliminated, with City Engineer approval, when it cannot be corrected by site plan, to the minimum amount necessary to respond to site constraints such as grades, mature trees, rock outcroppings, etc., or in response to right-of-way limitations.

Applicant's Finding: The applicant proposes to install a 6-foot planter strip between all proposed sidewalks and paved street sections on Weatherhill Road and the new local public streets, with the exception of areas near existing trees where a curb tight sidewalk will allow more room for tree preservation (Lots 10, 12, and 13).

The requirements of this section have been satisfied.

18. Streets and roads shall be dedicated without any reservations or restrictions.

Applicant's Finding: No reservations or restrictions are proposed with the street dedication.

The requirements of this section have been satisfied.

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.

Applicant's Finding: Lots 16-19 utilize a shared private access ("flag pole") to access the proposed public street. This is discussed further as permitted in Section 85.200.B.7. All other lots have access to a public street.

The requirements of this section have been satisfied.

20. Gated streets. Gated streets are prohibited in all residential areas on both public and private streets. A driveway to an individual home may be gated.

Applicant's Finding: Gated streets are not proposed.

The requirements of this section have been satisfied.

21. Entryway treatments and street isle design. When the applicant desires to construct certain walls, planters, and other architectural entryway treatments within a subdivision, the following standards shall apply:

a. All entryway treatments except islands shall be located on private property and not in the public right-of-way.

b. Planter islands may be allowed provided there is no structure (i.e., brick, signs, etc.) above the curbline, except for landscaping. Landscaped islands shall be set back a minimum of 24 feet from the curbline of the street to which they are perpendicular.

c. All islands shall be in public ownership. The minimum aisle width between the curb and center island curbs shall be 14 feet. Additional width may be required as determined by the City Engineer.

d. Brick or special material treatments are acceptable at intersections with the understanding that the City will not maintain these sections except with asphalt overlay, and that they must meet the Americans with Disabilities Act (ADA) standards. They shall be laid out to tie into existing sidewalks at intersections.

e. Maintenance for any common areas and entryway treatments (including islands) shall be guaranteed through homeowners association agreements, CC&Rs, etc.

f. Under Chapter 52 CDC, subdivision monument signs shall not exceed 32 square feet in area.

Applicant's Finding: The applicant does not propose to construct entryway treatments to the subdivision at this time.

The requirements of this section have been satisfied.

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. The proportionate share of the costs shall be determined by the City Manager or Manager's designee, who shall assume that the proposed subdivision provides improvements in rough proportion to identified impacts of the subdivision. Off-site transportation improvements will include bicycle and pedestrian improvements as identified in the adopted City of West Linn TSP.

Applicant's Finding: Right-of-way dedication and street improvements are proposed with this application proportionate to the construction of 22 new lots. Off-site street improvements are not necessary or proportionate to mitigate traffic impacts from this 22-lot subdivision.

The requirements of this section have been satisfied.

B. Blocks and lots.

1. General. The length, width, and shape of blocks shall be designed with due regard for the provision of adequate building sites for the use contemplated; consideration of the need for traffic safety, convenience, access, circulation, and control; and recognition of limitations and opportunities of topography and solar access.

Applicant's Finding: The proposed north-south public street intersects Weatherhill Road where safe and appropriate. This access provides the best option for traffic safety, convenience, access, circulation, and control. Until development of the properties to the east or west, all 22 proposed lots will utilize the new north-south public street, which will then connect to Weatherhill Road.

The requirements of this section have been satisfied.

2. Sizes. The recommended block size is 400 feet in length to encourage greater connectivity within the subdivision. Blocks shall not exceed 800 feet in length between street lines, except for blocks adjacent to arterial streets or unless topographical conditions or the layout of adjacent streets justifies a variation. Designs of proposed intersections shall demonstrate adequate sight distances to the City Engineer's specifications. Block sizes and proposed accesses must be consistent with the adopted TSP.

Applicant's Finding: Weatherhill Road currently extends from Salamo Road on the east to Bland Circle on the West. The new public street proposed with this subdivision application will intersect Weatherhill Road near the middle of the distance between Salamo and Bland. However,

due to topographical constraints (steep slope) and development constraints (the property to the south is subdivided with no potential for a public street connection), the new north-south public street will terminate within the subdivision at the new east-west street. The new east-west public street will continue to the boundaries of the subdivision, providing future vehicle, bicycle and pedestrian connectivity.

The City's TSP does not propose a specific lot or block arrangement within this part of the City. Blocks are generally recommended to be approximately 400 feet in length to allow for connectivity. The maximum allowable block length without topographic constraint, is recommended to be 800 feet. The block length pattern which will be partially established through the creation of the streets in this development is dictated by topography. The property to the west may have an opportunity to extend a new north/south road alignment but it is not clear whether this connection will be possible given the limited information regarding site topography which exists on the properties located to the east. From examining the contours, even though the applicant is proposing an at grade roadway connection to the east, a new north/south connection to Weatherhill may not be possible. If no connection is made to the north, the next possible connection point to Weatherhill would be approximately 675 feet to the west where Sagert turns north to connect to Weatherhill.

To the east, the newly proposed street layout would fall approximately 900 feet away from Salamo. While a new north/south street would need to be installed to connect the extension of Satter street to the north to meet the 800 foot block length requirement, the topography on the lots to the east may be too restrictive to allow for the connection of a new north/south street. The applicant has again proposed an at grade connection to the property to the east, providing the best possible situation for the extension of the street network. The new local street arrangement for the properties to the east in relation to the topography will determine whether a future north/south street is possible within this constrained area.

The requirements of this section have been satisfied.

3. <u>Lot size and shape</u>. Lot or parcel size, width, shape, and orientation shall be appropriate for the location of the subdivision or partition, for the type of use contemplated, for potential utilization of solar access, and for the protection of drainageways, trees, and other natural features. No lot or parcel shall be dimensioned to contain part of an existing or proposed street. All lots or parcels shall be buildable. "Buildable" describes lots that are free of constraints such as wetlands, drainageways, etc., that would make home construction impossible. Lot or parcel sizes shall not be less than the size required by the zoning code unless as allowed by planned unit development (PUD).
Depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to provide for the off-street parking and service facilities required by the type of use proposed.

Chapter 12- Single-Family Residential Detached and Attached, R-7 standards are as follows:

Lot Size (Detached Dwelling Units)	**7,000 square feet**

Lot Size (Attached Dwelling Units)	**5,500 square feet**
Front Lot Line Length/Minimum Lot Width at Front Lot Line	**35 feet**
Average Minimum Lot Width	**35 feet**

Applicant's Finding: All proposed lots are a minimum of 7,000 square feet in size to accommodate single-family detached dwelling units. All 22 proposed lots exceed the minimum requirements for front lot line length, lot width and lot depth

The requirements of this section have been satisfied.

4. Access. Access to subdivisions, partitions, and lots shall conform to the provisions of Chapter 48 CDC, Access, Egress and Circulation.

Applicant's Finding: The proposed access to the subdivision conforms to the provisions of CDC Chapter 48 because all lots will take access from a Local Street either directly or via a flag pole, as permitted by Section 85.200.B.7.

The requirements of this section have been satisfied.

5. Double frontage lots and parcels. Double frontage lots and parcels have frontage on a street at the front and rear property lines. Double frontage lots and parcels shall be avoided except where they are essential to provide separation of residential development from arterial streets or adjacent non-residential activities, or to overcome specific disadvantages of topography and orientation. A planting screen or impact mitigation easement at least 10 feet wide, and across which there shall be no right of access, may be required along the line of building sites abutting such a traffic artery or other incompatible use.

Applicant's Finding: No through lots or double fronted lots are proposed with this application.

The requirements of this section have been satisfied.

6. Lot and parcel side lines. The lines of lots and parcels, as far as is practicable, should run at right angles to the street upon which they face, except that on curved streets they should be radial to the curve.

Applicant's Finding: Though the shape of the subject site is somewhat irregular, all side lot lines run at approximate right angles to the streets upon which they face as far as practicable.

The requirements of this section have been satisfied.

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. ***

a. Setbacks applicable to the underlying zone shall apply to the flag lot.

b. Front yard setbacks may be based on the rear property line of the lot or parcel which substantially separates the flag lot from the street from which the flag lot gains access. Alternately, the house and its front yard may be oriented in other directions so long as some measure of privacy is ensured, or it is part of a pattern of development, or it better fits the topography of the site.

c. The lot size shall be calculated exclusive of the accessway; the access strip may not be counted towards the area requirements.

d. The lot depth requirement contained elsewhere in this code shall be measured from the rear property line of the lot or parcel which substantially separates the flag lot from the street from which the flag lot gains access.

e. As per CDC 48.030, the accessway shall have a minimum paved width of 12 feet.

f. If the use of a flag lot stem to access a lot is infeasible because of a lack of adequate existing road frontage, or location of existing structures, the proposed lot(s) may be accessed from the public street by an access easement of a minimum 15-foot width across intervening property.

Applicant's Finding: Lots 16-19 are proposed as flag lots. The street frontage of the accessway serving the 4 lots is 32 feet wide (8 feet per lot). All setback, lot size, lot depth and access requirements are met.

The requirements of this section have been satisfied.

8. Large lots or parcels. In dividing tracts into large lots or parcels which, at some future time, are likely to be redivided, the approval authority may:

a. require that the blocks be of such size and shape, and be so divided into building sites, and contain such easements and site restrictions as will provide for extension and opening of streets at intervals which will permit a subsequent division of any tract into lots or parcels of smaller size; or

b. alternately, in order to prevent further subdivision or partition of oversized and constrained lots or parcels, restrictions may be imposed on the subdivision or partition plat.

Applicant's Finding: The lots of the proposed subdivision, ranging in size from 7,004 square feet to 11,327 square feet, are not large enough for future division in the R-7 zone.

The requirements of this section have been satisfied.

C. Pedestrian and bicycle trails.

1. Trails or multi-use pathways shall be installed, consistent and compatible with federal ADA requirements and with the Oregon Transportation Planning Rule, between subdivisions, cul-de-sacs, and streets that would otherwise not be connected by streets due to excessive grades, significant tree(s), and other constraints natural or manmade. Trails shall also accommodate

bicycle or pedestrian traffic between neighborhoods and activity areas such as schools, libraries, parks, or commercial districts. Trails shall also be required where designated by the Parks Master Plan.

2. The all-weather surface (asphalt, etc.) trail should be eight feet wide at minimum for bicycle use and six feet wide at minimum for pedestrian use. Trails within 10 feet of a wetland or natural drainageway shall not have an all-weather surface, but shall have a soft surface as approved by the Parks Director. These trails shall be contained within a corridor dedicated to the City that is wide enough to provide trail users with a sense of defensible space. Corridors that are too narrow, confined, or with vegetative cover may be threatening and discourage use. Consequently, the minimum corridor width shall be 20 feet. Sharp curves, twists, and blind corners on the trail are to be avoided as much as possible to enhance defensible space. Deviations from the corridor and trail width are permitted only where topographic and ownership constraints require it.

3. Defensible space shall also be enhanced by the provision of a three- to four-foot-high matte black chain link fence or acceptable alternative along the edge of the corridor. The fence shall help delineate the public and private spaces.

4. The bicycle or pedestrian trails that traverse multi-family and commercial sites should follow the same defensible space standards but do not need to be defined by a fence unless required by the decision-making authority.

5. Except for trails within 10 feet of a wetland or natural drainageway, soft surface or gravel trails may only be used in place of a paved, all-weather surface where it can be shown to the Planning Director that the principal users of the path will be recreational, non-destination-oriented foot traffic, and that alternate paved routes are nearby and accessible.

6. The trail grade shall not exceed 12 percent except in areas of unavoidable topography, where the trail may be up to a 15 percent grade for short sections no longer than 50 feet. In any location where topography requires steeper trail grades than permitted by this section, the trail shall incorporate a short stair section to traverse the area of steep grades.

Applicant's Finding:

The proposed east-west street includes sidewalks and, therefore, additional trails or pedestrian connections are not required. There are no existing trail connections which require connection from this site. By connecting streets to the east, west, and the north, ample opportunities for connectivity along public streets will be provided.

The requirements of this section have been satisfied.

D. <u>Transit facilities</u>.

1. The applicant shall consult with Tri-Met and the City Engineer to determine the appropriate location of transit stops, bus pullouts, future bus routes, etc., contiguous to or within the development site. If transit service is planned to be provided within the next two years, then facilities such as pullouts shall be constructed per Tri-Met standards at the time of development. More elaborate facilities, like shelters, need only be built when service is existing or imminent. Additional rights-of-way may be required of developers to accommodate buses.

2. The applicant shall make all transit-related improvements in the right-of-way or in easements abutting the development site as deemed appropriate by the City Engineer.

3. Transit stops shall be served by striped and signed pedestrian crossings of the street within 150 feet of the transit stop where feasible. Illumination of the transit stop and crossing is required to enhance defensible space and safety. ODOT approval may be required.

4. Transit stops should include a shelter structure bench plus eight feet of sidewalk to accommodate transit users, non-transit-related pedestrian use, and wheelchair users. Tri-Met must approve the final configuration.

Applicant's Finding: Transit facilities have not been identified by Tri-Met or the City Development Engineer adjacent to this property.

The requirements of this section have been satisfied.

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:

a. Cut slopes shall not exceed one and one-half feet horizontally to one foot vertically (i.e., 67 percent grade).

b. Fill slopes shall not exceed two feet horizontally to one foot vertically (i.e., 50 percent grade). Please see the following illustration.***

2. The character of soil for fill and the characteristics of lot and parcels made usable by fill shall be suitable for the purpose intended.

3. If areas are to be graded (more than any four-foot cut or fill), compliance with CDC 85.170(C) is required.

4. The proposed grading shall be the minimum grading necessary to meet roadway standards, and to create appropriate building sites, considering maximum allowed driveway grades.

5. Type I lands shall require a report submitted by an engineering geologist, and Type I and Type II lands shall require a geologic hazard report.

6. *Repealed by Ord. 1635.*

7. On land with slopes in excess of 12 percent, cuts and fills shall be regulated as follows:

a. Toes of cuts and fills shall be set back from the boundaries of separate private ownerships at least three feet, plus one-fifth of the vertical height of the cut or fill. Where an exception is required from that requirement, slope easements shall be provided.

b. Cuts shall not remove the toe of any slope where a severe landslide or erosion hazard exists (as described in subsection (G)(5) of this section).

c. Any structural fill shall be designed by a registered engineer in a manner consistent with the intent of this code and standard engineering practices, and certified by that engineer that the fill was constructed as designed.

d. Retaining walls shall be constructed pursuant to Section 2308(b) of the Oregon State Structural Specialty Code.

e. Roads shall be the minimum width necessary to provide safe vehicle access, minimize cut and fill, and provide positive drainage control.

8. Land over 50 percent slope shall be developed only where density transfer is not feasible. The development will provide that:

a. At least 70 percent of the site will remain free of structures or impervious surfaces.

b. Emergency access can be provided.

c. Design and construction of the project will not cause erosion or land slippage.

d. Grading, stripping of vegetation, and changes in terrain are the minimum necessary to construct the development in accordance with subsection J of this section.

Applicant's Finding:

The property contains a limited amount of steeply sloped lands but the majority of which were created by the previous owner of the property when the home on the property was constructed. The installation of roads and utilities will require impacts to these lands; however these disturbed slopes are not significant enough to be of any concern or to warrant a geologic hazard analysis.

Elsewhere, the property does contain lands with slopes in excess of 12%. Within these areas, the guidelines for development of slopes in excess of 12% have been utilized in preparing the project's grading and site plans.

The property does not contain any lands in excess of 50% slope.

The requirements of this section have been satisfied.

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.

3. Adequate looping system of water lines to enhance water quality.

4. For all non-single-family developments, there shall be a demonstration of adequate fire flow to serve the site.

5. A written statement, signed by the City Engineer, that water service can be made available to the site by the construction of on-site and off-site improvements and that such water service has sufficient volume and pressure to serve the proposed development's domestic, commercial, industrial, and fire flows.

Applicant's Finding:

The applicant will connect all lots to public water per the submitted public improvement plans. To serve this site, it is necessary to install a new 8" public water main within the Weatherhill Road right-of-way from this site to Salamo Road to the east. This plan is consistent with the adopted Comprehensive Water System Plan.

The requirements of this section have been satisfied.

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.

2. Sanitary sewer information will include plan view of the sanitary sewer lines, including manhole locations and depth or invert elevations.

3. Sanitary sewer lines shall be located in the public right-of-way, particularly the street, unless the applicant can demonstrate why the alternative location is necessary and meets accepted engineering standards.

4. Sanitary sewer line should be at a depth that can facilitate connection with down-system properties in an efficient manner.

5. The sanitary sewer line should be designed to minimize the amount of lineal feet in the system.

6. The sanitary sewer line shall avoid disturbance of wetland and drainageways. In those cases where that is unavoidable, disturbance shall be mitigated pursuant to Chapter 32 CDC, Water Resource Area Protection, all trees replaced, and proper permits obtained. Dual sewer lines may be required so the drainageway is not disturbed.

7. Sanitary sewer shall be extended or stubbed out to the next developable subdivision or a point in the street that allows for reasonable connection with adjacent or nearby properties.

8. The sanitary sewer system shall be built pursuant to DEQ, City, and Tri-City Service District sewer standards. The design of the sewer system should be prepared by a licensed engineer, and the applicant must be able to demonstrate the ability to satisfy these submittal requirements or standards at the pre-construction phase.

9. A written statement, signed by the City Engineer, that sanitary sewers with sufficient capacity to serve the proposed development and that adequate sewage treatment plant capacity is available to the City to serve the proposed development.

Applicant's Finding:

The applicant will connect all lots to public sanitary sewer per the submitted public improvement plans. The lots in the subdivision will be provided sanitary sewer service via a new sanitary line extension within a new public easement which will be located to the south and east of the site. The Applicant proposes adding manholes within the easements and one manhole within the right-of-way of Bland Circle. The sewer system will then be connected to the existing 8" public sewer main in Bland Circle. The proposed sanitary sewer system is consistent with the Sanitary Sewer Master Plan, is in the correct basin and allows for full gravity service. As shown on the development plans a temporary sanitary sewer alignment and easement will be provided on a neighboring property (the Sloop Property).

The requirements of this section have been satisfied.

H. Storm

1. A stormwater quality and detention plan shall be submitted which complies with the submittal criteria and approval standards contained within Chapter 33 CDC. It shall include profiles of proposed drainageways with reference to the adopted Storm Drainage Master Plan.

2. Storm treatment and detention facilities shall be sized to accommodate a 25-year storm incident. 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 off-site impacts from increased intensity of runoff downstream or constriction causing ponding upstream. The plan and statement shall identify all on- or off-site impacts and measures to mitigate those impacts. The plan and statement shall, at a minimum, determine the off-site impacts from a 25-year storm.

3. Plans shall demonstrate how storm drainage will be collected from all impervious surfaces including roof drains. Storm drainage connections shall be provided to each dwelling unit/lot. The location, size, and type of material selected for the system shall correlate with the 25-year storm incident.

4. Treatment of storm runoff shall meet municipal code standards.

Applicant's Finding: The proposed stormwater treatment and detention has been designed to meet City standards, as detailed in the submitted stormwater report. The project will be served by a regional stormwater pond located to the southwest of the property. The regional pond was created and sized to handle the future development of this property and other properties within the watershed basin for detention. The facility will be enhanced to include additional stormwater quality (swale) since the requirements for water quality has become more stringent than the original pond design. The applicant and the neighboring property owner have a preliminary agreement for an easement which will allow for the extension of a storm drainage line leading to the regional facility. The Applicant will provide all required easement documentation prior to any application for site development or construction.

The requirements of this section have been satisfied.

I. Utility easements. Subdivisions and partitions shall establish utility easements to accommodate the required service providers as determined by the City Engineer. The developer of the subdivision shall make accommodation for cable television wire in all utility trenches and easements so that cable can fully serve the subdivision.

Applicant's Finding: The applicant will establish utility easements as determined by the City Engineer and shown on the preliminary plat.

The requirements of this section have been satisfied.

J. Supplemental provisions.

1. Wetland and natural drainageways. Wetlands and natural drainageways shall be protected as required by Chapter 32 CDC, Water Resource Area Protection. Utilities may be routed through the protected corridor as a last resort, but impact mitigation is required.

Applicant's Finding: The proposed subdivision does not impact any wetlands or natural drainage ways as none exist on the property.

The requirements of this section have been satisfied.

2. Willamette and Tualatin Greenways. The approval authority may require the dedication to the City or setting aside of greenways which will be open or accessible to the public. Except for trails or paths, such greenways will usually be left in a natural condition without improvements. Refer to Chapter 28 CDC for further information on the Willamette and Tualatin River Greenways.

Applicant's Finding: No greenways exist on this site or have been identified for dedication on this property. This property is not adjacent to the Willamette or Tualatin River and, therefore, a River Greenway is not feasible on this site.

The requirements of this section have been satisfied.

3. Street trees. Street trees are required as identified in the appropriate section of the municipal code and Chapter 54 CDC.

Applicant's Finding: Street trees will be installed as part of the public improvements with the development of this subdivision.

The requirements of this section have been satisfied.

4. Lighting. To reduce ambient light and glare, high or low pressure sodium light bulbs shall be required for all subdivision street or alley lights. The light shall be shielded so that the light is directed downwards rather than omni-directional.

Applicant's Finding: Any street light installation with the subdivision will utilize LED fixtures.

The requirements of this section have been satisfied.

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.

Applicant's Finding: The applicant is proposing right-of-way dedication and improvements that are roughly proportional to the development of a 22-lot subdivision.

The requirements of this section have been satisfied.

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. High voltage transmission lines, as classified by Portland General Electric or electric service provider, would also be exempted. Where adjacent future development is expected or imminent, conduits may be required at the direction of the City Engineer. All services shall be underground with the exception of standard above-grade equipment such as some meters, etc.

Applicant's Finding: All utilities will be installed in compliance with this section.

The requirements of this section have been satisfied.

7. Density requirement. Density shall occur at 70 percent or more of the maximum density allowed by the underlying zoning. These provisions would not apply when density is transferred from Type I and II lands as defined in CDC 02.030. Development of Type I or II lands are exempt from these provisions. Land divisions of three lots or less would also be exempt.

Applicant's Finding: The R-7 zone permits a maximum density of 6.2 dwelling units per net acre. Net acre is defined as "The total gross acres less the public right-of-way and other acreage deductions, as applicable". The net acreage of this site after removal of dedicated right-of way is 4.07 acres. At 6.2 dwelling units per net acre, the maximum number of dwelling units on this site is 25. The proposed 22 dwelling units would be 87 percent of the maximum density.

The requirements of this section have been satisfied.

8. Mix requirement. The "mix" rule means that developers shall have no more than 15 percent of the R-2.1 and R-3 development as single-family residential. The intent is that the majority of the site shall be developed as medium high density multi-family housing.

Applicant's Finding: This property is zoned R-7 and, therefore, the use of the parcel as an entirely residential development is permitted.

The requirements of this section have been satisfied.

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). Trees are defined per the municipal code as having a trunk six inches in diameter or 19 inches in circumference at a point five feet above the mean ground level at the base of the trunk.

Applicant's Finding: No heritage trees have been identified on this site. Tree preservation is discussed further in this report.

The requirements of this section have been satisfied.

CHAPTER 33. STORMWATER MANAGEMENT- REPEALED BY ORD 1622

CHAPTER 42. CLEAR VISION AREAS

42.020 CLEAR VISION AREAS REQUIRED, USES PROHIBITED

A. A clear vision area shall be maintained on the corners of all property adjacent to an intersection as provided by CDC 42.040 and 42.050.

B. A clear vision area shall contain no planting, fence, wall, structure or temporary or permanent obstruction (except for an occasional utility pole or tree) exceeding three feet in height, measured from the top of the curb, or, where no curb exists, from the street centerline grade, except that trees exceeding this height may be located in this area, provided all branches below eight feet are removed. (Ord. 1192, 1987)

42.030 EXCEPTIONS

The following described area in Willamette shall be exempt from the provisions of this chapter. The parcels of land zoned General Commercial which abut Willamette Falls Drive, located between 10th and 16th Streets. Beginning at the intersection of Willamette Falls Drive and 11th Street on 7th Avenue to 16th Street; on 16th Street to 9th Avenue; on 9th Avenue to 14th Street to the Tualatin River; following the Tualatin River and Willamette River to 12th Street; on 12th Street to 4th Avenue; on 4th Avenue to 11th Street; on 11th Street to Willamette Falls Drive. This described area does not include the northerly side of Willamette Falls Drive.

42.040 COMPUTATION; STREET AND ACCESSWAY 24 FEET OR MORE IN WIDTH

The clear vision area for all street intersections and street and accessway intersections (accessways having 24 feet or more in width) shall be that triangular area formed by the right-of-way or property lines along such lots and a straight line joining the right-of-way or property line at points which are 30 feet distant from the intersection of the right-of-way line and measured along such lines.

42.050 COMPUTATION; ACCESSWAY LESS THAN 24 FEET IN WIDTH

The clear vision area for street and accessway intersections (accessways having less than 24 feet in width) shall be that triangular area whose base extends 30 feet along the street right-of-way line in both directions from the centerline of the accessway at the front setback line of a single-family and two-family residence, and 30 feet back from the property line on all other types of uses.

Applicant's Finding: All clear vision areas at the intersections of public streets with driveways or other public streets on the subject site will be free of plantings, fences, walls, structures and obstructions, meeting the requirements for clear vision areas.

The requirements of this section have been satisfied.

CHAPTER 44. FENCES

44.020 SIGHT-OBSCURING FENCE; SETBACK AND HEIGHT LIMITATIONS

A. A sight- or non-sight-obscuring fence may be located on the property line or in a yard setback area subject to the following:

1. The fence is located within:

a. A required front yard area, and it does not exceed three feet, except pillars and driveway entry features subject to the requirements of Chapter 42 CDC, Clear Vision Areas, and approval by the Planning Director;

b. A required side yard which abuts a street and it is within that portion of the side yard which is also part of the front yard setback area and it does not exceed three feet;

c. A required side yard which abuts a street and it is within that portion of the side yard which is not also a portion of the front yard setback area and it does not exceed six feet provided the provisions of Chapter 42 CDC are met;

d. A required rear yard which abuts a street and it does not exceed six feet; or

e. A required side yard area which does not abut a street or a rear yard and it does not exceed six feet.

Applicant's Finding: New fences are not indicated on the proposed plans because the exact locations have yet to be determined. All fences constructed as part of this subdivision will meet the requirements of these standards.

The requirements of this section have been satisfied.

B. Fence or wall on a retaining wall. When a fence is built on a retaining wall or an artificial berm, the following standards shall apply:

1. When the retaining wall or artificial berm is 30 inches or less in height from finished grade, the maximum fence or wall height on top of the retaining wall shall be six feet.

2. When the retaining wall or earth berm is greater than 30 inches in height, the combined height of the retaining wall and fence or wall from finished grade shall not exceed eight and one-half feet.

3. Fences or walls located on top of retaining walls or earth berms in excess of 30 inches above finished grade may exceed the total allowed combined height of eight and one-half feet; provided, that the fence or wall is located a minimum of two feet from the retaining wall and the fence or wall height shall not exceed six feet.

Applicant's Finding: Any fences built on retaining walls will meet these standards.

The requirements of this section have been satisfied.

44.030 SCREENING OF OUTDOOR STORAGE

A. All service, repair, and storage activities carried on in connection with any commercial, business or industrial activity and not conducted within an enclosed building shall be screened from view of all adjacent properties and adjacent streets by a sight-obscuring fence.

B. The sight-obscuring fence shall be in accordance with provisions of Chapter 42 CDC, Clear Vision Areas, and shall be subject to the provisions of Chapter 55 CDC, Design Review.

Applicant's Finding: This site is residential and no service, repair, or storage activities in connection with commercial, business, or industry activities are proposed.

The requirements of this section have been satisfied.

44.040 LANDSCAPING

Landscaping which is located on the fence line and which impairs sight vision shall not be located within the clear vision area as provided in Chapter 42 CDC.

44.050 STANDARDS FOR CONSTRUCTION

A. The structural side of the fence shall face the owner's property; and

B. The sides of the fence abutting adjoining properties and the street shall be maintained. (Ord. 1291, 1990

Applicant's Finding: Any fences built will meet these standards.

The requirements of this section have been satisfied.

CHAPTER 54. LANDSCAPING

54.020 APPROVAL CRITERIA

A. Every development proposal requires inventorying existing site conditions which include trees and landscaping. In designing the new project, every reasonable attempt should be made to preserve and protect existing trees and to incorporate them into the new landscape plan. Similarly, significant landscaping (e.g., bushes, shrubs) should be integrated. The rationale is that saving a 30-foot-tall mature tree helps maintain the continuity of the site, they are qualitatively superior to two or three two-inch caliper street trees, they provide immediate micro-climate benefits (e.g., shade), they soften views of the street, and they can increase the attractiveness, marketability, and value of the development.

Applicant's Finding: This subdivision application includes a tree inventory and preservation plan focused on maintaining significant trees and clusters. Roads, utilities, and lots have been carefully placed to allow the retention of as many trees as possible.

The requirements of this section have been satisfied.

B. To encourage tree preservation, the parking requirement may be reduced by one space for every significant tree that is preserved in the parking lot area for a maximum reduction of 10 percent of the

required parking. The City Parks Supervisor or Arborist shall determine the significance of the tree and/or landscaping to determine eligibility for these reductions.

Applicant's Finding: No parking areas, aside from driveways, are required for residential subdivisions. No parking reduction is requested.

The requirements of this section have been satisfied.

C. Developers must also comply with the municipal code chapter on tree protection.

Applicant's Finding: The developer will comply with all municipal code requirements for tree protection.

The requirements of this section have been satisfied.

D. Heritage trees. Heritage trees are trees which, because of their age, type, notability, or historical association, are of special importance. Heritage trees are trees designated by the City Council following review of a nomination. A heritage tree may not be removed without a public hearing at least 30 days prior to the proposed date of removal. Development proposals involving land with heritage tree(s) shall be required to protect and save the tree(s). Further discussion of heritage trees is found in the municipal code.

Applicant's Finding: No heritage trees have been identified on this site.

The requirements of this section have been satisfied.

E. (Not applicable to single-family residential)

F. Landscaping (trees) in new subdivision.

1. Street trees shall be planted by the City within the planting strips (minimum six-foot width) of any new subdivision in conformity with the street tree plan for the area, and in accordance with the planting specifications of the Parks and Recreation Department. All trees shall be planted during the first planting season after occupancy. In selecting types of trees, the City Arborist may determine the appropriateness of the trees to local conditions and whether that tree has been overplanted, and whether alternate species should be selected. Also see subsection (C) of this section.

2. The cost of street trees shall be paid by the developer of the subdivision.

3. The fee per street tree, as established by the City, shall be based upon the following:

a. The cost of the tree;

b. Labor and equipment for original placement;

c. Regular maintenance necessary for tree establishment during the initial two-year period following the City schedule of maintenance; and

d. A two-year replacement warranty based on the City's established failure rate. (Ord. 1408, 1998; Ord. 1463, 2000)

Applicant's Finding: The applicant will pay for the installation of street trees by the City and maintain the trees for the two-year establishment period.

The requirements of this section have been satisfied.

54.030 PLANTING STRIPS FOR MODIFIED AND NEW STREETS

All proposed changes in width in a public street right-of-way or any proposed street improvement shall, where feasible, include allowances for planting strips. Plans and specifications for planting such areas shall be integrated into the general plan of street improvements. This chapter requires any multi-family, commercial, or public facility which causes change in public right-of-way or street improvement to comply with the street tree planting plan and standards.

Applicant's Finding: 6-foot-wide planting strips will be installed between the sidewalk and the asphalt within the new street right-of-ways and along Weatherhill Road.

The requirements of this section have been satisfied.

54.040 INSTALLATION

A. All landscaping shall be installed according to accepted planting procedures.

B. The soil and plant materials shall be of good quality.

C. Landscaping shall be installed in accordance with the provisions of this code.

D. Certificates of occupancy shall not be issued unless the landscaping requirements have been met or other arrangements have been made and approved by the City such as the posting of a bond.

Applicant's Finding: All landscaping installation will meet the requirements of this section.

The requirements of this section have been satisfied.

54.050 PROTECTION OF STREET TREES

Street trees may not be topped or trimmed unless approval is granted by the Parks Supervisor or, in emergency cases, when a tree imminently threatens power lines.

Applicant's Finding: There are no existing street trees adjacent to this property.

The requirements of this section have been satisfied.

54.060 MAINTENANCE

A. The owner, tenant and their agent, if any, shall be jointly and severally responsible for the maintenance of all landscaping which shall be maintained in good condition so as to present a healthy, neat, and orderly appearance and shall be kept free from refuse and debris.

B. All plant growth in interior landscaped areas shall be controlled by pruning, trimming, or otherwise so that:

1. **It will not interfere with the maintenance or repair of any public utility;**
2. **It will not restrict pedestrian or vehicular access; and**
3. **It will not constitute a traffic hazard because of reduced visibility.**

Applicant's Finding: The owners of this property, including future homeowners, will be responsible for maintenance of landscaping.

The requirements of this section have been satisfied.

54.070 SPECIFICATION SUMMARY

*****25% of residential/multi-family site must be landscaped.**

Applicant's Finding: A minimum of 25% of this site will be landscaped as part of the yards of future homes.

The requirements of this section have been satisfied.

DIVISION 4. DESIGN REVIEW

CHAPTER 55. DESIGN REVIEW

55.100 APPROVAL STANDARDS - CLASS II DESIGN REVIEW

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.

Applicant's Finding: No heritage trees were identified on this site.

The requirements of this section have been satisfied.

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.

Applicant's Finding: The findings of subsections (B)(2)(a) through (f) are found below.

The requirements of this section have been satisfied.

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.

Applicant's Finding: The City defines type I and II sites as lands that have either slopes of 35 percent or more or more than 25 percent slopes over more than 50 percent of the site. The total amount of land on this site is less than 50 percent of the total site area.

This standard is not applicable.

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.

Applicant's Finding: The applicant has inventoried all trees on site and has consulted with the City's arborist to determine which trees on site are significant. The applicant is proposing tree preservation consistent with these requirements, as detailed in the tree plan.

A total of 52,282 square feet of significant tree canopy area exists on site. The Applicant has proposed to retain a total of 18,205 square feet of significant tree canopy on site which achieves 35% retention of the existing significant canopy on site.

The requirements of this section have been satisfied.

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.

Applicant's Finding: Street layouts within the subdivision have been proposed to minimize tree loss at stubout locations by proposing roadway connections which are as close to existing grade as possible at the property boundaries. Tree loss on the adjoining properties at the time of future development is inevitable; however, the ability to connect to existing roadway stubs at grade provides the best possible opportunity for the adjoining properties to extent roadways in and around existing trees without having to accommodate significant cuts and fills.

The requirements of this section have been satisfied.

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.

Applicant's Finding: The proposed density of 5.4 dwelling units/acre is 87 percent of the maximum density for the developable net acre, 6.2 dwelling units/acre. A total of 35% percent of the existing tree canopy has been proposed for retention at the proposed density level.

The requirements of this section have been satisfied.

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.

Applicant's Finding: No arterial or collector street projects are included with this development application.

The requirements of this section have been satisfied.

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.

Applicant's Finding: The Applicant's proposed roadways, access drives, and homes will result in the removal of 594 caliper inches; therefore, mitigation for 594 inches is required. The Applicant will work with the City to propose a mitigation plan for the 594 inches of required mitigation through a combination of tree planting on site and payments in lieu of planting. All trees

installed on site will be 2 inches in caliper size or greater, therefore meeting the inch for inch mitigation requirement.

The requirements of this section can be satisfied during the construction documentation plan review stage of the project.

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:

a. The right-of-way cannot be reasonably improved in a manner consistent with City road standards or City standards for the protection of wetlands and natural drainageways.

b. The right-of-way does not provide a link in a continuous pattern of connected local streets, or, if it does provide such a link, that an alternative street link already exists or the applicant has proposed an alternative street which provides the necessary connectivity, or the applicant has proven that there is no feasible location on the property for an alternative street providing the link.

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

a. A condition that the applicant initiate vacation proceedings for all or part of the right-of-way.

b. A condition that the applicant build a trail, bicycle path, or other appropriate way.

If the applicant initiates vacation proceedings pursuant to subsection (A)(2)(a) of this section, and the right-of-way cannot be vacated because of opposition from adjacent property owners, the City Council shall consider and decide whether to process a City-initiated street vacation pursuant to Chapter 271 ORS.

Construction staging area shall be established and approved by the City Engineer. Clearing, grubbing, and grading for a development shall be confined to areas that have been granted approval in the land use approval process only. Clearing, grubbing, and grading outside of land use approved areas can only be approved through a land use approval modification and/or an approved Building Department

grading permit for survey purposes. Catch basins shall be installed and connected to pipe lines leading to storm sewers or drainageways.

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.

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.

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.

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.

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.

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.

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.

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).

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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. (Ord. 1180, 1986; Ord. 1192, 1987; Ord. 1287, 1990; Ord. 1321, 1992; Ord. 1339, 1993; Ord. 1401, 1997; Ord. 1408, 1998; Ord. 1442, 1999)

Applicant's Finding:	All improvements will be installed per the submitted plans and in conformance with the requirements of this title. The requirements of this section have been satisfied.

92.030 IMPROVEMENT PROCEDURES

In addition to other requirements, improvements installed by the developer, either as a requirement of these regulations or at the developer's own option, shall conform to the requirements of this title and permanent improvement standards and specifications adopted by the City and shall be installed in accordance with the following procedure:

A. Improvement work shall not be commenced until plans have been checked for adequacy and approved by the City. To the extent necessary for evaluation of the proposal, the improvement plans may be required before approval of the tentative plan of a subdivision or partition. Plans shall be prepared in accordance with the requirements of the City.

B. Improvement work shall not be commenced until the City has been notified in advance, and if work has been discontinued for any reason, it shall not be resumed until the City has been notified.

C. Improvements shall be constructed under the Engineer. The City may require changes in typical sections and details in the public interest if unusual conditions arise during construction to warrant the change.

D. All underground utilities, sanitary sewers, and storm drains installed in streets by the subdivider or by any utility company shall be constructed prior to the surfacing of the streets. Stubs for service connections for underground utilities and sanitary sewers shall be placed to a length obviating the necessity for disturbing the street improvements when service connections are made.

E. A digital and mylar map showing all public improvements as built shall be filed with the City Engineer upon completion of the improvements. (Ord. 1408, 1998)

Applicant's Finding: All improvements will be installed in conformance with the requirements of this title.

The requirements of this section have been satisfied.

CHAPTER 99 PROCEDURES FOR DECISION MAKING: QUASI-JUDICIAL

99.030 APPLICATION PROCESS: WHO MAY APPLY, PRE-APPLICATION CONFERENCE, REQUIREMENTS, REFUSAL OF APPLICATION, FEES

A. <u>Who may apply</u>.

1. Applications for approval required under this chapter may be initiated by:

a. The owner of the property that is the subject of the application or the owner's duly authorized representative;

b. The purchaser of such property who submits a duly executed written contract or copy thereof, which has been recorded with the Clackamas Clerk;

c. A lessee in possession of such property who submits written consent of the owner to make such application; or

d. Motion by the Planning Commission or City Council.

2. Any person authorized by this chapter to submit an application for approval may be represented by an agent who is authorized in writing by such a person to make the application.

Applicant's Finding: The owner of the property is initiating this application for approval.

The requirements of this section have been satisfied.

B. Pre-application conferences.

1. Subject to subsection (B)(4) of this section, a pre-application conference is required for, but not limited to, ***I. land divisions.

Applicant's Finding: A pre-application meeting was held December 18, 2014.

The requirements of this section have been satisfied.

C. The requirements for making an application.

1. The application shall be made on forms provided by the Director as provided by CDC 99.040(A)(1);

2. The application shall be complete and shall contain the information requested on the form, shall address the appropriate submittal requirements and approval criteria in sufficient detail for review and action, and shall be accompanied by the deposit or fee required by CDC 99.033. No application will be accepted if not accompanied by the required fee or deposit. In the event an additional deposit is required by CDC 99.033 and not provided within the time required, the application shall be rejected without further processing or deliberation and all application materials shall be returned to the applicant, notwithstanding any determination of completeness. (Ord. 1527, 2005; Ord. 1568, 2008; Ord. 1590 § 1, 2009; Ord. 1599 § 6, 2011)

Applicant's Finding: This application has been made on forms provided by the City's Planning Department. The application contains the necessary information and the required fee.

The requirements of this section have been satisfied.

99.033 FEES

The Council shall adopt a schedule of fees reasonably calculated to defray the expenses of the administrative process. The Council may establish either a set fee or a deposit system in which the applicant pays a deposit and the City determines the total administrative cost at the end of the process and refunds any unused amount of the deposit to the applicant. No additional deposit shall be required for additional costs that are incurred because the matter is referred to or called up by a higher decision-making authority. The Council shall charge no fees for City-initiated land use applications or appeals filed by a recognized neighborhood association pursuant to the provisions of CDC 99.240. (Ord. 1527, 2005; Ord. 1568, 2008; Ord. 1604 § 70, 2011)

Applicant's Finding: The required fee was submitted with the land use application.

The requirements of this section have been satisfied.

99.038 NEIGHBORHOOD CONTACT REQUIRED FOR CERTAIN APPLICATIONS

Prior to submittal of an application for any subdivision, conditional use permit, multi-family project, planned unit development of four or more lots, non-residential buildings of over 1,500 square feet, or

a zone change that requires a Comprehensive Plan amendment, the applicant shall contact and discuss the proposed development with any affected neighborhood as provided in this section. Although not required for other or smaller projects, contact with neighbors is highly recommended. The Planning Director may require neighborhood contact pursuant to this section prior to the filing of an application for any other development permit if the Director deems neighborhood contact to be beneficial.

A. Purpose. The purpose of neighborhood contact is to identify potential issues or conflicts regarding a proposed application so that they may be addressed prior to filing. This contact is intended to result in a better application and to expedite and lessen the expense of the review process by avoiding needless delays, appeals, remands, or denials. The City expects an applicant to take the reasonable concerns and recommendations of the neighborhood into consideration when preparing an application. The City expects the neighborhood association to work with the applicant to provide such input.

B. The applicant shall contact by letter all recognized neighborhood associations whose boundaries contain all or part of the site of the proposed development and all property owners within 500 feet of the site.

C. The letter shall be sent by to the president of the neighborhood association, and to one designee as submitted to the City by the neighborhood association, and shall be sent by regular mail to the other officers of the association and the property owners within 500 feet. If another neighborhood association boundary is located within the 500-foot notice radius, the letter shall be sent to that association's president, and to one designee as submitted to the City by the neighborhood association as well. The letter shall briefly describe the nature and location of the proposed development, and invite the association and interested persons to a meeting to discuss the proposal in more detail. The meeting shall be scheduled at the association's regularly scheduled monthly meeting, or at another time at the discretion of the association, and not less than 20 days from the date of mailing of the notice. If the meeting is scheduled as part of the association's regular monthly meeting, the letter shall explain that the proposal may not be the only topic of discussion on the meeting agenda. The letter shall encourage concerned citizens to contact their association president, or their association designee, with any questions that they may want to relay to the applicant.

Neighborhood contact shall be initiated by the applicant by mailing the association president, and to one designee as submitted to the City by the neighborhood association, a letter, return receipt requested, formally requesting, within 60 days, a date and location to have their required neighborhood meeting. The 60 days shall be calculated from the date that the applicant mails this letter to the association. If the neighborhood association does not want to meet within the 60-day timeframe, or if there is no neighborhood association, the applicant may hold a public meeting during the evening after 6:00 p.m., or on the weekend no less than 20 days from the date of mailing of the notice. All meetings shall be held at a location open to the public within the boundaries of the association or at a public facility within the City of West Linn. If the meeting is held at a business, it shall be posted at the time of the meeting as the meeting place and shall note that the meeting is open to the public and all interested persons may attend.

D. On the same date the letters described in subsections A through C of this section are mailed, the applicant shall provide and post notice on the property subject to the proposed application. The notice shall be posted at a location visible from the public right-of-way. If the site is not located adjacent to a through street, then an additional sign shall be posted on the nearest through street. The sign notice shall be at least 11 inches by 17 inches in size on durable material and in clear, legible

writing. The notice shall state that the site may be subject to a proposed development (e.g., subdivision, variance, conditional use) and shall set forth the name of the applicant and a telephone number where the applicant can be reached for additional information. The site shall remain posted until the conclusion of the meeting.

E. An application shall not be accepted as complete unless and until the applicant demonstrates compliance with this section by including with the application:

1. A copy of the certified letter to the neighborhood association with a copy of return receipt;

2. A copy of the letter to officers of the association and to property owners within 500 feet, including an affidavit of mailing and a copy of the mailing list containing the names and addresses of such owners and residents;

3. A copy of the required posted notice, along with an affidavit of posting;

4. A copy of the minutes of the meetings, produced by the neighborhood association, which shall include a record of any verbal comments received, and copies of any written comments from property owners, residents, and neighborhood association members. If there are no minutes, the applicant may provide a summary of the meeting comments. The applicant shall also send a copy of the summary to the chair of the neighborhood association. The chair shall be allowed to supplement the summary with any additional comments regarding the content of the meeting, as long as such comments are filed before the record is closed;

5. An audiotape of the meeting; and

6. In the event that it is discovered by staff that the aforementioned procedures of this section were not followed, or that a review of the audio tape and meeting minutes show the applicant has made a material misrepresentation of the project at the neighborhood meeting, the application shall be deemed incomplete until the applicant demonstrates compliance with this section. (Ord. 1425, 1998; Ord. 1474, 2001; Ord. 1568, 2008; Ord. 1590 § 1, 2009)

Applicant's Finding:

This section requires the applicant to contact and discuss the proposed development with any affected neighborhood as provided in this section.

A meeting was held with the Savanna Oaks Neighborhood Association on February 3, 2015. The meeting was scheduled and noticed per the requirements of this section, and the required neighborhood meeting documentation is submitted with this application. The applicant provided renderings and information regarding the proposed subdivision and answered all questions asked by the members of the neighborhood association.

The requirements of this section have been satisfied.

SUMMARY AND CONCLUSION

Based upon the materials submitted herein, the Applicant respectfully requests that the City's Planning Commission approve this 22-lot subdivision.

First American

First American Title Company of Oregon
121 SW Morrison St, FL 3
Portland, OR 97204
Phn - (503)222-3651 (800)929-3651
Fax - (877)242-3513

PUBLIC RECORD REPORT
FOR NEW SUBDIVISION OR LAND PARTITION

THIS REPORT IS ISSUED BY THE ABOVE-NAMED COMPANY ("THE COMPANY") FOR THE EXCLUSIVE USE OF:

JT Smith Companies
5285 Meadows RD STE 171
Lake Oswego, OR 97035
Phone: (503)209-7555
Fax: (503)684-0102

Date Prepared : January 09, 2014
Effective Date : 8:00 A.M on January 08, 2014
Order No. : 7019-2196212
Reference : Weatherhill No. 2

The information contained in this report is furnished by First American Title Insurance Company of Oregon (the "Company") as an information service based on the records and indices maintained by the Company for the county identified below. This report is not title insurance, is not a preliminary title report for title insurance, and is not a commitment for title insurance. No examination has been made of the Company's records, other than as specifically set forth in this report. Liability for any loss arising from errors and/or omissions is limited to the lesser of the fee paid or the actual loss to the Customer, and the Company will have no greater liability by reason of this report. This report is subject to the Definitions, Conditions and Stipulations contained in it.

REPORT

A. The Land referred to in this report is located in the County of Clackamas, State of Oregon, and is described as follows:

As fully set forth on Exhibit "A" attached hereto and by this reference made a part hereof.

B. As of the Effective Date, the tax account and map references pertinent to the Land are as follows:

As fully set forth on Exhibit "A" attached hereto and by this reference made a part hereof.

C. As of the Effective Date and according to the Public Records, we find title to the land apparently vested in:

As fully set forth on Exhibit "B" attached hereto and by this reference made a part hereof.

D. As of the Effective Date and according to the Public Records, the Land is subject to the following liens and encumbrances, which are not necessarily shown in the order of priority:

As fully set forth on Exhibit "C" attached hereto and by this reference made a part hereof.

EXHIBIT "A"
(Land Description Map Tax and Account)

That part of Lot 22, BLAND ACRES, in the County of Clackamas and State of Oregon, which lies Easterly of a straight line drawn Southerly from the point of intersection of the South right of way line of County Road No. 1637 with the Westerly line of said lot to a point on the Southerly line of said lot which bears Easterly 250 feet from Southwesterly corner thereof.

NOTE: This Legal Description was created prior to January 01, 2008.

Map No.: 21E35A 01200 and 21E35A 01202
Tax Account No.: 00405118 and 00405136

EXHIBIT "B"
(Vesting)

John C. De Vries and Virginia N. De Vries, Trustees, or their successors in trust, under the De Vries Living Trust, dated AUG 17, 1995, and any amendments thereto, a revocable living trust

EXHIBIT "C"
(Liens and Encumbrances)

1. The rights of the public in and to that portion of the premises herein described lying within the limits of streets, roads and highways.

NOTE: Taxes for the year 2013-2014 PAID IN FULL
Tax Amount: $8,156.66
Map No.: 21E35A 01200
Property ID: 00405118
Tax Code No.: 003-031
(Affects Tax Lot 1200)

NOTE: Taxes for the year 2013-2014 PAID IN FULL
Tax Amount: $3,765.72
Map No.: 21E35A 01202
Property ID: 00405136
Tax Code No.: 003-031
(Affects Tax Lot 1202)

DEFINITIONS, CONDITIONS AND STIPULATIONS

1. **Definitions.** The following terms have the stated meaning when used in this report:
   (a) "Customer": The person or persons named or shown as the addressee of this report.
   (b) "Effective Date": The effective date stated in this report.
   (c) "Land": The land specifically described in this report and improvements affixed thereto which by law constitute real property.
   (d) "Public Records": Those records which by the laws of the state of Oregon impart constructive notice of matters relating to the Land.

2. **Liability of the Company.**
   (a) This is not a commitment to issue title insurance and does not constitute a policy of title insurance.
   (b) The liability of the Company for errors or omissions in this public record report is limited to the amount of the charge paid by the Customer, provided, however, that the Company has no liability in the event of no actual loss to the Customer.
   (c) No costs (including, without limitation attorney fees and other expenses) of defense, or prosecution of any action, is afforded to the Customer.
   (d) In any event, the Company assumes no liability for loss or damage by reason of the following:
      (1) Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records.
      (2) Any facts, rights, interests or claims which are not shown by the Public Records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.
      (3) Easements, liens or encumbrances, or claims thereof, which are not shown by the Public Records.
      (4) Discrepancies, encroachments, shortage in area, conflicts in boundary lines or any other facts which a survey would disclose.
      (5) (i) Unpatented mining claims; (ii) reservations or exceptions in patents or in Acts authorizing the issuance thereof, (iii) water rights or claims or title to water.
      (6) Any right, title, interest, estate or easement in land beyond the lines of the area specifically described or referred to in this report, or in abutting streets, roads, avenues, alleys, lanes, ways or waterways.
      (7) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use or enjoyment on the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the Public Records at the effective date hereof.
      (8) Any governmental police power not excluded by 2(d)(7) above, except to the extent that notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the Public Records at the effective date hereof.
      (9) Defects, liens, encumbrances, adverse claims or other matters created, suffered, assumed, agreed to or actually known by the Customer.

3. **Report Entire Contract.** Any right or action or right of action that the Customer may have or may bring against the Company arising out of the subject matter of this report must be based on the provisions of this report. No provision or condition of this report can be waived or changed except by a writing signed by an authorized officer of the Company. By accepting this form report, the Customer acknowledges and agrees that the Customer has elected to utilize this form of public record report and accepts the limitation of liability of the Company as set forth herein.

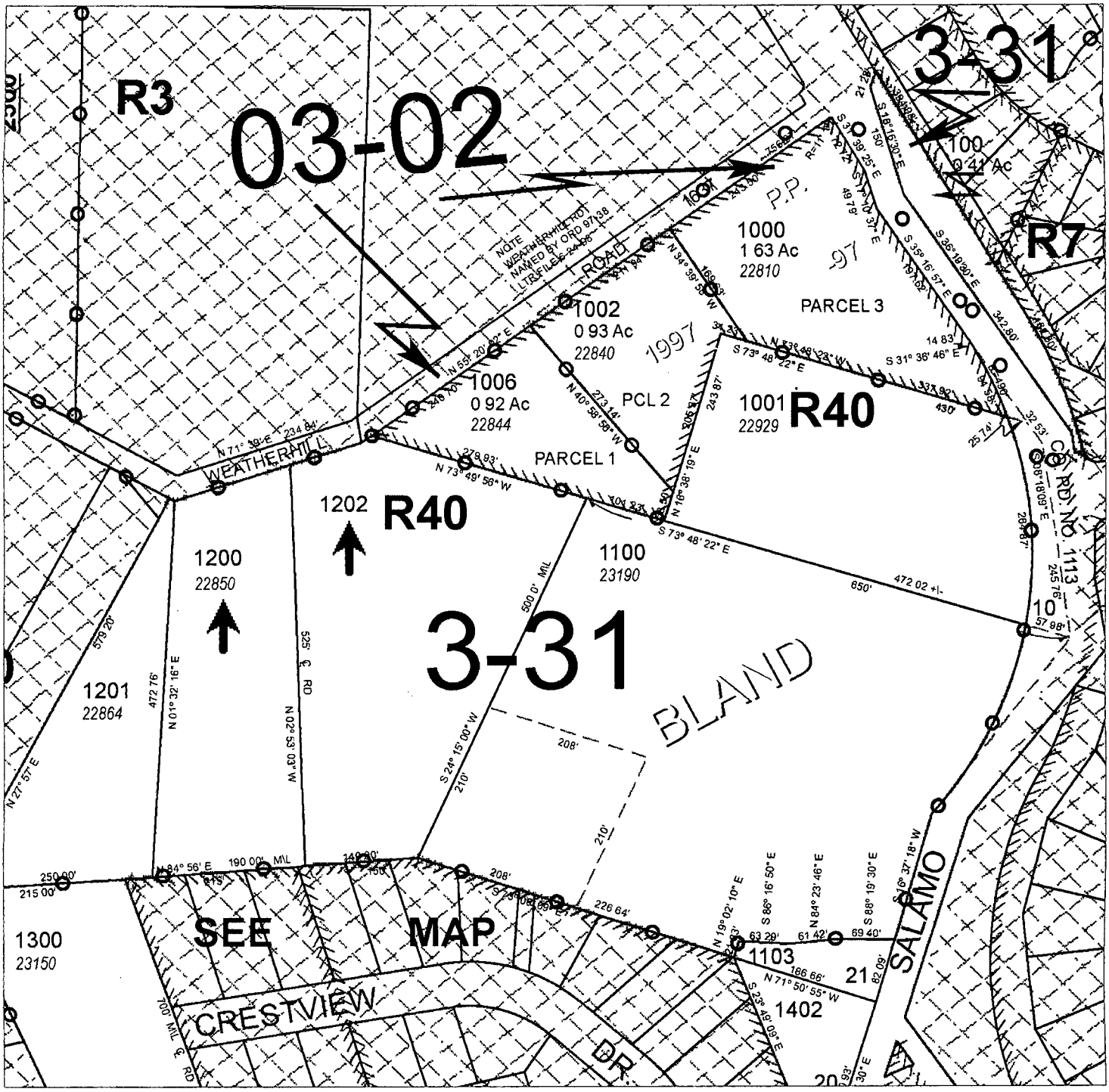
4. **Charge.** The charge for this report does not include supplemental reports, updates or other additional services of the Company.

First American Title Insurance Company of Oregon

An assumed business name of TITLE INSURANCE COMPANY OF OREGON

This map is provided as a convenience in locating property
First American Title Insurance Company assumes no liability for any variations as may be disclosed by an actual survey

Reference Parcel Number 21E35A 01200 & 01202



City of West Linn

PRE-APPLICATION CONFERENCE MEETING
SUMMARY NOTES

December 18, 2014

SUBJECT: Proposed 22 lot subdivision at 22850 Weatherhill Road

FILE: PA-14-44

ATTENDEES: Applicants: John Wyland, John Howorth, Andrew Tull
Staff: Peter Spir (Planning), Khoi Le (Engineering)
Other: Dale Seavey

The following is a summary of the meeting discussion provided to you from staff meeting notes. Additional information may be provided to address any "follow-up" items identified during the meeting. <u>These comments are PRELIMINARY in nature</u>. Please contact the Planning Department with any questions regarding approval criteria, submittal requirements, or any other planning-related items. Please note disclaimer statement below.

Site Information

Site Address: 22850 Weatherhill Road
Tax Not No.: tax lots 1200 and 1202 of Assessor's Map 21E35A
Site Area: 4.92 acres/ 22,435 square feet
Neighborhood: Savanna Oaks
Comp. Plan: Low density residential
Zoning: R-7 (Single family residential attached and detached / 7,000 square foot minimum lot size)
Applicable code: CDC Chapter 85: Land Division (subdivision)
CDC Chapter 12: R-7

<u>Project Details:</u> The applicant proposes a 22 lot subdivision on the recently annexed property. All lots exceed the 7,000 square foot minimum lot size. In keeping with the need for connectivity, the applicant proposes a public street to serve the site with stub outs to the east and west.

<u>Engineering Division Comments</u>

The applicant should contact Khoi Le of the Engineering Department to determine required improvements at Kle@westlinnoregon.gov. Applicable CDC provisions include Chapter 96.

Process

For the Subdivision, address the submittal requirements and provide responses to the approval criteria of CDC Chapter 85. There is a deposit fee of $4,200 plus $200 a lot plus final plat fee of $2,000 and a final inspection fee of $500.

N/A is not an acceptable response to the approval criteria. The submittal requirements may be waived, but the applicant must first identify the specific submittal requirement and request, in letter form, that it be waived by the Planning Manager and must identify the specific grounds for that waiver.

A neighborhood meeting is required per CDC 99.038. Follow the requirements of that section explicitly. The Savanna Oaks neighborhood president is Ed Schwarz, available at 503-723-5015 or SavannaOaksNA@westlinnoregon.gov.

Once the application and deposit/fee are submitted, the City has 30 days to determine if the application is complete or not. If the application is not complete, the applicant has 180 days to make it complete or provide written notice to staff that no other information will be provided. Once the submittal is deemed complete, a hearing with the Planning Commission will be scheduled.

Pre-application notes are void after 18 months. After 18 months with no application approved or in process, a new pre-application conference is required.

Typical land use applications can take 6-10 months from beginning to end.

DISCLAIMER: This summary discussion covers issues identified to date. It does not imply that these are the only issues. The burden of proof is on the applicant to demonstrate that all approval criteria have been met. These notes do not constitute an endorsement of the proposed application ***or provide any assurance of potential outcomes***. Staff responses are based on limited material presented at this pre-application meeting. New issues, requirements, etc. could emerge as the application is developed. ***A new pre-application conference would have to be scheduled one that period lapses and these notes would no longer be valid. Any changes to the CDC standards may require a different design or submittal.***

Date of Production: Thursday, December 11, 2014

The ownership information enclosed is time sensitive and should be utilized as soon as possible.

This mailing list was produced with the use of tax assessor maps available online from OR Maps (www.ormap.org/maps/index.cfm) as well as data purchased from the Portland Metro regional government and Real Estate Solutions Inc.

We assume no liability in connection with this service.

Thank you for your business and for using First American Title.

First American Title Company of Oregon

Customer Service Department
121 SW Morrison Street Suite 300 - Portland, OR 97204
Phone: 503.219.TRIO (8746) Fax: 503.790.7872
Email: cs.portland@firstam.com
Today's Date : 12/11/2014

OWNERSHIP INFORMATION

Owner	: **Devries John C Trustee**	Ref Parcel Number	: 21E35A 01200
Co Owner	:	Parcel Number	: 00405118
Site Address	: 22850 Weatherhill Rd West Linn 97068	T: 02S R: 01E S: 35 Q: NE QQ:	
Mail Address	: 22850 Weatherhill Rd West Linn Or 97068	County	: Clackamas (OR)
Taxpayer	: Devries John C	Telephone	:

PROPERTY DESCRIPTION

Map Page & Grid	: 686 H7
Census Tract	: 205.01 Block: 2
Improvement Type	: 152 Sgl Family,R1-5,1-Story (Basement)
Subdivision/Plat	: Bland Acres
Neighborhood	: West Linn/Lake Oswego Rural
Land Use	: 101 Res,Residential Land,Improved
Legal	: 304 BLAND AC PT LT 22
	:
	:

ASSESSMENT AND TAX INFORMATION

Mkt Land	: $264,840
Mkt Structure	: $321,010
Mkt Total	: $585,850
% Improved	: 55
13-14 Taxes	: $8,156.66
Exempt Amount	:
Exempt Type	:
Levy Code	: 003031
Millage Rate	: 17.3147
M50AssdValue	: $521,557

PROPERTY CHARACTERISTICS

Bedrooms	: 4	Building SF	: 3,100	BldgTotSqFt	: 3,100
Bathrooms	: 2.50	1st Floor SF	: 1,363	Lot Acres	: 1.88
Full Baths	: 2	Upper Finished SF	: 195	Lot SqFt	: 81,727
Half Baths	: 1	Finished SF	: 3,100	Garage SF	:
Fireplace	: Single Fireplce	Above Ground SF	: 1,662	Year Built	: 1977
Heat Type	: Heat Pump	Upper Total SF	: 195	School Dist	: 003
Floor Cover	: Carpet	UnFinUpperStorySF	:	Foundation	: Concrete
Stories	: 1 Story-Bsmt	Basement Fin SF	: 1,438	Roof Type	: Wd Shingle
Int Finish	: Drywall	Basement Unfin SF	:	Roof Shape	: Gable
Ext Finsh	: Tongue\groove	Basement Total SF	: 1,438		

TRANSFER INFORMATION

Owner Name(s)	Sale Date	Doc#	Sale Price	Deed Type	Loan Amount	Loan Type
:Devries John C Trustee	:		:	:	:	:
:	:		:	:	:	:
:	:		:	:	:	:
:	:		:	:	:	:
:	:		:	:	:	:
:	:		:	:	:	:

First American Title Company of Oregon

Customer Service Department
121 SW Morrison Street Suite 300 - Portland, OR 97204
Phone: 503.219.TRIO (8746) Fax: 503.790.7872
Email: cs.portland@firstam.com
Today's Date : 12/11/2014

OWNERSHIP INFORMATION

Owner	: **Devries John C Trustee**	Ref Parcel Number	: 21E35A 01202
Co Owner	:	Parcel Number	: 00405136
Site Address	: *no Site Address*	T: 02S R: 01E S: 35 Q: NE QQ:	
Mail Address	: 22850 Weatherhill Rd West Linn Or 97068	County	: Clackamas (OR)
Taxpayer	: Devries John C	Telephone	:

PROPERTY DESCRIPTION

Map Page & Grid	:
Census Tract	: 205.01 Block: 2
Improvement Type	: *unknown Improvement Code*
Subdivision/Plat	: Bland Acres
Neighborhood	: West Linn/Lake Oswego Rural
Land Use	: 100 Vacant,Residential Land
Legal	: 304 BLAND AC PT LT 22
	:
	:

ASSESSMENT AND TAX INFORMATION

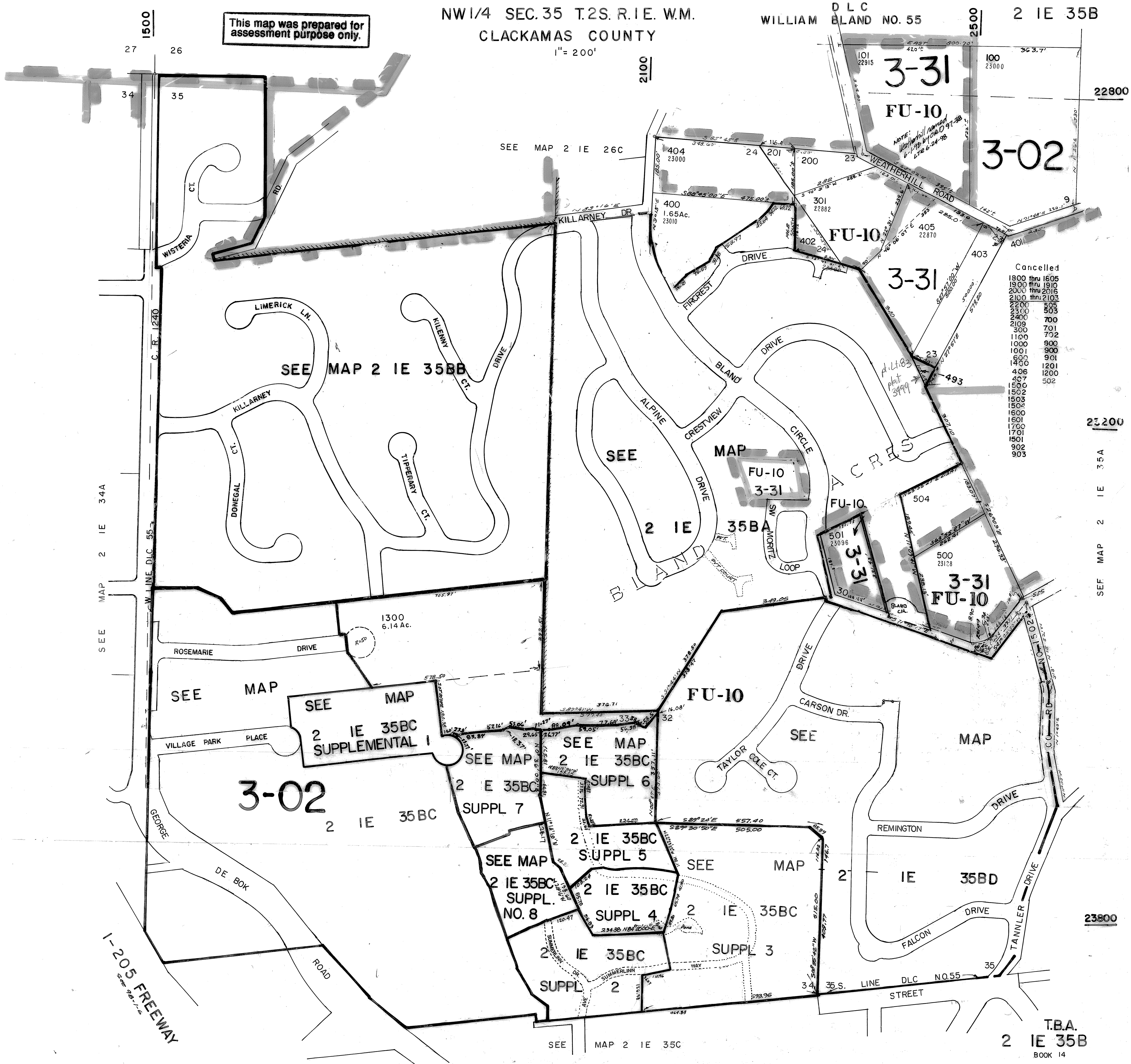
Mkt Land	: $298,521
Mkt Structure	:
Mkt Total	: $298,521
% Improved	:
13-14 Taxes	: $3,765.72
Exempt Amount	:
Exempt Type	:
Levy Code	: 003031
Millage Rate	: 17.3147
M50AssdValue	: $226,797

PROPERTY CHARACTERISTICS

Bedrooms	:	Building SF	:	BldgTotSqFt	:
Bathrooms	:	1st Floor SF	:	Lot Acres	: 3.04
Full Baths	:	Upper Finished SF	:	Lot SqFt	: 132,348
Half Baths	:	Finished SF	:	Garage SF	:
Fireplace	:	Above Ground SF	:	Year Built	:
Heat Type	:	Upper Total SF	:	School Dist	: 003
Floor Cover	:	UnFinUpperStorySF	:	Foundation	:
Stories	:	Basement Fin SF	:	Roof Type	:
Int Finish	:	Basement Unfin SF	:	Roof Shape	:
Ext Finsh	:	Basement Total SF	:		

TRANSFER INFORMATION

Owner Name(s)	Sale Date	Doc#	Sale Price	Deed Type	Loan Amount	Loan Type
:Devries John C Trustee	:		:	:	:	:
:	:		:	:	:	:
:	:		:	:	:	:
:	:		:	:	:	:
:	:		:	:	:	:
:	:		:	:	:	:



This map was prepared for assessment purpose only.
NW1/4 SEC. 35 T.2S. R.1E. W.M.
CLACKAMAS COUNTY
1" = 200'
DLC
WILLIAM BLAND NO. 55
2 1E 35B
1500
2100
2500
22800
23200
23800
SEE MAP 2 1E 26C
SEE MAP 2 1E 35BB
SEE MAP 2 1E 35BA
SEE MAP 2 1E 35A
SEE MAP 2 1E 34A
SEE MAP 2 1E 35BC SUPPLEMENTAL 1
SEE MAP 2 1E 35BC SUPPL 6
SEE MAP 2 1E 35BC SUPPL 7
2 1E 35BC SUPPL 5
SEE MAP 2 1E 35BC SUPPL. NO. 8
2 1E 35BC SUPPL 4
SEE MAP 2 1E 35BC SUPPL 3
2 1E 35BC SUPPL 2
SEE MAP 2 1E 35BD
SEE MAP 2 1E 35C
2 1E 35BC
3-31
3-02
FU-10
KILLARNEY DR.
WEATHERHILL ROAD
FIRCREST DRIVE
BLAND DRIVE
CIRCLE
ALPINE DRIVE
CRESTVIEW
BLAND ACRES
SW MORITZ LOOP
LIMERICK LN.
KILLARNEY
DONEGAL CT.
KILENNY CT.
DRIVE
TIPPERARY CT.
WISTERIA CT.
RD.
C.R. 1240
W. LINE DLC 55
ROSEMARIE DRIVE
VILLAGE PARK PLACE
GEORGE
DE BOK ROAD
I-205 FREEWAY
CARSON DR.
TAYLOR
COLE CT.
REMINGTON
FALCON DRIVE
TANNLER DRIVE
CO. RD. NO. 1502
STREET
S. LINE DLC NO. 55
SUMMERLINN WAY
1300 6.14 Ac.
400 1.65 Ac. 23010
404 23000
101 22915
100 23000
301 22882
405 22870
501 23096
500 23128
504
403
401
402
200
201
Cancelled
1800 thru 1605
1900 thru 1910
2000 thru 2016
2100 thru 2103
2200 505
2300 503
2400 700
2109 701
300 702
1100 800
1000 900
1001 901
600 1201
1400 1200
406 502
407
1500
1502
1503
1504
1600
1601
1700
1701
1501
902
903
T.B.A.
2 1E 35B
BOOK 14

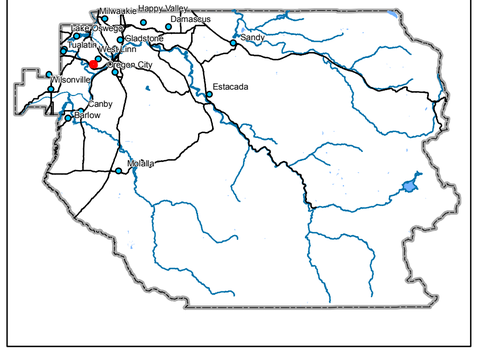
2 1 E 35BA
WEST LINN

N.E.1/4 N.W.1/4 SEC.35 T.2S. R.1E. W.M.
CLACKAMAS COUNTY
1" = 100'

Cancelled Taxlots

200
201
300
400
500
513

- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- TaxCodeLines
- Map Index
- WaterLines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 1/16th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'



THIS MAP IS FOR ASSESSMENT PURPOSES ONLY

1/28/2014

2 1 E 35BA
WEST LINN

2 1 E 35A
& INDEX
WEST LINN

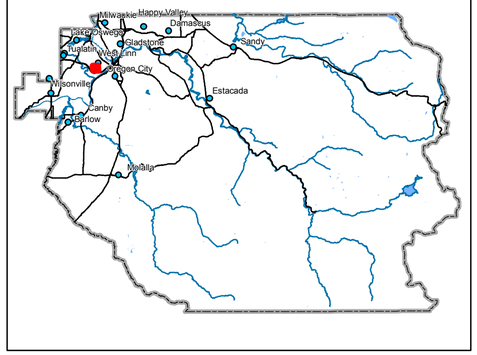
N.E.1/4 SEC.35 T.2S. R.1E. W.M.
CLACKAMAS COUNTY
1" = 200'

D. L. C.
WILLIAM BLAND NO. 56

Cancelled Taxlots

200
300
301
400
500
501
502
503
700
800
900
901
1003
1004
1005
1090
1101
1102
1301
1400
1401
1500
1600
1601
1700
1701
1800
1801
1602
1900
2000
2001
2100
2200
2300
2400
2401
2500
2501
2600
2700
2701
2800
2900
3000

- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- TaxCodeLines
- Map Index
- WaterLines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 1/16th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'



THIS MAP IS FOR ASSESSMENT PURPOSES ONLY

11/25/2013

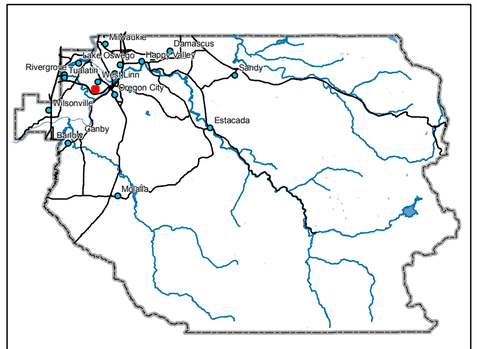
2 1 E 35A
& INDEX
WEST LINN

2 1 E 35 AB
WEST LINN

N.W.1/4 N.E.1/4 SEC.35 T.2S. R.1E. W.M.
Clackamas County
1" = 100'

Cancelled Taxlots

- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- TaxCodeLines
- Map Index
- WaterLines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 1/16th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'

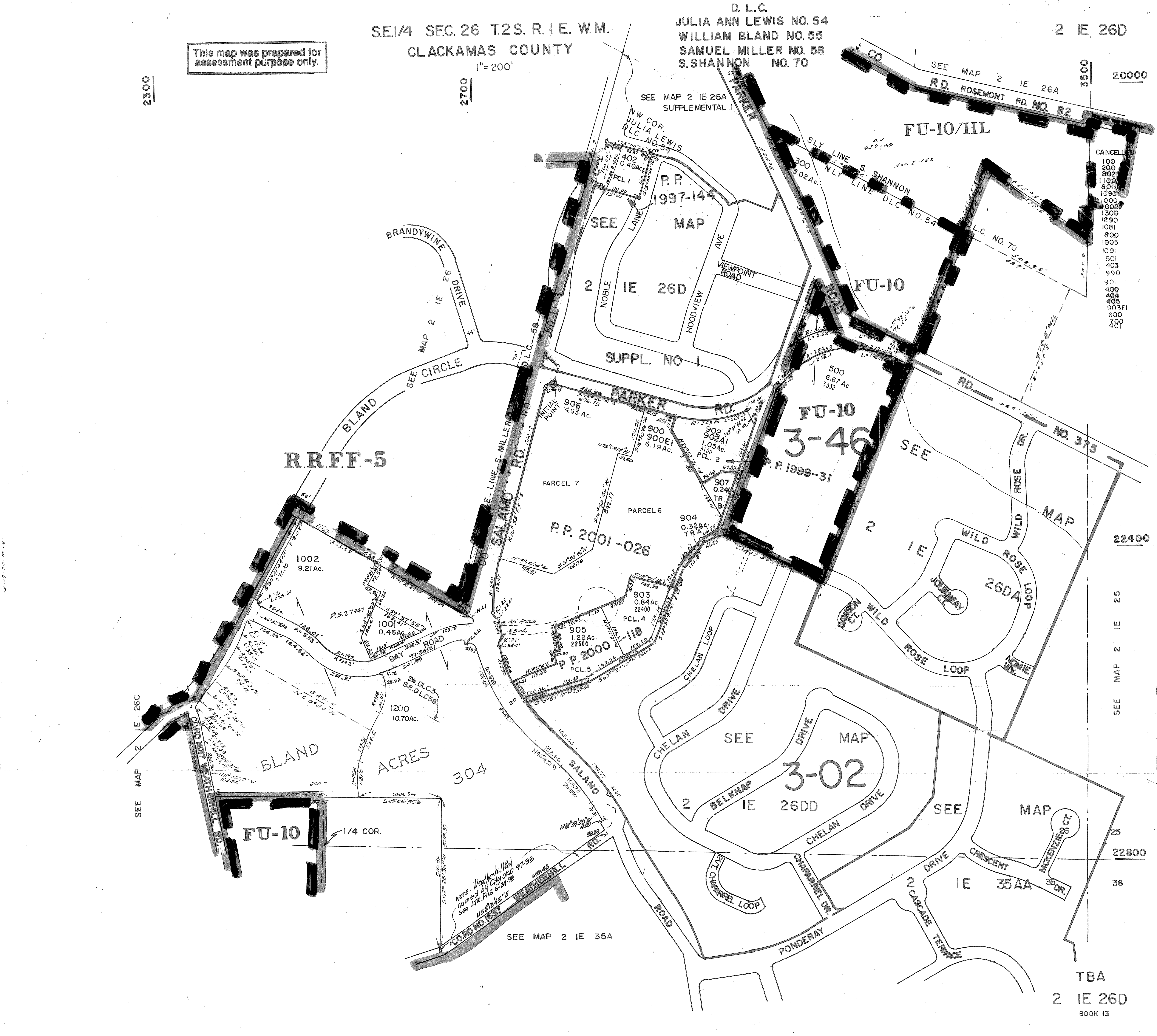


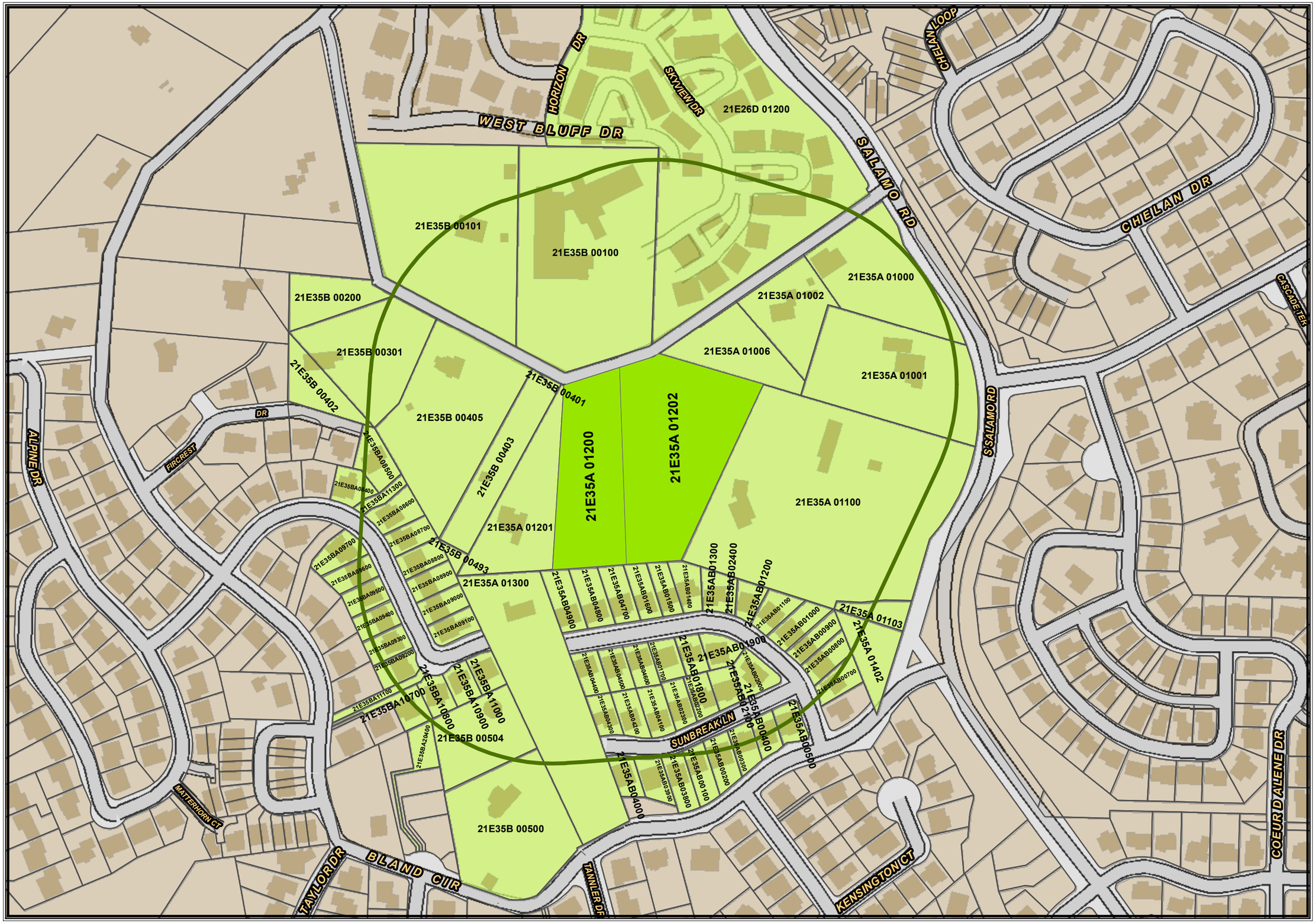
THIS MAP IS FOR ASSESSMENT PURPOSES ONLY

Feet
0 25 50 100 150 200

10/13/2011

2 1 E 35 AB
WEST LINN


S.E.1/4 SEC. 26 T.2S. R.1E. W.M.
CLACKAMAS COUNTY
1"= 200'
This map was prepared for assessment purpose only.
D.L.C.
JULIA ANN LEWIS NO. 54
WILLIAM BLAND NO. 55
SAMUEL MILLER NO. 58
S. SHANNON NO. 70
2 1E 26D
SEE MAP 2 1E 26A
SEE MAP 2 1E 26A SUPPLEMENTAL 1
CO. RD. ROSEMONT RD. NO. 82
FU-10/HL
FU-10
RRFF-5
P.P. 1997-144
SEE MAP 2 1E 26D SUPPL. NO 1
PARKER RD.
PARKER ROAD
VIEWPOINT ROAD
HOODVIEW AVE
NOBLE LANE
BRANDYWINE DRIVE
BLAND CIRCLE
SEE MAP 2 1E 26
CO. SALAMO RD.
SALAMO ROAD
DAY ROAD
P.P. 2001-026
P.P. 1999-31
P.P. 2000-118
3-46
3-02
SEE MAP 2 1E 26DA
SEE MAP 2 1E 26DD
SEE MAP 2 1E 35AA
SEE MAP 2 1E 35A
SEE MAP 2 1E 26C
SEE MAP 2 1E 25
BLAND ACRES 304
WILD ROSE LOOP
WILD ROSE DR.
JOURNEAY CT.
DAWSON CT.
NOMIE WY.
CHELAN LOOP
CHELAN DRIVE
BELKNAP DRIVE
CHAPARREL DR.
PVT. CHAPARREL LOOP
CRESCENT DRIVE
MCKENZIE CT.
CASCADE TERRACE
PONDERAY
WEATHERHILL RD.
CO.RD. NO. 1637
1/4 COR.
NO. 375
CANCELLED
TBA
2 1E 26D
BOOK 13



Prepared By:

First American

Date: 12/11/2014

N

0 220

feet

500 Foot Radius
22850 S Weatherhill Rd

- Subject Parcels
- Notification Area
- Radius
- Taxlots

This information is deemed reliable but is not guaranteed.

21E26D 01200
Srp I - Cascade Summit LLC
8110 E Union Ave
Denver, CO 80237

21E35A 01000
Michael & Julie Grubb
22810 Weatherhill Rd
West Linn, OR 97068

21E35A 01001
James & Denise McKune
22929 Salamo Rd
West Linn, OR 97068

21E35A 01100
David & Drucilla Sloop
23190 Bland Cir
West Linn, OR 97068

21E35A 01201
Li Wei
22864 Weatherhill Rd
West Linn, OR 97068

21E35A 01300
Lf LLC
23150 Bland Cir
West Linn, OR 97068

21E35B 00100
Sequoia Heights Capital Partners LLC
1101 5th Ave #300
San Rafael, CA 94901

21E35B 00101
Ethel Hardy
22915 Weatherhill Rd
West Linn, OR 97068

21E35B 00200
Lf LLC
5285 Meadows Rd #171
Lake Oswego, OR 97035

21E35B 00301
Lf7 LLC
5285 Meadows Rd #171
Lake Oswego, OR 97035

21E35B 00401
Li Wei
22864 Weatherhill Rd
West Linn, OR 97068

21E35B 00402
Lf7 LLC
5285 Meadows Rd #171
Lake Oswego, OR 97035

21E35B 00403
Li Wei
22864 Weatherhill Rd
West Linn, OR 97068

21E35B 00405
David & Diana Dean
22870 Weatherhill Rd
West Linn, OR 97068

21E35B 00500
Johnny & Laurie Coppedge
23128 Bland Cir
West Linn, OR 97068

21E35B 00504
City Of West Linn
22500 Salamo Rd #600
West Linn, OR 97068

21E35A 01002
Dale Seavey
22840 Weatherhill Rd
West Linn, OR 97068

21E35A 01006
Edwin & Brenda Winkler III
5690 Summit St
West Linn, OR 97068

21E35A 01402
City Of West Linn
22500 Salamo Rd #600
West Linn, OR 97068

21E35A 01103
City Of West Linn
22500 Salamo Rd #600
West Linn, OR 97068

21E35BA08400
Avian Charles Newton
2245 Crestview Dr
West Linn, OR 97068

21E35BA08500
Le Hong
2160 Fircrest Dr
West Linn, OR 97068

21E35BA08600
Jessica Mehta
2255 Crestview Dr
West Linn, OR 97068

21E35BA08700
Darren & Leslie Karr
2265 Crestview Dr
West Linn, OR 97068

21E35BA08800
David & Sandra Quesnel
2275 Crestview Dr
West Linn, OR 97068

21E35BA08900
Jie Zhang
23040 Bland Cir
West Linn, OR 97068

21E35BA09000
Jill Wolf
2295 Crestview Dr
West Linn, OR 97068

21E35BA09100
Charles & Roberta Mathews III
2305 Crestview Dr
West Linn, OR 97068

21E35BA09200
Wade Radcliffe
2300 Crestview Dr
West Linn, OR 97068

21E35BA09300
Brian Bell
2290 Crestview Dr
West Linn, OR 97068

21E35BA09400
Edison & Tamara Ghorbani-Elizeh
2280 Crestview Dr
West Linn, OR 97068

21E35BA09500
Thomas Sobotta
2270 Crestview Dr
West Linn, OR 97068

21E35BA09600
David & Lisa Jacobs
2260 Crestview Dr
West Linn, OR 97068

21E35BA09700
Sau Chan
2250 Crestview Dr
West Linn, OR 97068

21E35BA10700
Troy Allen & Erin Pendergraft
23073 Bland Cir
West Linn, OR 97068

21E35BA10800
Sean & Stacey Driggers
2310 Crestview Dr
West Linn, OR 97068

21E35BA10900
Kaykel Investments LLC
1800 NW 167th Pl #150
Beaverton, OR 97006

21E35BA11000
Kaykel Investments LLC
1800 NW 167th Pl #150
Beaverton, OR 97006

21E35BA11100
City Of West Linn
22500 Salamo Rd #600
West Linn, OR 97068

21E35BA11300
City Of West Linn
22500 Salamo Rd #600
West Linn, OR 97068

21E35AB00100
Bialas
3059 Sunbreak Ln
West Linn, OR 97068

21E35AB00200
Jennifer & Ronald Talaga Jr.
3061 Sunbreak Ln
West Linn, OR 97068

21E35AB00300
Ronald Jackson
3073 Sunbreak Ln
West Linn, OR 97068

21E35AB00400
Heidi Barber
3085 Sunbreak Ln
West Linn, OR 97068

21E35AB00500
Daniel Haddad
3097 Sunbreak Ln
West Linn, OR 97068

21E35AB00700
William & Janet Peck
2592 Crestview Dr
West Linn, OR 97068

21E35AB00800
Larry Co-E Dawson
2586 Crestview Dr
West Linn, OR 97068

21E35AB00900
Christopher Smith
8975 SW Sweek Dr #317
Tualatin, OR 97062

21E35AB01000
Mark Hatfield
2562 Crestview Dr
West Linn, OR 97068

21E35AB01100
Todd Drake
2550 Crestview Dr
West Linn, OR 97068

21E35AB01200
Tamara Tofte
2548 Crestview Dr
West Linn, OR 97068

21E35AB01300
Joshua & Stephanie Warren
2536 Crestview Dr
West Linn, OR 97068

21E35AB01400
Kendall & Kelli Woodworth
2524 Crestview Dr
West Linn, OR 97068

21E35AB01500
Karin Schaffer
2512 Crestview Dr
West Linn, OR 97068

21E35AB01600
Jennifer Pakula
2500 Crestview Dr
West Linn, OR 97068

21E35AB01700
David & Susan Roethe
2507 Crestview Dr
West Linn, OR 97068

21E35AB01800
W Erik Swanson
2511 Crestview Dr
West Linn, OR 97068

21E35AB01900
Michael & Jessica Moore
2531 Crestview Dr
West Linn, OR 97068

21E35AB02000
David & Valerie Feltman
2565 Crestview Dr
West Linn, OR 97068

21E35AB02100
John & Heidi Carr
3086 Sunbreak Ln
West Linn, OR 97068

21E35AB02200
Jeffrey & Tracey Barnett
3064 Sunbreak Ln
West Linn, OR 97068

21E35AB02300
Kevin & Julia Spellman
3062 Sunbreak Ln
West Linn, OR 97068

21E35AB02400
City Of West Linn
22500 Salamo Rd #600
West Linn, OR 97068

21E35B 00493
Li Wei
22864 Weatherhill Rd
West Linn, OR 97068

21E35AB03800
Robert & Beverly Brossman
2997 Sunbreak Ln
West Linn, OR 97068

21E35AB03900
Jason & Julie Fewell
2985 Sunbreak Ln
West Linn, OR 97068

21E35AB04000
Kurt & Jennifer Hill
2973 Sunbreak Ln
West Linn, OR 97068

21E35AB04100
Joseph & Lisa Arnone
2990 Sunbreak Ln
West Linn, OR 97068

21E35AB04200
Brian & Christy Riehm
2984 Sunbreak Ln
West Linn, OR 97068

21E35AB04300
Eric Egland
2976 Sunbreak Ln
West Linn, OR 97068

21E35AB04400
Pierre Bossaert
145 Sonata Ln
Aptos, CA 95003

21E35AB04500
Steve & Ann Crawford
2483 Crestview Dr
West Linn, OR 97068

21E35AB04600
Vishal & Purvi Singh
2495 Crestview Dr
West Linn, OR 97068

21E35AB04700
Robert & Cindy Conlin
2498 Crestview Dr
West Linn, OR 97068

21E35AB04800
Charles & Theresa Parker
2486 Crestview Dr
West Linn, OR 97068

21E35AB04900
C Briggs
2474 Crestview Dr
West Linn, OR 97068

Savanna Oaks NA
Ed Schwarz, President
2206 Tannler Dr
West Linn, OR 97068

Savanna Oaks NA
Ken Pryor , Vice President
2119 Green Street
West Linn, OR 97068

Savanna Oaks NA
Patrick McGuire
1841 Barnes Circle
West Linn, OR 97068

City of West Linn
C/O Brenda Perry
22500 Salamo Rd
West Linn, OR 97068

NEIGHBORHOOD MEETING

AFFIDAVIT OF POSTING NOTICE

STATE OF OREGON)

SS

County of Clackamas)

I, Mercedes Smith, being duly sworn, state that I represent the party initiating interest in a proposed subdivision affecting the land located at 22850 S Weatherhill Road in West Linn, Oregon and that pursuant to Community development Code Section 99, did on the 6th day of January, 2015 personally post notice indicating that the site may be proposed for a subdivision application.

A sign was posted along the northern property line.

This 6TH day of JANUARY, 2015.

Signature

Subscribed and sworn to, or affirmed, before me this 6th day of January, 2015.

OFFICIAL SEAL
ERIKA ELIZABETH WHITE
NOTARY PUBLIC - OREGON
COMMISSION NO. 475096
MY COMMISSION EXPIRES JANUARY 28, 2017

Notary Public for the State of Oregon

County of Washington

My Commission Expires: 1.28.2017

NEIGHBORHOOD MEETING

AFFIDAVIT OF MAILING

STATE OF OREGON)

SS

County of Clackamas)

I, Andrew Tull, being duly sworn, state that I represent the party initiating interest in a proposed subdivision affecting the land located at 22850 S Weatherhill Road in West Linn, Oregon and that pursuant to Community development Code Section 99, did on the 2nd day of January, 2015 caused to have mailed, to each of the persons on the attached list, a notice of a meeting to discuss the proposed development of the aforementioned property.

I further state that said notices were enclosed in plainly addressed envelopes to said persons and were deposited on the date indicated above in the United States Post Office with postage prepaid thereon.

This 6th day of January, 2015.

Signature

Subscribed and sworn to, or affirmed, before me this 6th day of January, 2015.

OFFICIAL SEAL
ERIKA ELIZABETH WHITE
NOTARY PUBLIC - OREGON
COMMISSION NO. 475096
MY COMMISSION EXPIRES JANUARY 28, 2017

Notary Public for the State of Oregon

County of Washington

My Commission Expires: 1-28-2017

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

KEN PRYOR
2119 GREEN ST.
WEST LINN, OR 97068

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* KEN PRYOR | C. Date of Delivery 1-3-14

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail® ☐ Priority Mail Express™
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ Collect on Delivery

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7014 2870 0000 4482 8964

PS Form 3811, July 2013 Domestic Return Receipt

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

ED SCHWARZ
2206 TANNLER
WEST LINN, OR 97068

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* ED SCHWARZ | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail® ☐ Priority Mail Express™
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ Collect on Delivery

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7014 2870 0000 4482 8971

PS Form 3811, July 2013 Domestic Return Receipt

Civil Engineering
Water Resources
Land Use Planning

December 22, 2014

Savannah Oaks Neighborhood Association
Vice President Ken Pryor
2119 Green Street
West Linn, OR 97068

22850 S Weatherhill Road
Proposed Residential Subdivision

Dear Mr. Pryor,

3J Consulting acts on behalf of JT Smith Companies regarding the planned subdivision of the property located at 22850 S Weatherhill Road. The location of the property and the proposed project is shown on the attached map. The tax lot numbers for the property are 21E35A 1200 and 1202. The property is currently located inside the City of West Linn's boundaries and it zoned R-7 or Single Family Residential.

JT Smith Companies is considering a subdivision of the 4.92 acre property in order to create 22 new residential lots. It is envisaged that each of the proposed lots will exceed 7,000 square feet which is the minimum lot size within the zoning R-7 district. The proposed lots will take access from a new road taking access to Weatherhill Road.

Before finalizing an application to the City's Planning Department for the proposed subdivision, we would like to take the opportunity to discuss this proposal with the members of the Savannah Oaks neighborhood association and property owners residing within 500 feet of the property.

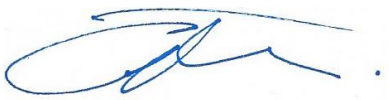
The purpose of this meeting will be to provide a forum for surrounding property owners and residents to review the proposal and to identify issues so they can be given proper consideration. These meetings are required the public to share with the project team any special information about the property involved. The project team will try to answer questions related to how the project meets the relevant development standards consistent with West Linn's land use regulations.

We would like to formally request a meeting with the neighborhood association. If you have a preferred date and time, we would be more than happy to work towards scheduling a meeting and inviting the neighbors within our notification boundaries. If after 20 days, we have not heard from you with a preferred meeting date, we will schedule a meeting, in accordance with the City's notification requirements.

Please note that this will be an informational meeting based upon preliminary development plans and that these plans may change before the application is submitted to the City.

If the proposed meeting is acceptable, we would ask that you please respond to this letter with an email to andrew.tull@3j-consulting.com or phone call to 503-545-1907.

Sincerely,



Andrew Tull
Senior Planner
3J Consulting, Inc

3J Consulting, Inc.
5075 SW Griffith Drive, Suite 150, Beaverton, OR 97005
Ph: 503-946-9365
andrew.tull@3j-consulting.com

Civil Engineering
Water Resources
Land Use Planning

December 30, 2014

22850 S Weatherhill Road
Proposed Residential Subdivision

To Our Neighbors,

3J Consulting acts on behalf of JT Smith Companies regarding the planned subdivision of a property located along Weatherhill Road. The location of the property is shown on the attached map. The address of the project is 22850 S Weatherhill Road. The tax lot numbers for the property are 21E35A 1200 and 1202. The property is currently located inside the City of West Linn's boundaries and it is zoned R-7 or Single Family Residential.

JT Smith Companies is considering a subdivision of the 4.92 acre property in order to create 22 new residential lots. It is envisaged that each of the proposed lots will exceed 7,000 square feet which is the minimum lot size within the zoning R-7 district. The proposed lots will take access from a new road taking access to Weatherhill Road.

Before finalizing an application to the City's Planning Department for the proposed subdivision, we would like to take the opportunity to discuss this proposal with the members of the Savannah Oaks neighborhood association and property owners residing within 500 feet of the property.

The Savannah Oaks Neighborhood Association has invited the Applicant to attend the association's regularly scheduled February neighborhood meeting. The location of the meeting and the proposed time is stated below:

Informational Meeting
Tuesday February 3, 2015 at 7:00PM
TVFR Fire Station 59
1860 Willamette Falls Drive

The purpose of this meeting will be to provide a forum for surrounding property owners and residents to review the proposal and to identify issues so they can be given proper consideration. This meeting will provide the opportunity for the public to share with the project team any special information about the property involved. The project team will try to answer questions related to how the project meets the relevant development standards consistent with West Linn's land use regulations.

Please note that this will be an informational meeting based upon preliminary development plans and that these plans may change before the application is submitted to the City.

We look forward to discussing this proposal with you. Please feel free to contact us by emailing andrew.tull@3j-consulting.com if you have any questions.

Sincerely,

Andrew Tull
Senior Planner
3J Consulting, Inc.

3J Consulting, Inc.
5075 SW Griffith Drive, Suite 150, Beaverton, OR 97005
Ph: 503-946-9365
andrew.tull@3j-consulting.com

PUBLIC NOTICE

OF A NEIGHBORHOOD MEETING

THIS SITE MAY BE SUBJECT TO A PROPOSED SUBDIVISION.

PLEASE CONTACT THE APPLICANT FOR MORE INFORMATION AT
THE FOLLOWING NUMBER OR FEEL FREE TO ATTEND THE
SCHEDULED NEIGHBORHOOD MEETING:

3J CONSULTING, INC. C/O ANDREW TULL
503-946-9365

NEIGHBORHOOD MEETING:

SAVANNA OAKS NEIGHBORHOOD
ASSOCIATION
FEBRUARY 3, 2015 AT 7:00 PM
WILLAMETTE FIRE STATION 59
1860 WILLAMETTE FALLS DRIVE,
WEST LINN, OR 97068

Civil Engineering
Water Resources
Land Use Planning

Meeting Minutes – Weatherhill Estates

Date: February 3, 2015
Meeting No: Neighborhood Meeting
Project: Weatherhill Estates
3J No.: 13171
Location: Willamette Fire Station

Presenters	Company
Andrew Tull	**3J Consulting**
John Wyland	**JT Smith Companies**
Aaron Murphy	**3J Consulting**

In preparation for the submission of a land use application for the Subdivision of the Weatherhill Estates Property, the applicant held a neighborhood meeting with members of the Savannah Oaks Neighborhood Association on February 3, 2015

The meeting began at 7pm with a presentation by Andrew Tull. A description of the proposed development, proposed access, and the City's review process was provided. The general timeframe for the land use review period and construction process was described.

Following the introduction of the project, neighbors and attendees openly asked questions of the project team. The following is a record of the questions and the project teams' responses.

Item	Question	Response
1	Weatherhill residents should discuss this project early in the process.	
2	Where's the northern exit?	Residents will drive up Weatherhill and then down Salamo.
3	What will this do to the overall traffic system at 10th, it will impact it greatly?	The 22 lots proposed through the development will only generate 9 trips per day. To mitigate for impacts, we pay Transportation SDC's. No Traffic Report is required for such a small traffic impact. The system should be able to handle the impacts.
4	So this will impact an F rated intersection.	This is small development that will connect to local roads. The transportation system plan is the tool that the City should be using to address larger transportation system issues. The SDC fees that we pay will be spent in accordance with the priority list that the TSP generates.
5	Emergency Exits, are they required?	This is a small subdivision, for larger subdivisions, emergency access points are often required. In this case, we have a full turn around and this road system will eventually connect once the neighboring properties develop. The Fire marshal has reviewed this and has not asked for a secondary access point.

6	Will you be flipping this or building it?	We don't have a specific plan or a defined exit point.
7	We've been told that 80 houses will be developed, when will the one-way road on Weatherhill be upgraded?	The Developer will improve our frontage along Weatherhill with a ¾ street improvement. There are undeveloped properties along Bland and Weatherhill. If they develop in the future, Weatherhill will be improved. If it's a big enough of a priority project or safety issue, the City may initiate an improvement project using SCD projects.
8	SDC's don't pay for development.	The developer pays for their own streets and improvements and then pays SDC's which the City spends at their discretion.
9	How far will the improvements be required along Weatherhill?	Just along our frontage.
10	Two properties adjacent. Is there a dust abatement program. Who's responsible for cleaning our houses?	This may be one of the problems of living in an area with really desirable real estate.
11	When will you break ground on this project?	Summer Construction would be ideal. July or August.
12	The TSP is being updated this year.	
13	Will construction traffic come up Salamo?	Yes, truck traffic will be coming from Salamo. Its really advantageous for us to try to balance the site grading to avoid needing multiple trucks bringing import fill.
14	What about the existing madrone?	There was a madrone on the neighboring property (Weatherhill I). The tree was diseased and it was removed. We work with one of the best arborist's in the region to try to work around the trees.
15	We are going to want to see that you're retaining 20% of the trees on the site.	At falcon place, the developer spent a significant amount of money to retain the tree. The tree was removed after the property was sold.
16	Are you not doing sidewalks?	The Development will have curbs sidewalks and gutters.
17	Will you use a 100 foot notice radius or a 500 foot radius for notification?	The City has standard notification radius boundary. That boundary will be used.
18	Will you be providing water, sewer, and storm lines just to serve your property or will you upsizing?	The developer will be sized in accordance with the City's Master Plans for utilities.
19	Will the assisted care facility across the street be responsible for completing their improvements?	They will, at the time of development.
20	Residents should go to the planning commission if they want to make testimony. When will the application be submitted?	Potentially the end of the month.

The meeting concluded at approximately 8pm.

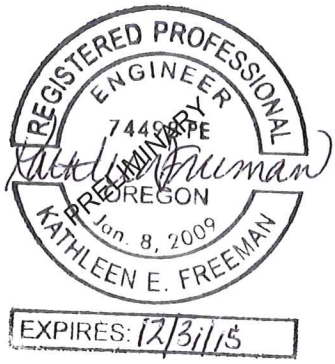
PRELIMINARY
STORMWATER REPORT

WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR

April 16, 2015

Prepared For:

LF7, LLC
West Linn, OR



Prepared By:
3J Consulting, Inc.
5075 SW Griffith Drive, Suite 150
Beaverton, Oregon 97005
Project No: 13171
KEF

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EXECUTIVE SUMMARY

The existing site is located on private property at 22850 Weatherhill Road on two tax lots (2s1e35a 01200 & 01202) in West Linn, Oregon (See Figure 2). The property is approximately 4.92 acres and currently contains a single family home, asphalt driveway, asphalt recreation court, and numerous small and large trees throughout the property. The proposed development will consist of subdividing the property to create 22 lots including streets and sidewalks. Half-street improvements to Weatherhill Road, along the property frontage will be constructed as well.

Stormwater runoff from the proposed development will be treated and detained per Section 2 of the City of West Linn's Public Works Design Standards. Runoff will be conveyed to a new grassy swale for water quality treatment. The swale will release treated stormwater to an existing regional pond that was originally constructed in the 1990's to treat and detain runoff from the 74.1 acre watershed basin. The pond has recently been surveyed and an analysis has been conducted to determine the capacity of the pond given the years of sediment accumulation. A recommendation has been made to the City to remove 1-1/2 feet of sediment and backfill with 1-foot of topsoil, remove the existing flow control structure and construct a new flow control manhole 10-feet from Bland Circle (for maintenance purposes). The regional pond will continue to treat the currently developed impervious area draining to it as well as providing detention for the entire 74.1 acre basin assuming full build out conditions.

The new water quality swale has been sized to comply with the following requirements:

- Treat stormwater runoff using the City of Portland's requirement of 0.83 inches of precipitation for a 24-hour storm event.

Additionally the regional detention pond will continue to detain to the following requirements:

- Capture and detain the 5, 10 and 25-year, 24-hour post developed runoff rate to release less than the 5, 10 and 25-year, 24-hour existing runoff rate.

Due to grading constraints, pervious areas from lots 6-19 will continue draining towards the south and southeast.

A geotechnical investigation was completed in December 2014 with one test pit at 4 and 5.5 feet deep. The resulting infiltration rate at each depth was 0.5 in/hr.

The purpose of this preliminary stormwater report is to show that the new impervious area will be treated per the requirements of the City of West Linn. Additionally, the existing regional pond will have the capacity to detain the future build-out conditions of the Weatherhill Estates Subdivision.

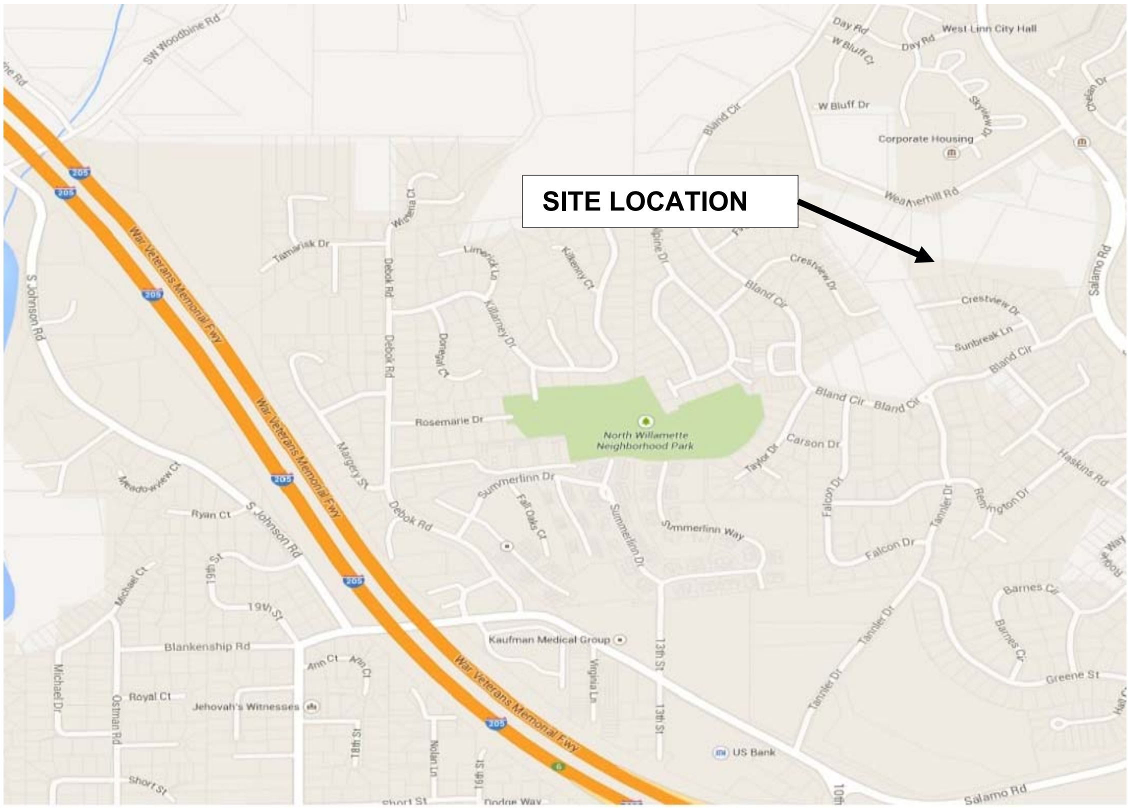


Figure 1 - Vicinity Map

Figure 2 - Site Location

EXISTING CONDITIONS

Site

The topography on the site is sloping south to southeast at an average grade of approximately 7% to 16%. Elevations range from a maximum of 635 feet near Weatherhill Road to a minimum of 576 feet on the southeast side of the property. Vegetation on the site consists primarily of grass, brush, and small to large trees. The site currently contains a single family home, asphalt driveway, asphalt recreation court, and numerous small and large trees throughout the property.

Climate

The site is located in Clackamas County approximately 12 miles south of downtown Portland in the West Linn foothills. Average annual rainfall recorded in this area is 47 inches.

Flood Map

The flood plain map shows that the site resides in Zone X, where no base flood elevations have been determined (See Technical Appendix: Exhibits – FIRM Panel 257 of 1175).

Site Geology

The soil type as classified by the United States Department of Agriculture Soil Survey of Clackamas County is Nekia silty clay loam (See Technical Appendix: Exhibits - Hydrologic Soil Group for Clackamas County Area, Oregon). The soil type is classified as hydrologic group C. Group C soils generally have slow infiltration rates.

A geotechnical investigation was completed in December 2014 with one test pit at 4 and 5.5 feet deep. The resulting infiltration rate at each depth was 0.5 in/hr (See Technical Appendix: Geotechnical Report).

Existing Drainage

Existing Site

The existing site does not contain a stormwater management system. Stormwater runoff from the site sheet flows to the south and southeast (See Technical Appendix: Exhibits – Existing Site Conditions).

Basin Areas

Table 1 shows the current impervious and pervious areas for the property and the small offsite area from Weatherhill Drive draining to the property (See Technical Appendix: Exhibits – Existing Site Conditions).

Existing Onsite Basin Area	**ft^2**	**Acres**
Impervious Area	16,553	0.38
Pervious Area	197,762	4.54
Total Existing Onsite Basin Area	214,315	4.92
Existing Offsite Basin Area		
Impervious Area	3,485	0.08
Pervious Area	1,742	0.04
Total Existing Offsite Basin Area	5,227	0.12
Total Existing Basin Area	**219,542**	**5.04**

Table 1 – Existing Basin Areas

Curve Number
The major factors for determining the CN values are hydrologic soil group, cover type, treatment, hydrologic condition, and antecedent runoff condition. The curve number represents runoff potential from the ground. Table 2-2a in the TR-55 manual was used to determine the appropriate curve numbers (See Technical Appendix: Exhibits – Table 2-2a Runoff Curve Numbers).

Consistent with the 1992 drainage report, a curve number of 85 was used for the existing pervious area. The post-developed pervious area was considered to be open space, assuming grass cover <50% (CN=86).

Time of Concentration
The time of concentration was calculated for the existing site using the TR-55 Method, the existing contours and assuming the site was dense grass. A time of concentration was calculated to be 22 minutes (See Technical Appendix: Calculations – Time of Concentration). A time of concentration for the post-developed site was assumed to be 5 minutes.

POST-DEVELOPED CONDITIONS

Post-Developed Site
Runoff from each roof will be conveyed to the proposed storm system via roof laterals. Pervious and impervious runoff from the majority of the site will sheet flow to sumped catch basins that will convey the stormwater to the proposed storm system. The system will convey the runoff to a new grassy swale that will be constructed to treat stormwater runoff from the proposed development. The swale will release treated runoff into the existing regional pond for detention.

Do to grading constraints, pervious areas from lots 6-19 will continue draining towards the south and southeast.

Basin Areas
Table 2 shows the post-developed impervious and pervious areas (See Technical Appendix: Exhibits – Post-Developed Site Conditions). The total post-developed basin area includes the offsite basin.

Post-Developed Basin Area	ft^2	Acres
Impervious Area	105,415	2.42
Pervious Area	114,127	2.62
Total Post-Developed Basin Area	**219,542**	**5.04**

Table 2 – Post-Developed Basin Areas

HYDROLOGIC ANALYSIS DESIGN GUIDELINES

Design Guidelines
The site is located within the jurisdiction of the City of West Linn, which follows the City of Portland's Stormwater Management Manual for the design of stormwater facilities. Stormwater runoff from the proposed development will be conveyed to a proposed grassy swale for water quality treatment and detention. All facilities have been sized to comply with the following requirements:

- Treat stormwater runoff for water quality storm event (0.83 inches);
- Capture and detain the 5, 10 and 25-year, 24-hour post developed runoff rates to the existing 5, 10 and 25-year, 24-hour existing runoff rates.

- The existing regional pond was designed in 1992 using the 5, 10 and 25 year storm events. To be consistent with that and to design a new flow control manhole, the same storm events were used.

Hydrograph Method

Naturally occurring rainstorms dissipate over long periods of time. An effective way of estimating storm rainfall is by using the hydrograph method. The Santa Barbara Urban Hydrograph (SBUH) method was used to develop runoff rates. The computer software XPSTORM was used to compute runoff rates and volumes to size the water quality facility and design the proposed flow control structure for the existing regional pond.

Design Storm

The rainfall distribution to be used for this area is the design storm of 24-hour duration based on the standard Type 1A rainfall distribution. The 1992 design for the regional pond used slightly higher precipitation depths than the City of West Linn currently uses. To be consistent, the 1992 values were used for modeling the regional pond. Table 3 shows the 1992 values as well as the current City of West Linn values. The total precipitation depths for the various storm events were used as multipliers for the Type 1A 24-hour rainfall distribution in XPSTORM.

Recurrence Interval (years)	1992 Total Precipitation Depth (inches)	Current Total Precipitation Depth (inches)
WQ	N/A	0.83
5	3.10	3.00
10	3.50	3.40
25	4.00	3.90
100	4.60	4.50

Table 3 - Design Storms

Basin Runoff

Table 4 below shows the existing and post-developed runoff rates for the project site, including the offsite road improvements (See Technical Appendix: Hydrographs – Existing and Post-Developed Runoff hydrographs).

Recurrence Interval (years)	Existing Runoff (cfs)	Post-Developed Runoff (cfs)
WQ	N/A	0.39
5	1.70	2.85
10	2.07	3.33
25	2.56	3.94
100	3.15	4.68

Table 4 - Basin Runoff Rates

System Capacities

The stormwater conveyance system will be sized in the final design phase of the project.

WATER QUALITY/QUANTITY

Water Quality

The stormwater facility design follows West Linn's design standards and the City of Portland's Stormwater Management Manual guidelines for performance based facilities. A grassy swale has been designed to treat the runoff from the onsite and offsite road improvements. The swale will have the following minimum characteristics (See Technical Appendix: Calculations – Swale Calculations):

- Swale Bottom Width = 2 ft
- Side Slopes (H:V) = 4:1
- Swale Slope = 1%
- Total Depth = 2.0 feet (includes 1 foot of freeboard)
- Swale Length = 150 ft
- Minimum Hydraulic Retention Time = 9 minutes

Existing Regional Detention Pond Analysis

(Excerpt from Memo to the City dated March 13, 2015)

The 1992 storm report by OTAK provided existing and post-developed runoff rates from the 74.1 acres contributing to the pond. The rates were verified using XPSTORM with the same method (SBUH), curve numbers and time of concentration used in the report. Table 5 below shows the existing runoff rates (required release rates) and post-developed runoff rates. The existing pond was originally designed to detain the 5, 10 and 25 year post-developed storm events to the 5, 10 and 25 year pre-developed rates.

Storm Event	[1]Pre-Developed Runoff Rate (cfs)	[2]Post-Developed Runoff Rate (cfs)
5	18.40	38.35
10	22.80	44.90
25	28.58	53.19
[3]100	35.70	63.22

[1]As shown in the 1992 OTAK report
[2]Calculated in XPSTORM
[3]Detention not required but subsequently provided

Table 5 – Existing and Post-Developed Runoff Rates

Table 6 below shows the volume of the existing pond based on the recent survey.

Elevation (ft)	Surface Area (ft^2)	Average Surface Area (ft^2)	Sectional Volume (ft^3)	Total Volume (ft^3)
528	3,122			
		5,347	5,347	
529	7,573			**5,347**
		9,721	9,721	
530	11,869			**15,068**
		13,466	13,466	
531	15,063			**28,534**
		16,630	16,630	
532	18,196			**45,164**
		19,962	19,962	
533	21,727			**65,126**
		23,625	23,625	
534	25,523			**88,751**
		27,407	27,407	
535	29,291			**116,158**
		31,865	31,865	
536	34,440			**148,024**
		37,538	37,538	
537	40,637			**185,562**
		43,307	43,307	
538	45,977			**228,869**

Table 6 – Existing Regional Pond Volume

The bottom and top of the surveyed pond is 528 and 538 feet, respectively. Table 7 below shows the peak release rate, peak elevation and freeboard in the pond for the WQ-100 year storm events.

Storm Event	Peak Release Rate (cfs)	Peak Elevation (ft)	Freeboard in Pond (ft)
[1]WQ	0.20	531.31	6.69
5	18.39	534.07	3.93
10	20.38	534.74	3.26
25	22.65	535.56	2.44
100	25.09	536.52	1.48

[1]Water Quality only includes runoff from the current impervious area draining to it

Table 7 – Peak Discharge, Elevation and Freeboard

In order for the release rates and elevations in the pond to be achieved, the existing pond will require modifications. We recommend removing 1-1/2 feet of sediment from the bottom of the pond, replacing it with 1-foot of topsoil and providing 0.50-feet of dead storage. The freeboard shown in Table 6 does not account for the 0.50-feet of dead storage.

In addition to the 1-1/2 feet of sediment removal in the pond, we recommend removing the existing flow control manhole (and the 6-inch perforated pipe connected to it) and installing a new 60-inch diameter manhole at a maximum of 10-feet (horizontal) from Bland Circle so the maintenance department is able to vacuum the sediment out. The manhole should be installed with a weir spanning the inside diameter of the structure. Table 8 below shows the recommended control structures to achieve the release rates shown in Table 7. We recommend fitting a 'Birdcage' style

overflow lid to the flow control structure set 1-foot below the top of pond for emergency overflow.

Control Structure	Diameter/Width	Elevation
WQ Orifice	2-3/16 inch	528.00
Weir	5' Span	530.30
[1]Overflow	15.7 feet	537.00

[1]Circumference of 60" Diameter Manhole Overflow

Table 8 – Flow Control Structure

If the City prefers to keep the existing flow control manhole, the 3-12 inch diameter openings and 6-inch perforated pipe opening will need to be grouted closed. A weir structure similar to that shown in Table 4 will need to be installed in the manhole along with a 15-inch inlet pipe. The existing rim is an open grated structure set at 0.74 feet below the top of pond and could remain in place. Due to the distance from Bland Circle, the existing flow structure will not be maintenance accessible.

SUMMARY

The stormwater design for the proposed Weatherhill Estates Subdivision will meet or exceed the City of West Linn's requirements. All sizing of water quality/quantity facilities followed the City of Portland's Stormwater Management Manual.

TECHNICAL APPENDIX

Exhibits
- FIRM Panel 257 of 1175
- Hydrologic Soil Group-Clackamas County Area, Oregon
- Table 2-2a Runoff Curve Numbers
- Existing Site Conditions
- Post-Developed Site Conditions

Drawings
- Sheet C1.0 “Existing Conditions Plan”
- Sheet C1.1 “Demolition Plan”
- Sheet C2.1 “Site Plan”
- Sheets C2.2-C2.4 “Grading & Erosion Control Plan”
- Sheet C3.0 “Composite Utility Plan”
- Sheet C3.5 “Offsite Storm”

Hydrographs
- Existing Runoff Hydrograph
- Post Developed Runoff Hydrograph

Calculations
- Time of Concentration
- Swale Calculations

Geotechnical Report
- Geotechnical Report, GeoPacific Engineering, Inc., February 13, 2015

Operations and Maintenance
- To be included in Final Stormwater Report

REFERENCES

1. City of West Linn’s Public Works Design Standards Issued in 2010

2. City of Portland’s Stormwater Management Manual Issued in January 2014

3. Soil Survey of Clackamas County Area. National Resource Conservation Service

4. Urban Hydrology for Small Watersheds – TR-55 Issued in June 1986 – U.S. Department of Agriculture, Natural Resources Conservation Service, Conservation Engineering Division

5. http://westlinnoregon.gov/publicworks/stormwater-fact-sheet

EXHIBITS

MAP SCALE 1" = 500'

250 0 500 1000 FEET

0 150 300 METE

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0257D

FIRM

FLOOD INSURANCE RATE MAP

CLACKAMAS COUNTY, OREGON

AND INCORPORATED AREAS

PANEL 257 OF 1175

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

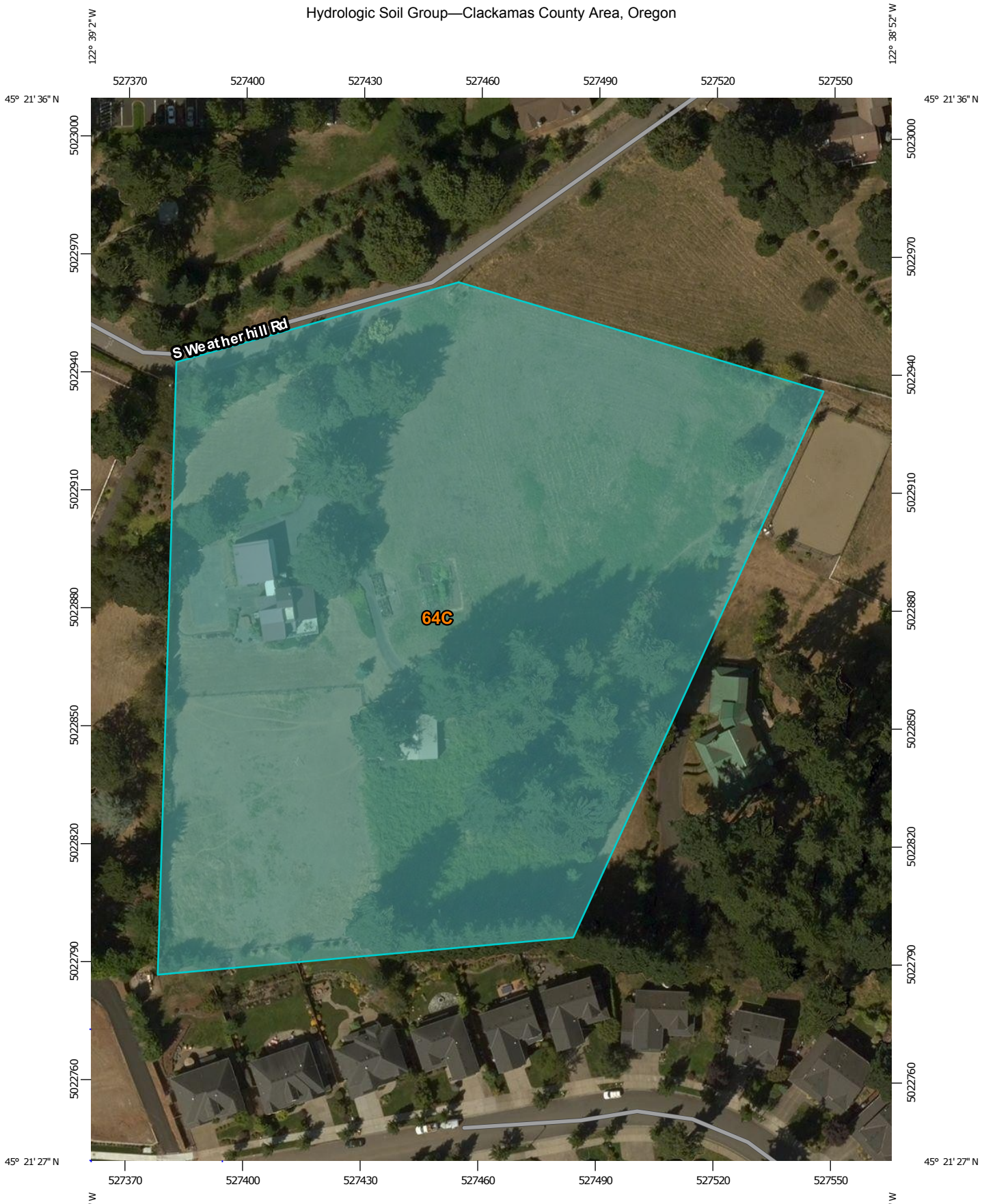
COMMUNITY	NUMBER	PANEL	SUFFIX
CLACKAMAS COUNTY	415588	0257	D
OREGON CITY, CITY OF	410021	0257	D
WEST LINN, CITY OF	410024	0257	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
41005C0257D

EFFECTIVE DATE
JUNE 17, 2008

Federal Emergency Management Agency



Map Scale: 1:1,320 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clackamas County Area, Oregon
Survey Area Data: Version 9, Sep 19, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 26, 2014—Sep 5, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Clackamas County Area, Oregon (OR610)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
64C	Nekia silty clay loam, 8 to 15 percent slopes	C	5.4	100.0%
Totals for Area of Interest			**5.4**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Table 2-2a Runoff curve numbers for urban areas [1/]

Cover description		Curve numbers for hydrologic soil group			
Cover type and hydrologic condition	Average percent impervious area [2/]	A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) [3/]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) [4/]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation) [5/]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

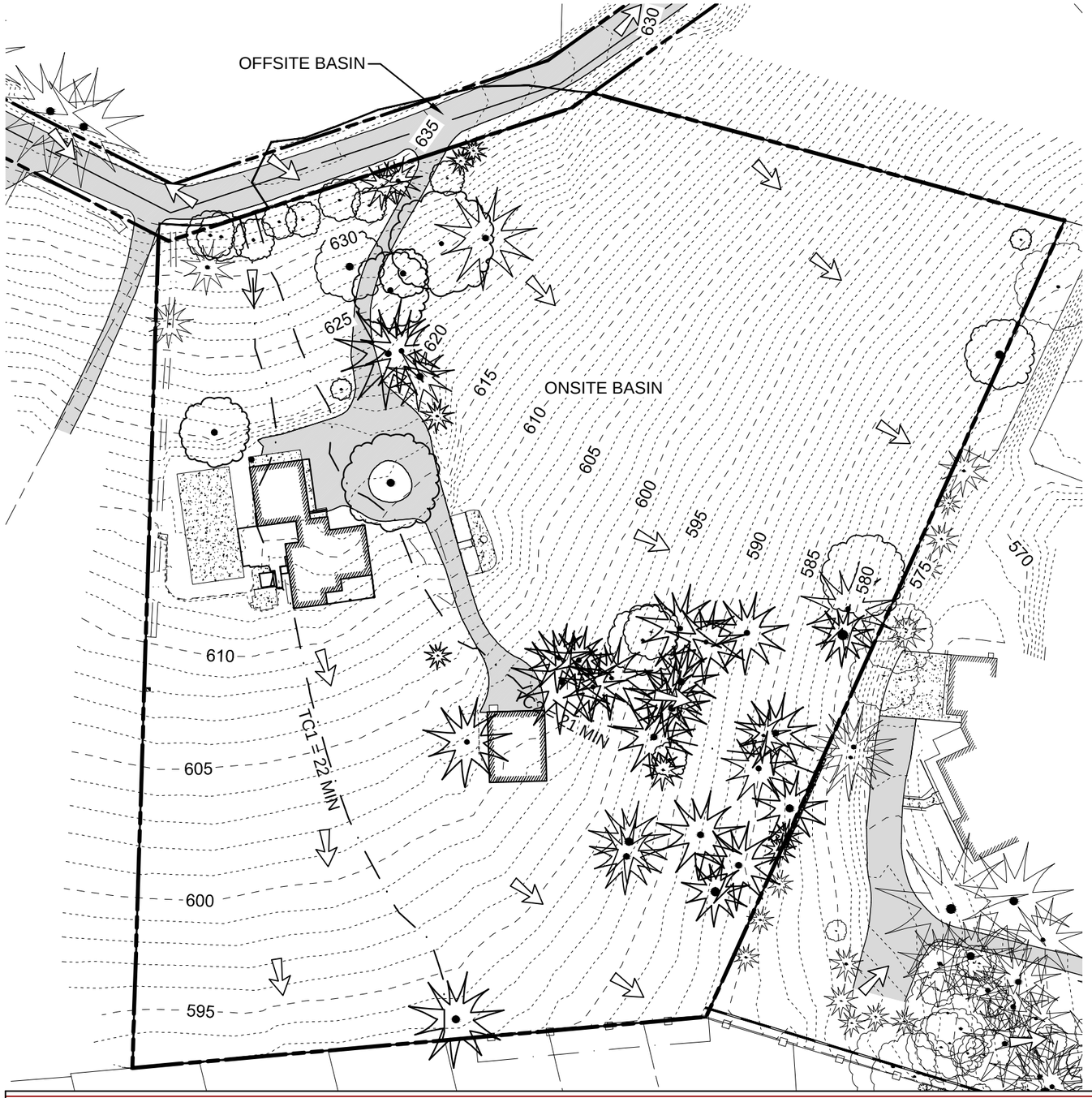
1 Average runoff condition, and $I_a = 0.2S$.

2 The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

3 CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

4 Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

5 Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.



LEGEND

- - - 600 - - - EXISTING MAJOR CONTOUR

EXISTING MINOR CONTOUR

FLOW DIRECTION

EXISTING CONCRETE (TO BE REMOVED)

EXISTING ASPHALT (TO BE REMOVED)

EXISTING BUILDING (TO BE REMOVED)

EXISTING BASIN LINE

ONSITE BASIN

EXISTING AREA	= 4.92 AC
IMPERVIOUS AREA	= 0.38 AC
PERVIOUS AREA	= 4.54 AC

OFFSITE BASIN

EXISTING AREA	= 0.12 AC
IMPERVIOUS AREA	= 0.08 AC
PERVIOUS AREA	= 0.04 AC

N

1 inch = 70 feet

0 35 70

3J CONSULTING, INC

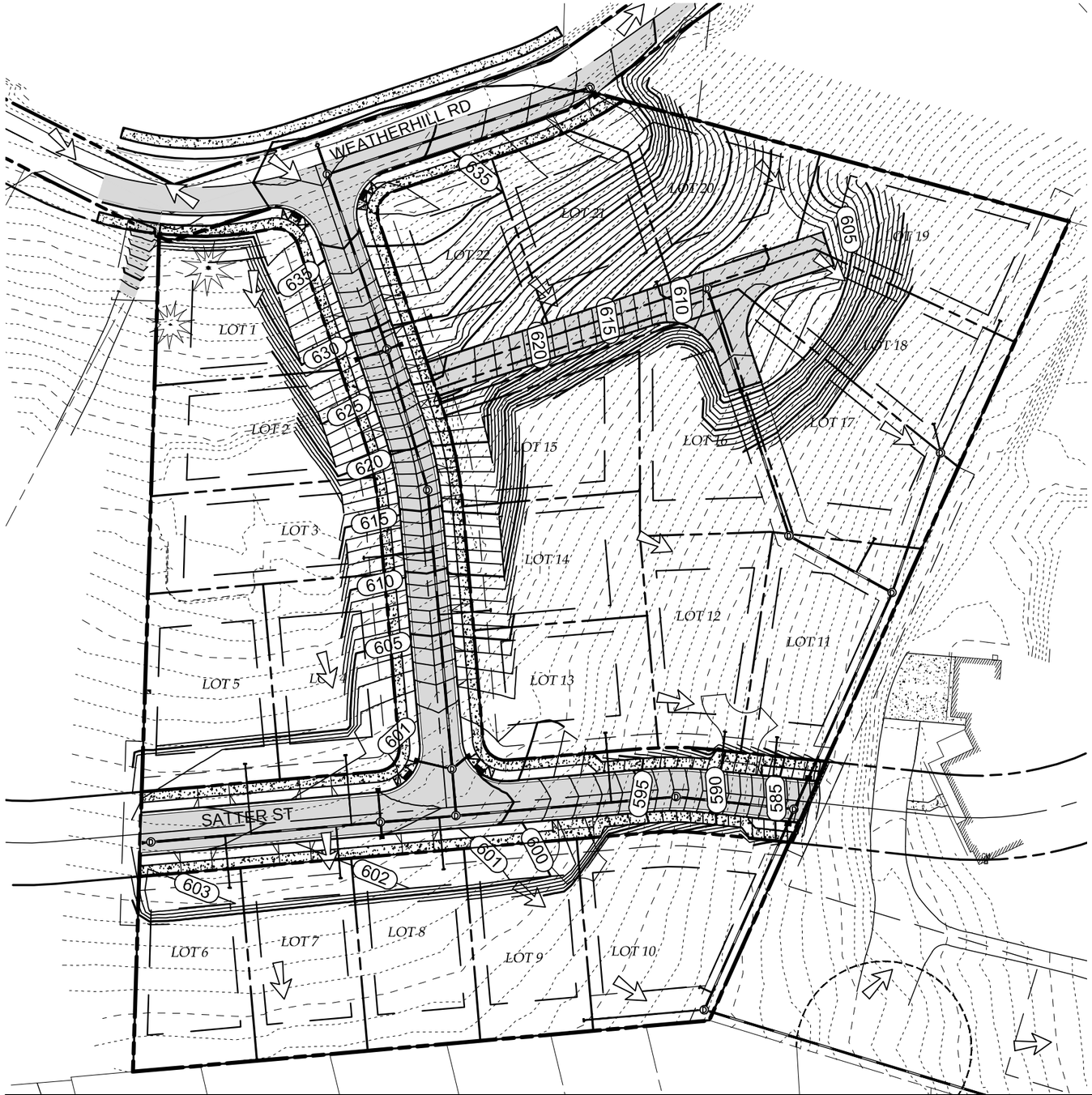
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING

EXISTING SITE CONDITIONS
WEATHERHILL ESTATES SUBDIVISION

Storm Report

Exhibit 1

Date: 03/17/15 **By: KEF**



LEGEND

- 600 EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 635 PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- FLOW DIRECTION
- PROPOSED LOT BOUNDARY
- PROPOSED LOT SETBACK LINE

POST DEVELOPED BASIN

TOTAL AREA (INCLUDES OFFSITE)	= 5.04 AC
*IMPERVIOUS AREA (INCLUDES OFFSITE)	= 2.42 AC
PERVIOUS AREA (INCLUDES OFFSITE)	= 2.62 AC

*ASSUMED 2,640 SF IMPERVIOUS AREA PER LOT

N

1 inch = 70 feet

0 35 70

3J CONSULTING, INC

CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING

POST-DEVELOPED SITE CONDITIONS
WEATHERHILL ESTATES SUBDIVISION

Storm Report

Exhibit 2

Date:03/17/15 **By: KEF**

DRAWINGS

Scale: 1 inch = 30 feet

30 15 0 15 30

LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY
- CENTERLINE
- LOT LINE
- BUILDING
- 1 FT CONTOUR
- 200 5 FT CONTOUR
- FENCE LINE
- W WATER LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- OHP OVERHEAD POWER
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING TELEPHONE PEDESTAL
- C C UNDERGROUND CABLE LINE
- ASPHALT
- CONCRETE
- EXISTING TREES

NOTES

1. UTILITY INFORMATION SHOWN ON THIS MAP IS BASED UPON OBSERVED FEATURES, RECORD DATA AND TONE MARKS PROVIDED BY PUBLIC UTILITY LOCATION SERVICES. NO WARRANTIES ARE MADE REGARDING THE ACCURACY OR COMPLETENESS OF THE UTILITY INFORMATION SHOWN. ADDITIONAL UTILITIES MAY EXIST. INTERESTED PARTIES ARE HEREBY ADVISED THAT UTILITY LOCATIONS SHOULD BE VERIFIED PRIOR TO DESIGN OR CONSTRUCTION OF ANY CRITICAL ITEMS.
2. VERTICAL DATUM: NAVD '88 UTILIZING GPS POSITIONING TIED TO THE ORIGIN WITH REAL TIME CORRECTORS REFERENCED TO NAD 83(2011).
3. TOPOGRAPHIC FEATURES SHOWN ON THIS MAP WERE LOCATED USING STANDARD PRECISION TOPOGRAPHIC MAPPING PROCEDURES. THIRD PARTY USERS OF DATA FROM THIS MAP PROVIDED VIA AUTOCAD DRAWING FILES OR DATA EXCHANGE FILES SHOULD NOT RELY ON ANY AUTOCAD GENERATED INFORMATION WHICH IS BEYOND THE LIMITS OF PRECISION OF THIS MAP. THIRD PARTIES USING DATA FROM THIS MAP IN AN AUTOCAD FORMAT SHOULD VERIFY ANY ELEMENTS REQUIRING PRECISE LOCATIONS PRIOR TO COMMENCEMENT OF ANY CRITICAL DESIGN OR CONSTRUCTION. CONTACT COMPASS ENGINEERING FOR FURTHER INFORMATION. FURTHERMORE, COMPASS ENGINEERING WILL NOT BE RESPONSIBLE NOR HELD LIABLE FOR ANY DESIGN OR CONSTRUCTION RELATED PROBLEMS THAT ARISE OUT OF THIRD PARTY USAGE OF THIS MAP (IN AUTOCAD OR OTHER FORMAT) FOR ANY PURPOSE OTHER THAN SPECIFICALLY STATED HEREIN. THIS STATEMENT IS AN OFFICIAL PART OF THIS MAP.

EXISTING CONDITIONS PLAN

THIS PLAN IS INTENDED FOR USE AS AN EXISTING CONDITIONS PLAN SHOWING THE CONDITIONS OF THE SITE PRIOR TO CONSTRUCTION. INFORMATION SHOWN ON THIS PLAN WAS DEVELOPED FROM THE TOPOGRAPHIC SURVEY, AERIAL PHOTOS, AND SITE OBSERVATIONS BY THE ENGINEER . NOT ALL SURFACE FEATURES OR UTILITIES MAY BE SHOWN. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION TO DETERMINE WORK SPECIFIC DETAILS. TOPOGRAPHIC INFORMATION PROVIDED BY COMPASS LAND SURVEYORS DATED JANUARY, 2015 .

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

811 Know what's **below.** **Call** before you dig.

LAND USE APPROVAL	04/01/2015
REVISION SUMMARY	BY DATE
A	

EXISTING CONDITIONS
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER 80055PE OREGON JULY 21, 2015 CLAY L FERGESTON EXPIRES: 12/31/15

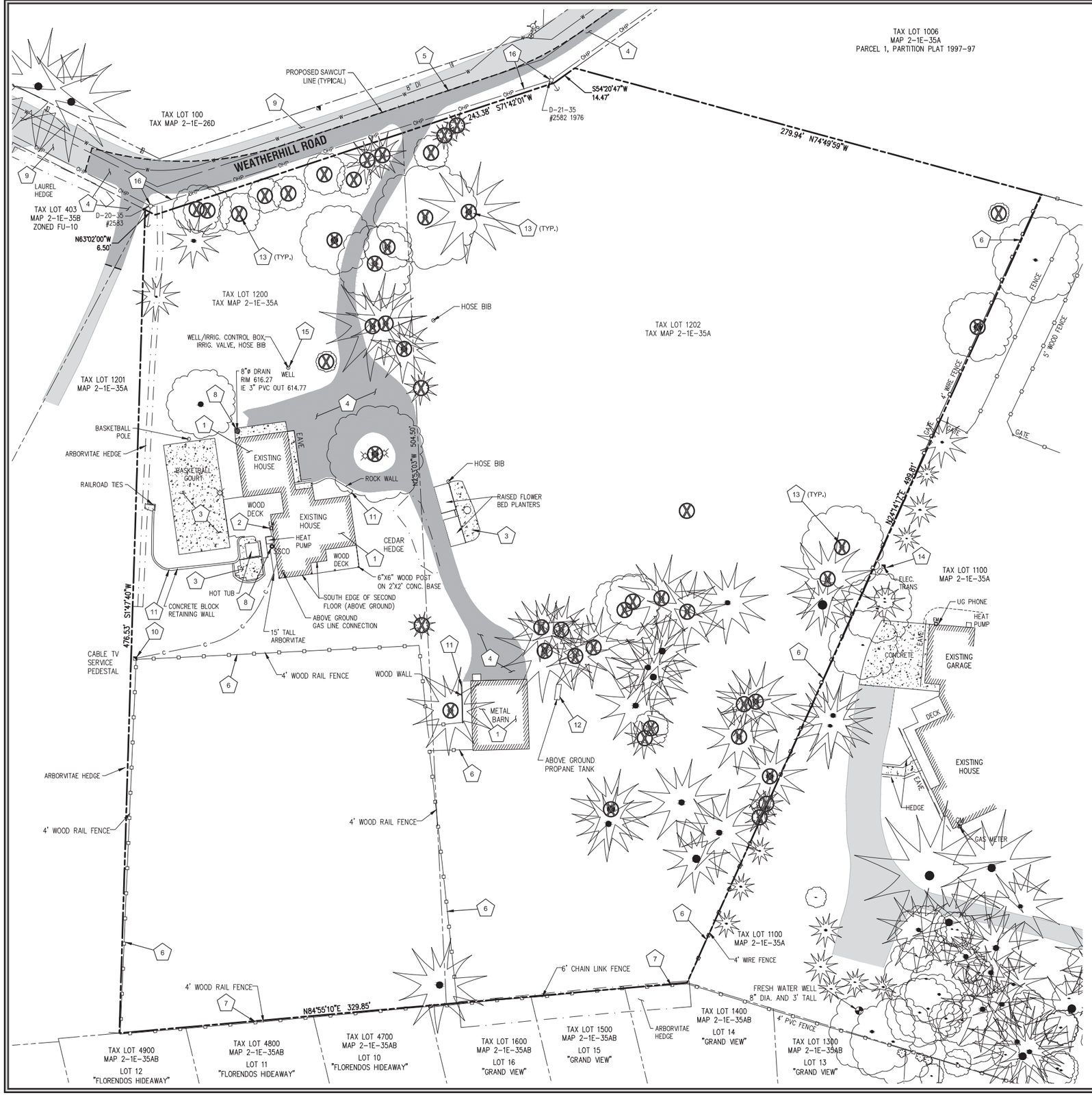
PRELIMINARY

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
EXISTING COND.'S

SHEET NUMBER
C1.0



LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY
- CENTERLINE
- EXISTING LOT LINE
- BUILDING
- FENCE LINE
- WATER LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- OVERHEAD POWER
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING TELEPHONE PEDESTAL
- UNDERGROUND CABLE LINE
- ASPHALT
- ASPHALT TO BE REMOVED
- CONCRETE
- EXISTING TREES TO REMAIN
- EXISTING TREES TO BE REMOVED
- SAWCUT LINE

DEMOLITION KEY

1	EXISTING BUILDING AND FOUNDATION TO BE DEMOLISHED. DEBRIS AND REFUSE TO BE DISPOSED OFF-SITE AT AN APPROVED LOCATION.
2	EXISTING POWER METER TO BE DISCONNECTED AND RETURNED TO POWER COMPANY. CAP SERVICE LINES AND REMOVE ALL CONDUITS AND WIRING WITHIN PROPERTY.
3	REMOVE EXISTING CONCRETE AND BASE ROCK. DISPOSE OF RUBBLE AND REFUSE OFF-SITE.
4	REMOVE EXISTING ASPHALT AND BASE ROCK. DISPOSE OF RUBBLE AND REFUSE OFF-SITE.
5	SAWCUT EXISTING ASPHALT PAVEMENT AS SHOWN.
6	REMOVE EXISTING FENCING AND DISPOSE OF OFF-SITE.
7	PROTECT EXISTING FENCING TO REMAIN.
8	REMOVE EXISTING STORM AND SEWER LINES AND STRUCTURES AND DISPOSE OF OFF-SITE (TYPICAL FOR ALL).
9	PROTECT EXISTING PAVEMENT TO REMAIN, SEE SHEET C2.1.
10	CABLE TV PROVIDER TO REMOVE EXISTING TELEPHONE PEDESTAL. CONTRACTOR TO COORDINATE WITH CABLE TV PROVIDER.
11	REMOVE EXISTING WALL AND DISPOSE OF REFUSE OFF-SITE (TYPICAL).
12	DECOMMISSION AND REMOVE PROPANE TANK. DISPOSE OF OFF-SITE.
13	REMOVE TREE
14	RELOCATE EXISTING TRANSFORMER AND PEDESTAL. CONTRACTOR TO COORDINATE WITH LAND OWNER AND ASSOCIATED PURVEYORS.
15	DECOMMISSION EXISTING WELL HEAD PER LOCAL, STATE AND FEDERAL REQUIREMENTS.
16	EXISTING UTILITIES TO BE INSTALLED UNDERGROUND. CONTRACTOR TO COORDINATE WITH PURVEYORS.

GENERAL DEMOLITION NOTES

1. DEMOLITION NOTES ARE FOR CLARIFICATION ONLY AND ARE SHOWN FOR THE CONTRACTOR'S BENEFIT. THESE NOTES ARE NOT INTENDED TO BE COMPREHENSIVE. THE CONTRACTOR SHALL REMOVE OR RELOCATE ALL EXISTING ON-SITE IMPROVEMENTS NECESSARY TO ACCOMMODATE THE PROPOSED CONSTRUCTION.
2. ALL EXISTING PROPERTY UTILITY SERVICES TO BE TERMINATED AND CAPPED AT THE RIGHT OF WAY PRIOR TO DEMOLISHING ANY EXISTING BUILDINGS.
3. CONTRACTOR IS TO REMOVE ALL EXISTING SURFACE IMPROVEMENTS AND DEBRIS WITHIN THE LIMITS OF WORK UNLESS OTHERWISE NOTED. ALL DEBRIS FOUND ON SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE STATE CODES.
4. CONTRACTOR TO PROTECT EXISTING FEATURES WHICH ARE TO REMAIN.
5. CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLE RIMS, DRAINAGE STRUCTURES, VALVE BOXES, VAULT LIDS AND UTILITY ACCESS STRUCTURES TO FINISH GRADE WITHIN AREAS AFFECTED BY PROPOSED CONSTRUCTION.
6. CONSTRUCTION AND DEMOLITION ACTIVITIES SHALL BE PHASED IN SUCH A MANNER AS TO ENSURE THAT PUBLIC ACCESS ROADS ARE NOT BLOCKED AND REMAIN OPERATIONAL.
7. SEE TREE PROTECTION AND REMOVAL PLAN (SHEET C1.3) FOR ALL TREE REMOVAL INFORMATION.

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

Know what's **below.** **Call** before you dig.

LAND USE APPROVAL	04/01/2015
REVISION SUMMARY	BY DATE

DEMOLITION PLAN
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER 80054 OREGON JULY 21, 2006 JEFFREY L. FERGESON
PRELIMINARY
EXPIRES 12/31/15

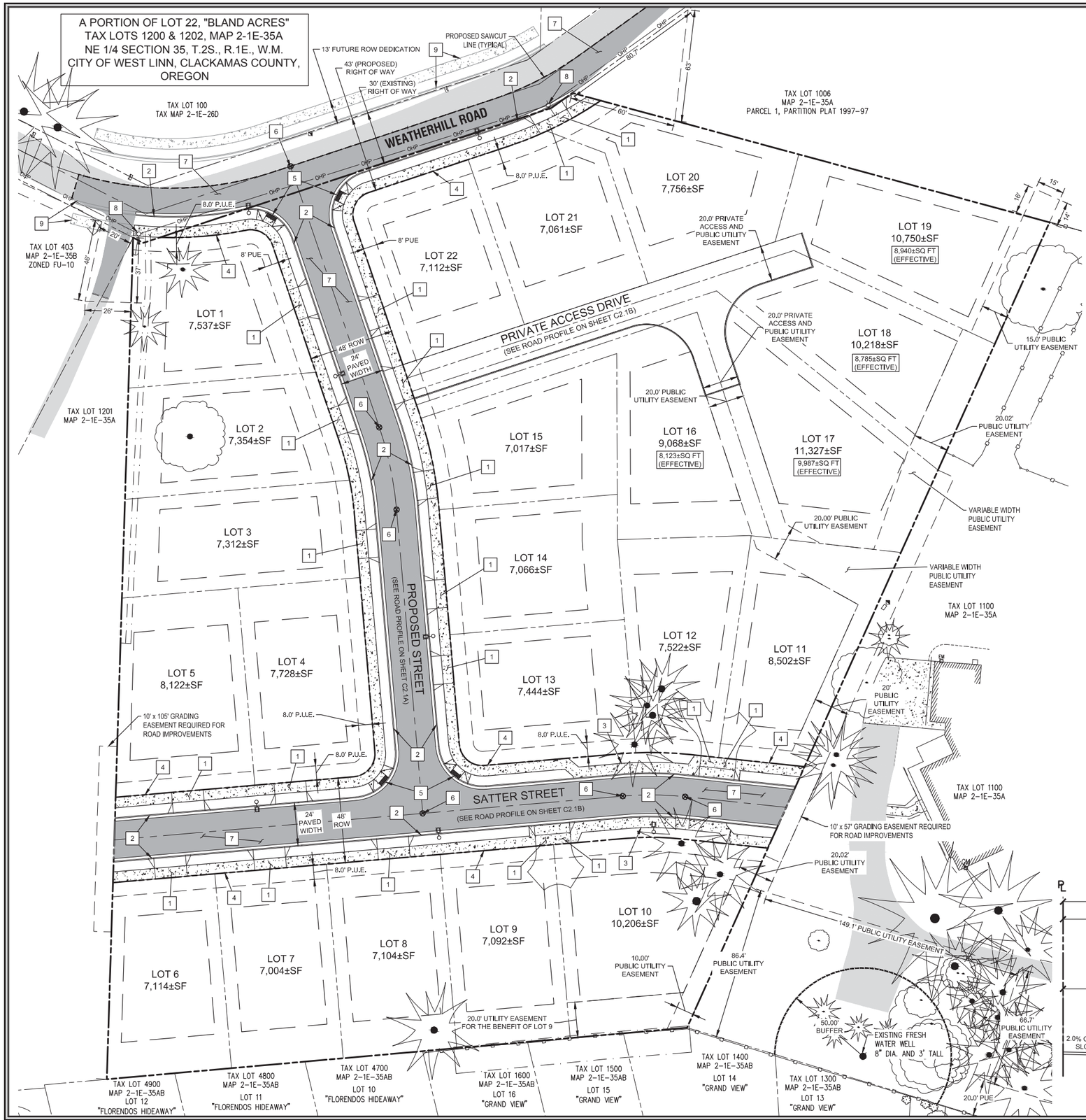
3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
DEMOLITION

SHEET NUMBER
C1.1

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON



Scale: 1 inch = 30 feet
30 15 0 15 30

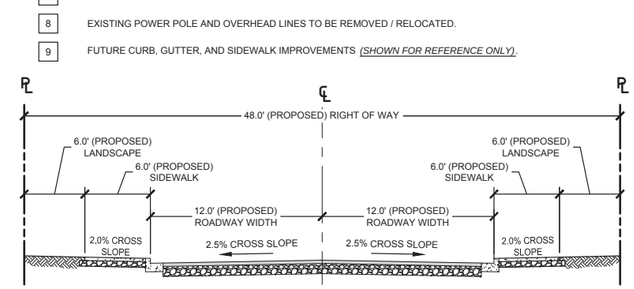
Know what's **below.** **Call** before you dig.

LEGEND

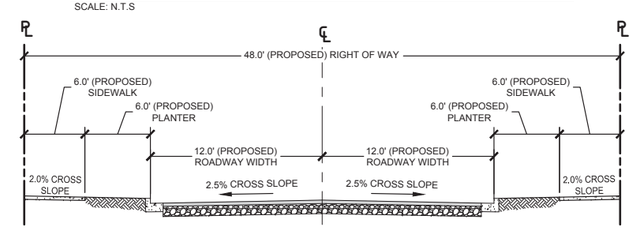
- BOUNDARY LINE
- EXISTING RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING TREES TO REMAIN
- EXISTING ASPHALT
- OHP — OVERHEAD POWER WIRE
- EXISTING UTILITY POLE WITH GUY WIRE
- PROPOSED MONUMENT
- PROPOSED BUILDING SETBACK
- PROPOSED LOT LINE
- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- PROPOSED EASEMENT
- PROPOSED RIGHT-OF-WAY
- PROPOSED CENTERLIINE
- PROPOSED STREET LIGHT

CONSTRUCTION KEY NOTES

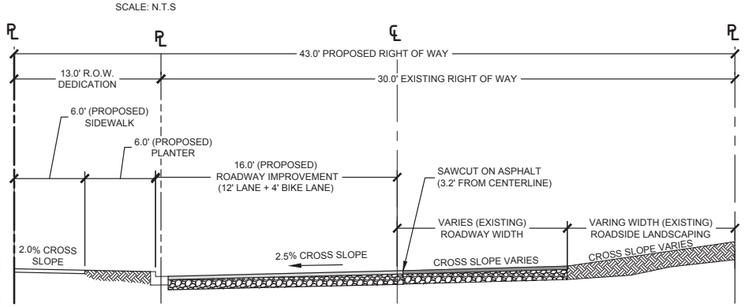
1. PROPOSED LOT ACCESS LOCATION.
2. CONSTRUCT STANDARD CURB AND GUTTER PER CITY OF WEST LINN STANDARD DETAIL WL-501 (TYPICAL CURBS).
3. CONSTRUCT 6 FT WIDE CURB TIGHT SIDEWALK PER CITY OF WEST LINN STANDARD DETAIL WL-508 (CONCRETE SIDEWALK CROSS SECTION).
4. CONSTRUCT 6 FT WIDE DETACHED SIDEWALK PER CITY OF WEST LINN STANDARD DETAIL WL-508 (CONCRETE SIDEWALK CROSS SECTION).
5. CONSTRUCT CURB RAMP PER CITY OF WEST LINN STANDARD DETAIL WL-507A (SINGLE CURB RAMP).
6. INSTALL SURVEY MONUMENT PER CLACKAMAS COUNTY SPECIFICATIONS.
7. INSTALL ASPHALT PAVEMENT SECTION.
8. EXISTING POWER POLE AND OVERHEAD LINES TO BE REMOVED / RELOCATED.
9. FUTURE CURB, GUTTER, AND SIDEWALK IMPROVEMENTS *(SHOWN FOR REFERENCE ONLY)*.



TYPICAL SECTION - SATTER STREET (CURB TIGHT SIDEWALK)
SCALE: N.T.S



TYPICAL SECTION - SATTER ST. / PROPOSED STREET IMPROVEMENTS
SCALE: N.T.S



TYPICAL SECTION - WEATHERHILL RD IMPROVEMENTS
SCALE: N.T.S

DATE	BY	REVISION SUMMARY
04/01/2015		LAND USE APPROVAL

SITE PLAN
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER 80055 OREGON JULY 21, 2010 CLAY L. FERGESON EXPIRES: 12/31/15

PRELIMINARY

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

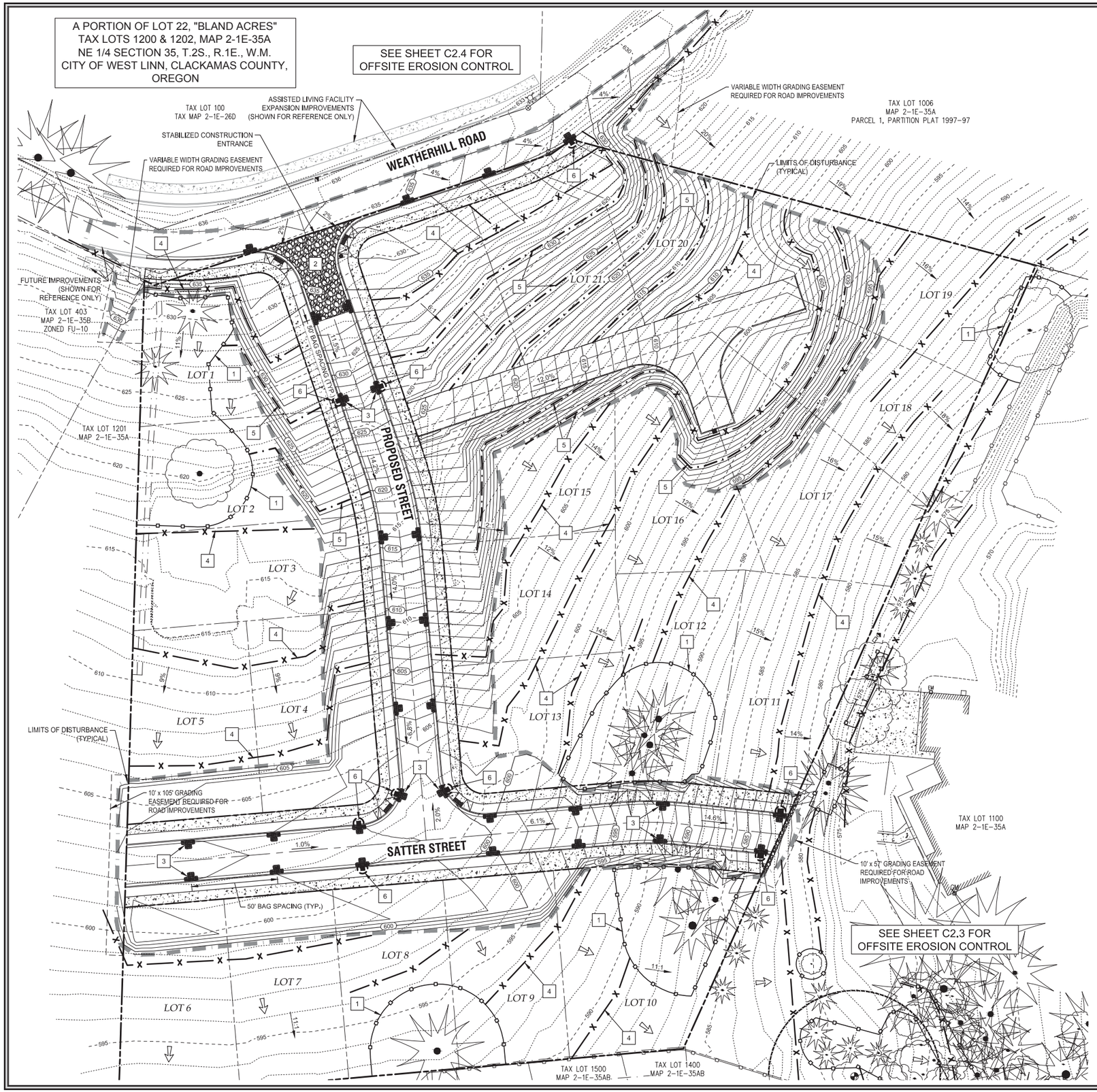
3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
SITE PLAN

SHEET NUMBER
C2.1

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

SEE SHEET C2.4 FOR OFFSITE EROSION CONTROL



Scale: 1 inch = 30 feet
30 15 0 15 30

LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING ON-SITE TREES TO REMAIN
- EXISTING 1FT CONTOUR
- EXISTING 5FT INDEX CONTOUR
- PROPOSED LOT LINE
- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE
- PROPOSED 1FT CONTOUR
- PROPOSED 5FT INDEX CONTOUR
- EROSION CONTROL: SILT FENCING (BLACK)
- EROSION CONTROL: FESCUE STRAW WATTLE
- EROSION CONTROL: BIO BAG CHECK DAM
- EROSION CONTROL: CONSTRUCTION ENTRANCE
- LIMITS OF GRADING/DISTURBANCE
- SURFACE RUN-OFF FLOW ARROW
- EROSION CONTROL: INLET PROTECTION
- TREE PROTECTION FENCING

SITE GRADING INFORMATION	
NEAT LINE CUT	1,371 CY
NEAT LINE FILL	14,037 CY
STRIPPINGS*	2,090 CY
MAXIMUM CUT DEPTH	4.4 FT
MAXIMUM FILL DEPTH	12.5 FT
MAXIMUM PROPOSED SLOPE	2:1 (H:V)
TOTAL AREA OF DISTURBANCE	2.59 ACRES

(ASSUMED REPLACEMENT / STOCKPILE ON SITE OUTSIDE BUILDING ENVELOPE)*

GRADING KEY NOTES

1	PLACE TREE PROTECTION FENCING AT LIMITS OF GRADING AND FOR CONSTRUCTION WHERE SHOWN
2	CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AT LOCATION SHOWN
3	PLACE BIO-BAG CHECK DAM FOR SEDIMENT CONTROL ADJACENT TO ALL NEW CONCRETE WORK WITHIN RIGHT OF WAY
4	PLACE SILT FENCING AT LIMITS OF GRADING AND CONSTRUCTION WHERE SHOWN
5	INSTALL STRAW WATTLE
6	INSTALL INLET PROTECTION
7	CONSTRUCT FRENCH TO INTERCEPT RUNOFF ONTO NEIGHBORING PROPERTY

GRADING GENERAL NOTES:

1. ALL GRADING ACTIVITIES SHALL CONFORM TO THE UNIFORM BUILDING CODE AND THE OREGON SPECIALTY CODE AMENDMENTS, INCLUDING APPENDIX J.

811 Know what's below. Call before you dig.

LAND USE APPROVAL	04/01/2015
REVISION SUMMARY	BY DATE
A	

GRADING AND EROSION CONTROL PLAN
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

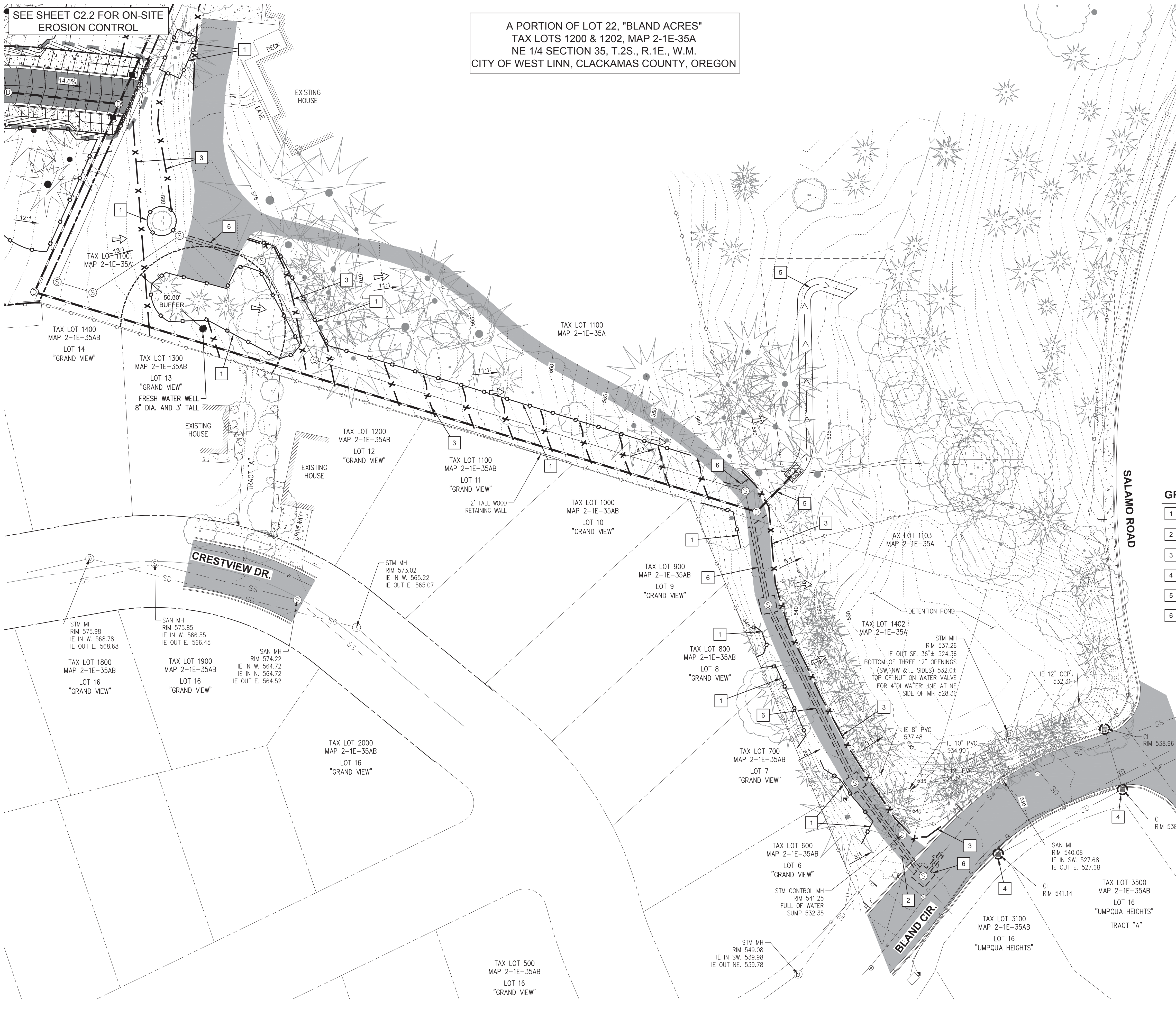
REGISTERED PROFESSIONAL ENGINEER 80054 OREGON JULY 21, 2015 CLIFFORD L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
GRADING / ESCP

SHEET NUMBER
C2.2



LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING CURB AND GUTTER
- EXISTING TREES TO REMAIN
- EXISTING 1FT CONTOUR (207)
- EXISTING 5FT INDEX CONTOUR (208)
- PROPOSED LOT LINE
- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE
- PROPOSED 1FT CONTOUR (207)
- PROPOSED 5FT INDEX CONTOUR (208)
- EROSION CONTROL: SILT FENCING (BLACK)
- EROSION CONTROL: FESCUE STRAW WATTLE
- LIMITS OF GRADING/DISTURBANCE
- SURFACE RUN-OFF FLOW ARROW
- EROSION CONTROL: INLET PROTECTION
- TREE PROTECTION FENCING

GRADING KEY NOTES

1. PLACE TREE PROTECTION FENCING AT LIMITS OF GRADING AND FOR CONSTRUCTION WHERE SHOWN
2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AS REQUIRED
3. PLACE SILT FENCING AT LIMITS OF GRADING AND CONSTRUCTION WHERE SHOWN
4. INSTALL INLET PROTECTION
5. INSTALL 150' DRAINAGE SWALE UPSTREAM OF EXISTING DETENTION POND
6. SAWCUT, REMOVE, AND REPLACE PAVEMENT TO MATCH EXISITNG

GRADING GENERAL NOTES:

1. ALL GRADING ACTIVITIES SHALL CONFORM TO THE UNIFORM BUILDING CODE AND THE OREGON SPECIALTY CODE AMENDMENTS, INCLUDING APPENDIX J.
2. APPROXIMATE EXCAVATION REQUIRED FOR DRAINAGE SWALE = 56 CY.

Know what's below. Call before you dig.

#	REVISION SUMMARY	BY	DATE
	LAND USE APPROVAL		04/01/2015

OFFSITE GRADING AND EROSION CONTROL PLAN

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

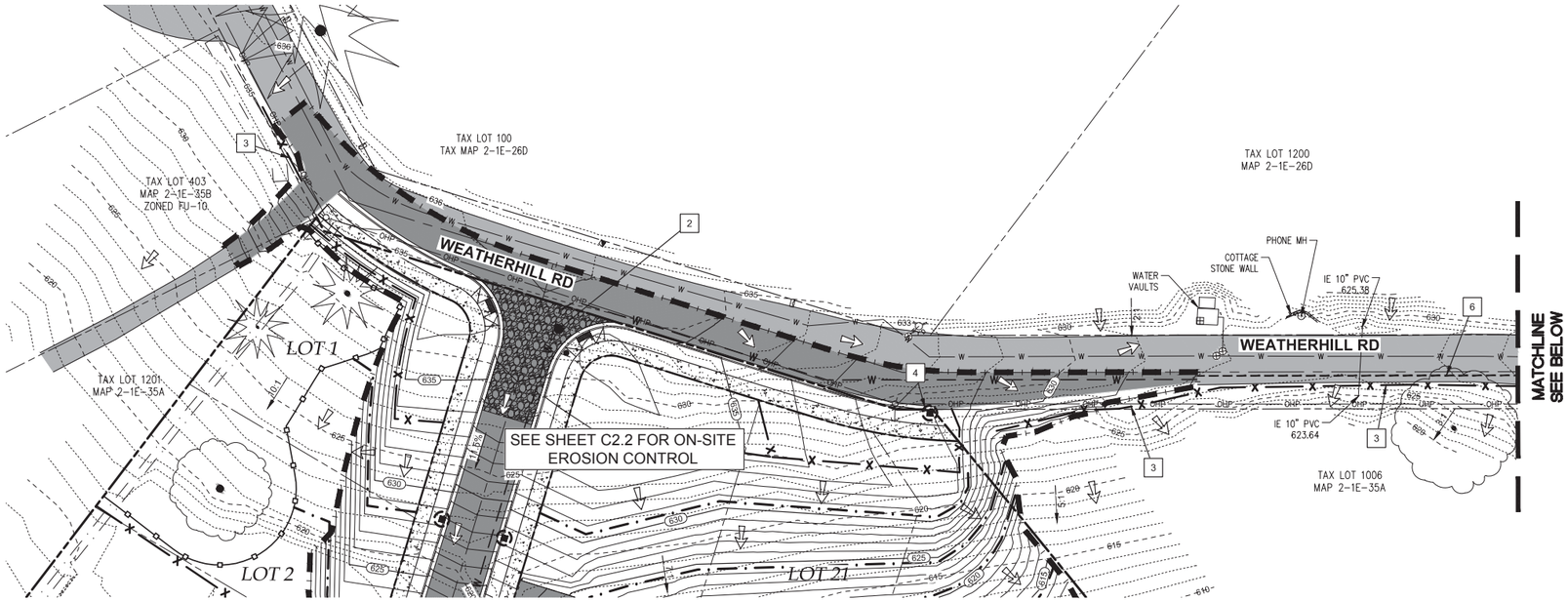
REGISTERED PROFESSIONAL ENGINEER 80055PE OREGON ... 21, 2014 ...Y L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

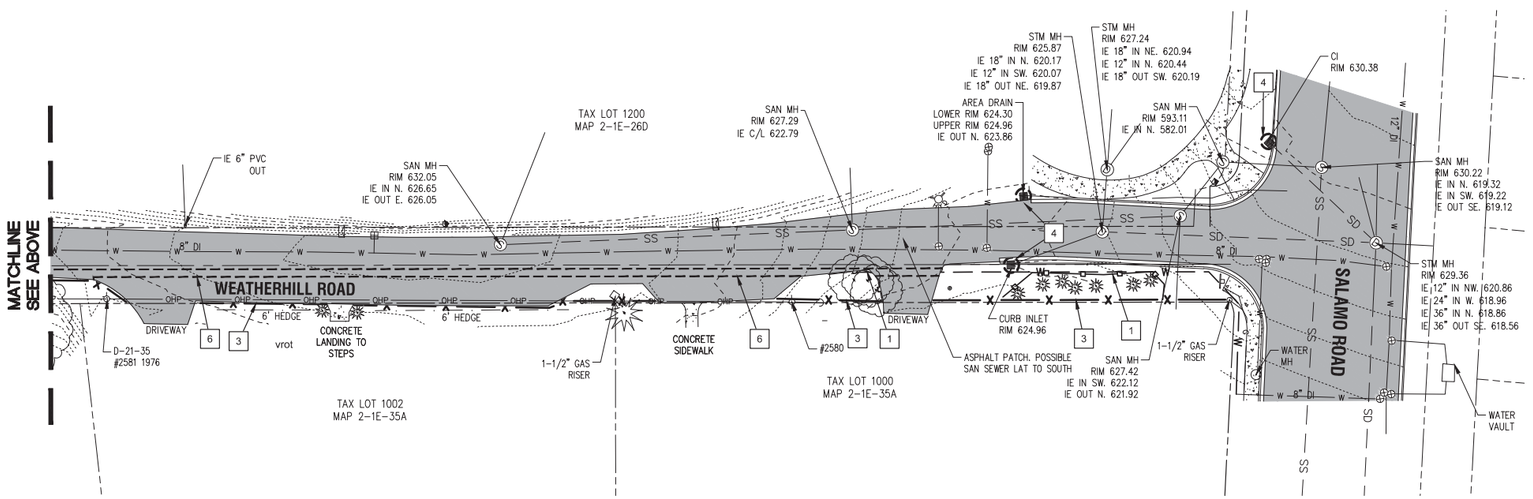
3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID # 13171
LAND USE #
TAX LOT #'S
DESIGNED BY CLF
CHECKED BY JDH

SHEET TITLE
OFFSITE ESCP

SHEET NUMBER
C2.3





LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING CURB AND GUTTER
- EXISTING TREES TO REMAIN
- EXISTING 1FT CONTOUR
- EXISTING 5FT INDEX CONTOUR
- PROPOSED LOT LINE
- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE
- PROPOSED 1FT CONTOUR
- PROPOSED 5FT INDEX CONTOUR
- EROSION CONTROL: SILT FENCING (BLACK)
- EROSION CONTROL: FESCUE STRAW WATTLE
- LIMITS OF GRADING/DISTURBANCE
- SURFACE RUN-OFF FLOW ARROW
- EROSION CONTROL: INLET PROTECTION
- TREE PROTECTION FENCING

GRADING KEY NOTES

1. PLACE TREE PROTECTION FENCING AT LIMITS OF GRADING AND FOR CONSTRUCTION WHERE SHOWN
2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AS REQUIRED
3. PLACE SILT FENCING AT LIMITS OF GRADING AND CONSTRUCTION WHERE SHOWN
4. INSTALL INLET PROTECTION
5. SAWCUT, REMOVE, AND REPLACE PAVEMENT TO MATCH EXISITNG

GRADING GENERAL NOTES:

1. ALL GRADING ACTIVITIES SHALL CONFORM TO THE UNIFORM BUILDING CODE AND THE OREGON SPECIALTY CODE AMENDMENTS, INCLUDING APPENDIX J.

Know what's below.
Call before you dig.

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

	REVISION SUMMARY	BY	DATE
A	LAND USE APPROVAL		04/01/2015

OFFSITE GRADING AND EROSION CONTROL PLAN

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80056PE
OREGON
JULY 21, 2010
CLIFFORD L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
OFFSITE ESCP

SHEET NUMBER
C2.4

Scale: 1 inch = 30 feet

30 15 0 15 30

LEGEND

- BOUNDARY LINE
- EXISITNG RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CENTERLINE
- PROPOSED LOT LINE
- PROPOSED CURB
- PROPOSED SIDEWALK
- PROPOSED SETBACK LINE
- SANITARY SEWER LINE AND MANHOLE
- STORM DRAIN LINE AND MANHOLE
- DOMESTIC WATER SERVICE & METER
- STORM SEWER LATERAL AS NOTED
- SANITARY SEWER LATERAL AS NOTED
- STORM SEWER CURB INLET
- PROPOSED STREET LIGHT
- UTILITY/ACCESS EASEMENT

STORM SEWER CONSTRUCTION NOTES

1. PROVIDE 4" PRIVATE STORM DRAIN LATERAL CONNECTION FOR INDIVIDUAL LOT SERVICE. EXTEND SERVICE LATERAL 3' BEYOND PUE.
2. CONSTRUCT STANDARD 48" STORM SEWER MANHOLE.
3. CONSTRUCT CURB INLET WITH 10" STORM LINE.
4. INSTALL 6" CLEAN OUT AS REQUIRED.
5. CONSTRUCT FLOW-THRU CURB INLET WITH STORM LINE SIZED AS NOTED.
6. CAP PROPOSED 12" STORM MAIN.

SANITARY SEWER CONSTRUCTION NOTES

1. PROVIDE NEW 4" SANITARY SEWER LATERAL FOR INDIVIDUAL LOT SERVICE. EXTEND SERVICE LATERAL 3' BEYOND PUE.
2. CONSTRUCT STANDARD 48" SANITARY SEWER MANHOLE.
3. CONSTRUCT STANDARD 48" SANITARY SEWER MANHOLE.
3. INSTALL 6" CLEAN OUT AS REQUIRED.

WATER CONSTRUCTION NOTES

1. INSTALL SINGLE WATER METER FOR INDIVIDUAL LOT SERVICE. EXTEND 1" SERVICE LATERAL 3' BEYOND PUE.
2. INSTALL STANDARD BLOW-OFF.

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

Know what's below. Call before you dig.

	DATE	BY	REVISION SUMMARY
A	04/01/2015		LAND USE APPROVAL

COMPOSITE UTILITY PLAN

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80054PE
OREGON
JULY 21, 2006
JEFFREY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
UTILITY PLAN

SHEET NUMBER
C3.0

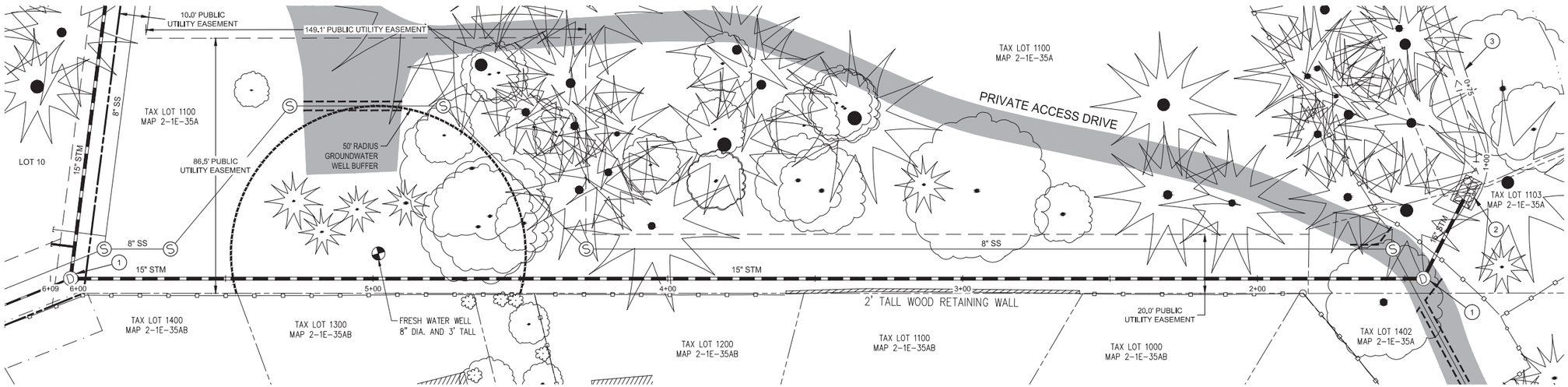
STORM SEWER CONSTRUCTION NOTES	
1	CONSTRUCT STANDARD 48" STORM SEWER MANHOLE
2	INSTALL RIP RAP OUTFALL PAD
3	CONSTRUCT APPROXIMATELY 8' WIDE X 2' DEEP X 150' LONG WQ QUALITY SWALE

LEGEND

- BOUNDARY LINE
- EXISITNG RIGHT-OF-WAY
- EXISTING LOT LINE
- EXISTING ASPHALT
- SANITARY SEWER LINE AND MANHOLE
- STORM DRAIN LINE AND MANHOLE
- UTILITY/ACCESS EASEMENT
- PROPOSED SAWCUT

Scale: 1 inch = 20 feet

20 10 0 10 20



OFFSITE STORM LINE 'O' PLAN

811 Know what's **below.** **Call** before you dig.

LAND USE APPROVAL	BY	DATE
REVISION SUMMARY		
A		

OFFSITE STORM IMPROVEMENTS

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR

BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER 80055PE OREGON JULY 21, 2010 CLIFFORD L. FERGESON

PRELIMINARY

EXPIRES: 12/31/15

3J CONSULTING, INC

CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING

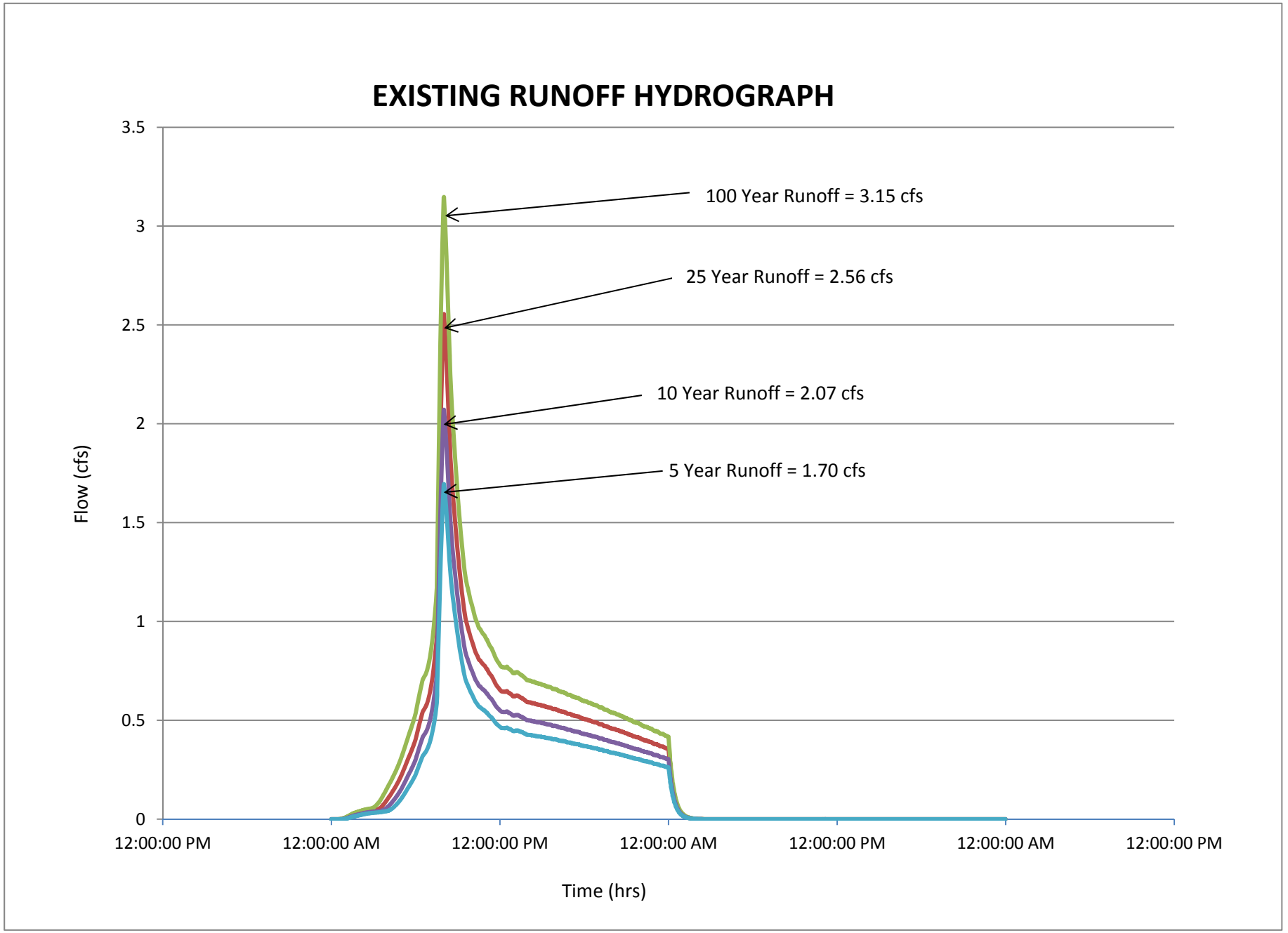
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

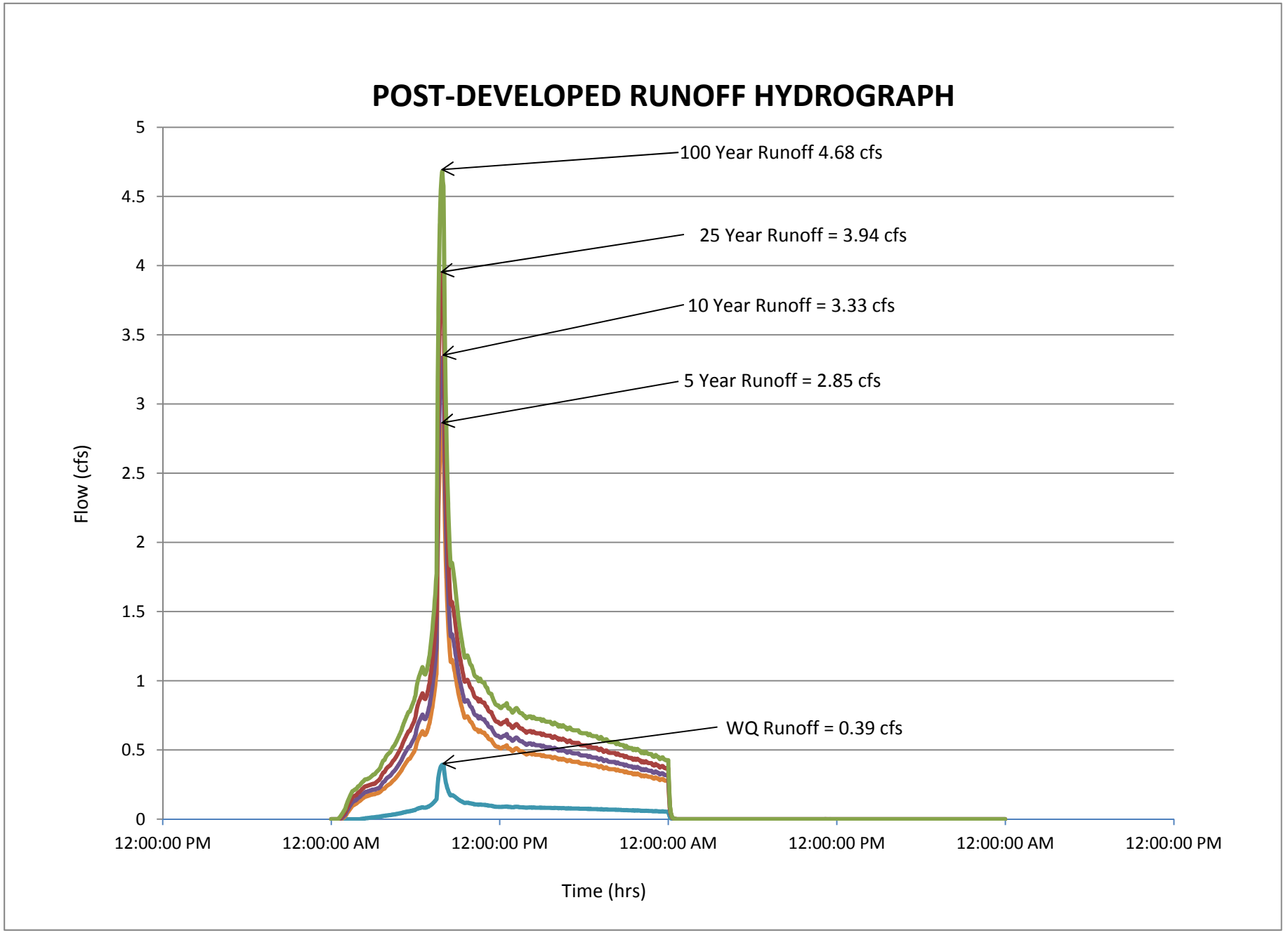
3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
OFFSITE STORM

SHEET NUMBER
C3.5

HYDROGRAPHS


EXISTING RUNOFF HYDROGRAPH
100 Year Runoff = 3.15 cfs
25 Year Runoff = 2.56 cfs
10 Year Runoff = 2.07 cfs
5 Year Runoff = 1.70 cfs
Flow (cfs)
3.5
3
2.5
2
1.5
1
0.5
0
12:00:00 PM
12:00:00 AM
12:00:00 PM
12:00:00 AM
12:00:00 PM
12:00:00 AM
12:00:00 PM
Time (hrs)


POST-DEVELOPED RUNOFF HYDROGRAPH
100 Year Runoff 4.68 cfs
25 Year Runoff = 3.94 cfs
10 Year Runoff = 3.33 cfs
5 Year Runoff = 2.85 cfs
WQ Runoff = 0.39 cfs
Flow (cfs)
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
12:00:00 PM
12:00:00 AM
12:00:00 PM
12:00:00 AM
12:00:00 PM
12:00:00 AM
12:00:00 PM
Time (hrs)

CALCULATIONS

Time of Concentration

PROJECT NO.	13171 Weatherhill Estates	BY	KEF	DATE	3/25/2015

	TC 1	TC 2	
SHEET FLOW			
INPUT	**VALUE**	**VALUE**	**VALUE**
Surface Description	**Type 6 Grass (dense)**	**Type 6 Grass (dense)**	**Type 5 Grass (short prairie)**
Manning's "n"	**0.24**	**0.24**	**0.15**
Flow Length, L (<300 ft)	**300** ft	**300** ft	**0** ft
2-Yr 24 Hour Rainfall, P_2	**2.5** in	**2.5** in	**2.5** in
Land Slope, s	**0.094** ft/ft	**0.1027** ft/ft	**0.0025** ft/ft
OUTPUT			
Travel Time	0.35 hr	0.34 hr	0.00 hr
SHALLOW CONCENTRATED FLOW			
INPUT	**VALUE**	**VALUE**	**VALUE**
Surface Description	**Unpaved**	**Unpaved**	**Unpaved**
Flow Length, L	**209** ft	**209** ft	**0** ft
Watercourse Slope*, s	**0.066** ft/ft	**0.1133** ft/ft	**0.027** ft/ft
OUTPUT			
Average Velocity, V	4.15 ft/s	5.43 ft/s	2.65 ft/s
Travel Time	0.014 hr	0.011 hr	0.000 hr
CHANNEL FLOW			
INPUT	**VALUE**	**VALUE**	**VALUE**
Cross Sectional Flow Area, a	**7.5** ft^2	**7.5** ft^2	**15.05** ft^2
Wetted Perimeter, P_w	**11.28** ft	**11.28** ft	**7.69** ft
Channel Slope, s	**0.003** ft/ft	**0.003** ft/ft	**0.00** ft/ft
Manning's "n"	**0.24**	**0.24**	**0.24**
Flow Length, L	**0** ft	**0** ft	**0** ft
OUTPUT			
Average Velocity	0.26 ft/s	0.26 ft/s	0.53 ft/s
Hydraulic Radius, r = a / P_w	0.66 ft	0.66 ft	1.96 ft
Travel Time	0.00 hr	0.00 hr	0.00 hr
Watershed or Subarea T_c =	**0.36 hr**	**0.35 hr**	**0.00 hr**
Watershed or Subarea T_c =	**22 minutes**	**21 minutes**	**0 minutes**

Swale Calculations

SUBJECT	Weatherhill Estates Water Quality Swale		
PROJECT NO.	13171	**BY** KEF	**DATE** 4/3/2015

Swale Characteristics		
Input		**Value**
Q	Peak design storm discharge	**0.39** cfs
n	Roughness factor*	**0.25**
B	Swale width at base (minimum = 2')	**2** ft
Z	Side Slopes X:1 (maximum = 4:1)	**4** H:1V
s	Slope of channel (ft/ft, 0.005 minimum)	**0.01** ft/ft
t	Minimum hydraulic residence time	**9.78** min
Flow Results (Q)		
Input		**Value**
Y	Normal depth (1' freeboard required if high flow is not bypassed)	**0.42** ft
P	Wetted perimeter	**5.43** ft
A	Cross section flow area	**1.53** ft^2
R	Hydraulic radius	**0.28** ft
W	Width of water surface in Swale	**5.33** ft
V	Velocity	**0.26** ft/s
L	Length	**150.0** ft

**n values: 0.25 per City of Portland's SWMM*

GEOTECHNICAL REPORT

GeoPacific Engineering, Inc.

Real-World Geotechnical Solutions
Investigation • Design • Construction Support

February 13, 2015
Project No. 14-3636

John Wyland
J.T. Smith Companies
5282 Meadows Road, Suite 171
Lake Oswego, Oregon 97035

Copy: Brian Feeney (brian.feeney@3j-consulting.com)

SUBJECT: GEOTECHNICAL REPORT
WEATHERHILL II
22850 S. WEATHERHILL ROAD
WEST LINN, OREGON

This report presents the results of a geotechnical engineering study conducted by GeoPacific Engineering, Inc. (GeoPacific) for the above-referenced project. The purpose of our investigation was to evaluate subsurface conditions at the site and to provide geotechnical recommendations for site development. This geotechnical study was performed in accordance with GeoPacific Proposal No. P-5040, dated December 4, 2014, and your subsequent authorization of our proposal and *General Conditions for Geotechnical Services*.

SITE DESCRIPTION AND PROPOSED DEVELOPMENT

The subject site is located on the south side of South Weatherhill Road in West Linn, Clackamas County, Oregon. The property is approximately 4.92 acres in size and topography is gently to moderately sloping to the south at grades of approximately 10 to 20 percent. The site is currently occupied by one home and one outbuilding. Vegetation consists primarily of short grasses and sparse trees.

It is our understanding that proposed development includes 22 lots for single family homes, construction of approximately 780 lineal feet of new streets, and associated underground utilities. A water quality facility is planned in the southeastern portion of the site. The existing home will be removed. A grading plan has not been provided for our review; however, we anticipate maximum cuts and fills will be on the order of 10 feet or less.

REGIONAL AND LOCAL GEOLOGIC SETTING

The subject site lies within the Willamette Valley/Puget Sound lowland, a broad structural depression situated between the Coast Range on the west and the Cascade Range on the east. A series of discontinuous faults subdivide the Willamette Valley into a mosaic of fault-bounded,

structural blocks (Yeats et al., 1996). Uplifted structural blocks form bedrock highlands, while down-warped structural blocks form sedimentary basins.

The site is located on a south facing slope at elevations of approximately 570 to 620 feet above sea level. The subject site is underlain by the Miocene aged (about 14.5 to 16.5 million years ago) Columbia River Basalt Formation, which are a thick sequence of lava flows which form the crystalline basement of the Tualatin Valley (Beeson et al., 1989). The basalts are composed of dense, finely crystalline rock that is commonly fractured along blocky and columnar vertical joints. Individual basalt flow units typically range from 25 to 125 feet thick and interflow zones are typically vesicular, scoriaceous, brecciated, and sometimes include sedimentary rocks.

REGIONAL SEISMIC SETTING

At least three major fault zones capable of generating damaging earthquakes are thought to exist in the vicinity of the subject site. These include the Portland Hills Fault Zone, the Gales Creek-Newberg-Mt. Angel Structural Zone, and the Cascadia Subduction Zone.

Portland Hills Fault Zone

The Portland Hills Fault Zone is a series of NW-trending faults that include the central Portland Hills Fault, the western Oatfield Fault, and the eastern East Bank Fault. These faults occur in a northwest-trending zone that varies in width between 3.5 and 5.0 miles. The combined three faults vertically displace the Columbia River Basalt by 1,130 feet and appear to control thickness changes in late Pleistocene (approx. 780,000 years) sediment (Madin, 1990). The Portland Hills Fault occurs along the Willamette River at the base of the Portland Hills, and is about 4 miles northeast of the site. The Oatfield Fault occurs along the western side of the Portland Hills, and is about 3 miles northeast of the site. The Oatfield Fault is considered to be potentially seismogenic (Wong, et al., 2000). Madin and Mabey (1996) indicate the Portland Hills Fault Zone has experienced Late Quaternary (last 780,000 years) fault movement; however, movement has not been detected in the last 20,000 years. The accuracy of the fault mapping is stated to be within 500 meters (Wong, et al., 2000). No historical seismicity is correlated with the mapped portion of the Portland Hills Fault Zone, but in 1991 a M3.5 earthquake occurred on a NW-trending shear plane located 1.3 miles east of the fault (Yelin, 1992). Although there is no definitive evidence of recent activity, the Portland Hills Fault Zone is assumed to be potentially active (Geomatrix Consultants, 1995).

Gales Creek-Newberg-Mt. Angel Structural Zone

The Gales Creek-Newberg-Mt. Angel Structural Zone is a 50-mile-long zone of discontinuous, NW-trending faults that lies about 17.5 miles southwest of the subject site. These faults are recognized in the subsurface by vertical separation of the Columbia River Basalt and offset seismic reflectors in the overlying basin sediment (Yeats et al., 1996; Werner et al., 1992). A geologic reconnaissance and photogeologic analysis study conducted for the Scoggins Dam site in the Tualatin Basin revealed no evidence of deformed geomorphic surfaces along the structural zone (Unruh et al., 1994). No seismicity has been recorded on the Gales Creek Fault or Newberg Fault (the fault closest to the subject site); however, these faults are considered to be potentially active because they may connect with the seismically active Mount Angel Fault and the rupture plane of the 1993 M5.6 Scotts Mills earthquake (Werner et al. 1992; Geomatrix Consultants, 1995).

Cascadia Subduction Zone

The Cascadia Subduction Zone is a 680-mile-long zone of active tectonic convergence where oceanic crust of the Juan de Fuca Plate is subducting beneath the North American continent at a rate of 4 cm per year (Goldfinger et al., 1996). A growing body of geologic evidence suggests that prehistoric subduction zone earthquakes have occurred (Atwater, 1992; Carver, 1992; Peterson et al., 1993; Geomatrix Consultants, 1995). This evidence includes: (1) buried tidal marshes recording episodic, sudden subsidence along the coast of northern California, Oregon, and Washington, (2) burial of subsided tidal marshes by tsunami wave deposits, (3) paleoliquefaction features, and (4) geodetic uplift patterns on the Oregon coast. Radiocarbon dates on buried tidal marshes indicate a recurrence interval for major subduction zone earthquakes of 250 to 650 years with the last event occurring 300 years ago (Atwater, 1992; Carver, 1992; Peterson et al., 1993; Geomatrix Consultants, 1995). The inferred seismogenic portion of the plate interface lies roughly along the Oregon coast at depths of between 20 and 40 miles.

SUBSURFACE CONDITIONS

Our site-specific exploration for this report was conducted on December 18, 2014. A total of 5 exploratory test pits were excavated with a trackhoe to depths of 3.5 to 10 feet at the approximate locations indicated on Figure 2. It should be noted that test pit locations were located in the field by pacing or taping distances from apparent property corners and other site features shown on the plans provided. As such, the locations of the explorations should be considered approximate.

A GeoPacific geologist continuously monitored the field exploration program and logged the test pits. Soils observed in the explorations were classified in general accordance with the Unified Soil Classification System. Rock hardness was classified in accordance with Table 1, modified from the ODOT Rock Hardness Classification Chart. During exploration, our geologist also noted geotechnical conditions such as soil consistency, moisture and groundwater conditions. Logs of test pits are attached to this report. The following report sections are based on the exploration program and summarize subsurface conditions encountered at the site.

Table 1. Rock Hardness Classification Chart

ODOT Rock Hardness Rating	Field Criteria	Unconfined Compressive Strength	Typical Equipment Needed For Excavation
Extremely Soft (R0)	Indented by thumbnail	<100 psi	Small excavator
Very Soft (R1)	Scratched by thumbnail, crumbled by rock hammer	100-1,000 psi	Small excavator
Soft (R2)	Not scratched by thumbnail, indented by rock hammer	1,000-4,000 psi	Medium excavator (slow digging with small excavator)
Medium Hard (R3)	Scratched or fractured by rock hammer	4,000-8,000 psi	Medium to large excavator (slow to very slow digging), typically requires chipping with hydraulic hammer or mass excavation)
Hard (R4)	Scratched or fractured w/ difficulty	8,000-16,000 psi	Slow chipping with hydraulic hammer and/or blasting
Very Hard (R5)	Not scratched or fractured after many blows, hammer rebounds	>16,000 psi	Blasting

Undocumented Fill: Undocumented fill was not encountered in our explorations. We anticipate areas of fill may be present in the vicinity of the existing structures, driveway, and adjacent to Weatherhill Road.

Topsoil Horizon: Directly underlying the ground surface in test pits TP-1 through TP-5 was a topsoil horizon consisting of dark brown, moderately organic SILT (OL-ML). The topsoil horizon was generally loose, contained many fine roots, and extended to a depth of 6 to 10 inches.

Residual Soil: Underlying the topsoil horizon in test pits TP-1 through TP-5 was clayey SILT (ML) to silty CLAY (CL) resulting from in-place weathering of the underlying Columbia River Basalt Formation. The light reddish brown silty clay to clayey silt contained weathered basalt fragments and was generally characterized by a stiff to very stiff consistency. In test pits, the residual soil extended to a depth of 2 to 6 feet and beyond the maximum depth of exploration in test pit TP-3 (10 feet).

Columbia River Basalt Formation: Underlying the residual soil in test pits TP-1, TP-2, TP-4, and TP-5 was weathered basalt belonging to the Columbia River Basalt Formation. Generally, the gray basalt was extremely soft (R0) to soft (R2) with trace light reddish brown silty clay to clayey silt matrix. This material was excavatable with a medium trackhoe except in test pit TP-2, where refusal was encountered on medium hard (R3) basalt at a depth of 3.5 feet. A larger machine would likely be able to excavate deeper depths.

Soil Moisture and Groundwater

On December 18, 2014, neither static groundwater nor groundwater seepage was encountered in test pits excavated to a maximum depth of 10 feet below the ground surface. Experience has shown that temporary storm related perched groundwater within the near surface soils often occur over fine-grained native deposits such as those beneath the site during the wet season and particularly in mottled soils such as were identified in the test pits. It is anticipated that groundwater conditions will vary depending on the season, local subsurface conditions, changes in site utilization, and other factors.

INFILTRATION TESTING

Soil infiltration testing was performed at depths of 4 and 5.5 feet using the pushed pipe infiltration method in test pit TP-1. The soil was pre-saturated for a period of over 3 hours. The water level was measured to the nearest tenth of an inch every fifteen minutes to half hour with reference to the ground surface. Table 2 presents the results of our falling head infiltration testing.

Table 2. Summary of Infiltration Test Results

Test Pit	Depth (feet)	Soil Type	Infiltration Rate (in/hr)	Hydraulic Head Range (inches)
TP-1	4	Clayey SILT (ML) to Silty CLAY (CL)	0.5	10-14
TP-1	5.5	Clayey SILT (ML) to Silty CLAY (CL)	0.5	10-13

CONCLUSIONS AND RECOMMENDATIONS

Our investigation indicates that the proposed development is geotechnically feasible, provided that the recommendations of this report are incorporated into the design and sufficient geotechnical monitoring is incorporated into the construction phases of the project. In our opinion, the greatest geotechnical issue for project completion is the depth of the bedrock beneath the site. Weathered basalt bedrock was encountered throughout the site except in the northeastern portion of the site (test pit TP-3). Basalt was first encountered at depths of 2 to 6 feet. Practical refusal was encountered on medium hard (R3) basalt in test pit TP-2, which is located in the southern portion of the site. A larger excavator may be able to achieve greater depths. Elsewhere, our test pit explorations indicate the basalt bedrock is highly to moderately weathered and excavation depths of 8 to 10 feet should be obtainable with conventional heavy equipment.

Site Preparation

Areas of proposed buildings, new streets, and areas to receive fill should be cleared of vegetation and any organic and inorganic debris. Existing buried structures, should be demolished and any cavities structurally backfilled. Inorganic debris and organic materials from clearing should be removed from the site.

Existing fill and any organic-rich topsoil should then be stripped from construction areas of the site or where engineered fill is to be placed. The estimated depth range necessary for removal of topsoil is approximately 6 to 9 inches. The final depth of soil removal will be determined on the basis of a site inspection after the stripping/ excavation has been performed. Stripped topsoil should preferably be removed from the site. Any remaining topsoil should be stockpiled only in designated areas and stripping operations should be observed and documented by the geotechnical engineer or his representative.

Any remaining undocumented fills and subsurface structures (tile drains, basements, driveway and landscaping fill, old utility lines, septic leach fields, etc.) should be removed and the excavations backfilled with engineered fill.

Once stripping of a particular area is approved, the area must be ripped or tilled to a depth of 12 inches, moisture conditioned, root-picked, and compacted in-place prior to the placement of engineered fill or crushed aggregate base for pavement. Exposed subgrade soils should be evaluated by the geotechnical engineer. For large areas, this evaluation is normally performed by proof-rolling the exposed subgrade with a fully loaded scraper or dump truck. For smaller areas where access is restricted, the subgrade should be evaluated by probing the soil with a steel probe. Soft/loose soils identified during subgrade preparation should be compacted to a firm and unyielding condition, over-excavated and replaced with engineered fill (as described below), or stabilized with rock prior to placement of engineered fill. The depth of overexcavation, if required, should be evaluated by the geotechnical engineer at the time of construction.

Engineered Fill

All grading for the proposed development should be performed as engineered grading in accordance with the applicable building code at time of construction with the exceptions and additions noted herein. Proper test frequency and earthwork documentation usually requires daily observation and testing during stripping, rough grading, and placement of engineered fill. Imported fill material must be approved by the geotechnical engineer prior to being imported to the site. Oversize material greater than 6 inches in size should not be used within 3 feet of foundation footings, and material greater than 12 inches in diameter should not be used in engineered fill.

Engineered fill should be compacted in horizontal lifts not exceeding 8 inches using standard compaction equipment. We recommend that engineered fill be compacted to at least 90% of the maximum dry density determined by ASTM D1557 (Modified Proctor) or equivalent. Field density testing should conform to ASTM D2922 and D3017, or D1556. All engineered fill should be observed and tested by the project geotechnical engineer or his representative. Typically, one density test is performed for at least every 2 vertical feet of fill placed or every 500 yd^3, whichever requires more testing. Because testing is performed on an on-call basis, we recommend that the earthwork contractor be held contractually responsible for test scheduling and frequency.

Site earthwork will be impacted by soil moisture and shallow groundwater conditions. Earthwork in wet weather would likely require extensive use of cement or lime treatment, or other special measures, at considerable additional cost compared to earthwork performed under dry-weather conditions.

Keyways and Benching For Engineered Fill on Slopes

Engineered fill to be placed in sloping areas inclining steeper than 20% grade should be constructed on a keyway and benches in accordance with the typical design shown in Figure 3. Keyways should have a minimum depth of 2 feet and minimum width of 10 feet. Additional removals of potentially unstable soils may be required depending on conditions observed during construction. Both benches and keyways should be roughly horizontal in the down slope direction, but may slope up to 20% grade along topographic contour. Keyways sloping more than 20% grade along topographic contour should be benched.

The keyway should include a subdrain consisting of a minimum 3-inch-diameter, ADS Heavy Duty grade (or equivalent), perforated plastic pipe enveloped in a minimum of 3 cubic feet per lineal foot of 2"- ½", open-graded gravel drain rock wrapped with geotextile filter fabric (Mirafi 140N or equivalent). GeoPacific should inspect keyways, subdrains and benching prior to fill placement. Areas of potential seepage observed during construction may require a rock blanket drain in the keyway bottom.

We recommend that permanent fill and cut slopes be constructed no steeper than 2H:1V (50% grade). Fill slopes should be overbuilt a minimum of 3 feet horizontally beyond finish grade and then trimmed back to finish grade as shown in figure in order to achieve a well compacted slope face.

Excavating Conditions and Utility Trenches

We anticipate that on-site soils can be excavated using conventional heavy equipment such as scrapers and trackhoes. Weathered basalt bedrock was encountered in test pits throughout the site at depths of 2 to 6 feet and practical refusal was encountered on medium hard (R3) basalt at a depth of 3.5 feet in the southern portion of the site (test pit TP-2). A larger excavator may be able to achieve greater depths. Elsewhere, our test pit explorations indicate the basalt bedrock is moderately weathered and excavation depths of 10 feet should be obtainable with conventional heavy equipment.

The existing native soils classify as Type B Soil and temporary excavation side slope inclinations as steep as 1H:1V may be assumed for planning purposes. This cut slope inclination is applicable to excavations above the water table only. Maintenance of safe working conditions, including temporary excavation stability, is the responsibility of the contractor. Actual slope inclinations at the time of construction should be determined based on safety requirements and actual soil and groundwater conditions.

Saturated soils and groundwater may be encountered in utility trenches, particularly during the wet season. We anticipate that dewatering systems consisting of ditches, sumps and pumps would be adequate for control of perched groundwater. Regardless of the dewatering system used, it should be installed and operated such that in-place soils are prevented from being removed along with the groundwater.

Vibrations created by traffic and construction equipment may cause some caving and raveling of excavation walls. In such an event, lateral support for the excavation walls should be provided by the contractor to prevent loss of ground support and possible distress to existing or previously constructed structural improvements.

PVC pipe should be installed in accordance with the procedures specified in ASTM D2321. We recommend that trench backfill be compacted to at least 95% of the maximum dry density obtained by Standard Proctor ASTM D698 or equivalent. Initial backfill lift thickness for a ¾"-0 crushed aggregate base may need to be as great as 4 feet to reduce the risk of flattening underlying flexible pipe. Subsequent lift thickness should not exceed 1 foot. If imported granular fill material is used, then the lifts for large vibrating plate-compaction equipment (e.g. hoe compactor attachments) may be up to 2 feet, provided that proper compaction is being achieved and each lift is tested. Use of large vibrating compaction equipment should be carefully monitored near existing structures and improvements due to the potential for vibration-induced damage.

Adequate density testing should be performed during construction to verify that the recommended relative compaction is achieved. Typically, one density test is taken for every 4 vertical feet of backfill on each 200-lineal-foot section of trench.

Erosion Control Considerations

During our field exploration program, we did not observe soil types that would be considered highly susceptible to erosion. In our opinion, the primary concern regarding erosion potential will occur during construction, in areas that have been stripped of vegetation. Erosion at the site during construction can be minimized by implementing the project erosion control plan, which should include judicious use of straw bales and silt fences. If used, these erosion control devices should be in place and remain in place throughout site preparation and construction.

Erosion and sedimentation of exposed soils can also be minimized by quickly re-vegetating exposed areas of soil, and by staging construction such that large areas of the project site are not denuded and exposed at the same time. Areas of exposed soil requiring immediate and/or temporary protection against exposure should be covered with either mulch or erosion control netting/blankets. Areas of exposed soil requiring permanent stabilization should be seeded with an approved grass seed mixture, or hydroseeded with an approved seed-mulch-fertilizer mixture.

Wet Weather Earthwork

Soils underlying the site are likely to be moisture sensitive and may be difficult to handle or traverse with construction equipment during periods of wet weather. Earthwork is typically most economical when performed under dry weather conditions. Earthwork performed during the wet-weather season will probably require expensive measures such as cement treatment or imported granular material to compact fill to the recommended engineering specifications. If earthwork is to be performed or fill is to be placed in wet weather or under wet conditions when soil moisture content is difficult to control, the following recommendations should be incorporated into the contract specifications.

- Earthwork should be performed in small areas to minimize exposure to wet weather. Excavation or the removal of unsuitable soils should be followed promptly by the placement and compaction of clean engineered fill. The size and type of construction equipment used

may have to be limited to prevent soil disturbance. Under some circumstances, it may be necessary to excavate soils with a backhoe to minimize subgrade disturbance caused by equipment traffic;

- The ground surface within the construction area should be graded to promote run-off of surface water and to prevent the ponding of water;
- Material used as engineered fill should consist of clean, granular soil containing less than 5 percent fines. The fines should be non-plastic. Alternatively, cement treatment of on-site soils may be performed to facilitate wet weather placement;
- The ground surface within the construction area should be sealed by a smooth drum vibratory roller, or equivalent, and under no circumstances should be left uncompacted and exposed to moisture. Soils which become too wet for compaction should be removed and replaced with clean granular materials;
- Excavation and placement of fill should be observed by the geotechnical engineer to verify that all unsuitable materials are removed and suitable compaction and site drainage is achieved; and
- Geotextile silt fences, straw waddles, and fiber rolls should be strategically located to control erosion.

If cement or lime treatment is used to facilitate wet weather construction, GeoPacific should be contacted to provide additional recommendations and field monitoring.

Pavement Design

For design purposes, we used an estimated resilient modulus of 9,000 for compacted native soil. Table 3 presents our recommended minimum pavement section for dry weather construction.

Table 3. Recommended Minimum Dry-Weather Pavement Section

Material Layer	Light-duty Public Streets	Private Driveways	Compaction Standard
Asphaltic Concrete (AC)	3 in.	2.5 in.	92%/ 92% of Rice Density AASHTO T-209
Crushed Aggregate Base ¾"-0 (leveling course)	2 in.	2 in.	95% of Modified Proctor AASHTO T-180
Crushed Aggregate Base 1½"-0	8 in.	6 in.	95% of Modified Proctor AASHTO T-180
Subgrade	12 in.	12 in.	95% of Standard Proctor AASHTO T-99 or equivalent

Any pockets of organic debris or loose fill encountered during ripping or tilling should be removed and replaced with engineered fill (see *Site Preparation* Section). In order to verify subgrade strength, we recommend proof-rolling directly on subgrade with a loaded dump truck during dry weather and on top of base course in wet weather. Soft areas that pump, rut, or weave should be stabilized prior to paving. If pavement areas are to be constructed during wet weather, the subgrade and construction plan should be reviewed by the project geotechnical engineer at the time of construction so that condition specific recommendations can be

provided. The moisture sensitive subgrade soils make the site a difficult wet weather construction project.

During placement of pavement section materials, density testing should be performed to verify compliance with project specifications. Generally, one subgrade, one base course, and one asphalt compaction test is performed for every 100 to 200 linear feet of paving.

Spread Foundations

The proposed residential structures may be supported on shallow foundations bearing on competent undisturbed, native soils and/or engineered fill, appropriately designed and constructed as recommended in this report. Foundation design, construction, and setback requirements should conform to the applicable building code at the time of construction. For maximization of bearing strength and protection against frost heave, spread footings should be embedded at a minimum depth of 18 inches below exterior grade. The recommended minimum widths for continuous footings supporting wood-framed walls without masonry are 12 inches for single-story, 15 inches for two-story, and 18 inches for three-story structures. Minimum foundation reinforcement should consist of a No. 4 bar at the tops of stem walls, and a No. 4 bar at the bottom of footings. Concrete slab-on-grade reinforcement should consist of No. 4 bars placed on 24-inch centers in a grid pattern.

The anticipated allowable soil bearing pressure is 1,500 lbs/ft^2 for footings bearing on competent, native soil and/or engineered fill. A maximum chimney and column load of 30 kips is recommended for the site. The recommended maximum allowable bearing pressure may be increased by 1/3 for short-term transient conditions such as wind and seismic loading. For heavier loads, the geotechnical engineer should be consulted. The coefficient of friction between on-site soil and poured-in-place concrete may be taken as 0.40, which includes no factor of safety. The maximum anticipated total and differential footing movements (generally from soil expansion and/or settlement) are 1 inch and ¾ inch over a span of 20 feet, respectively. We anticipate that the majority of the estimated settlement will occur during construction, as loads are applied. Excavations near structural footings should not extend within a 1H:1V plane projected downward from the bottom edge of footings.

Footing excavations should penetrate through topsoil and any loose soil to competent subgrade that is suitable for bearing support. All footing excavations should be trimmed neat, and all loose or softened soil should be removed from the excavation bottom prior to placing reinforcing steel bars. Due to the moisture sensitivity of on-site native soils, foundations constructed during the wet weather season may require overexcavation of footings and backfill with compacted, crushed aggregate.

Our recommendations are for house construction incorporating raised wood floors and conventional spread footing foundations. If living space of the structures will incorporate basements, a geotechnical engineer should be consulted to make additional recommendations for retaining walls, water-proofing, underslab drainage and wall subdrains. After site development, a Final Soil Engineer's Report should either confirm or modify the above recommendations.

Drainage

The upslope edge of perimeter footings may be provided with a drainage system consisting of 3-inch diameter, slotted, plastic pipe embedded in a minimum of 1 ft^3 per lineal foot of clean, free-draining gravel or uncompacted 3/4" - 0 rock. Water collected from the footing drains should be directed into the local storm drain system or other suitable outlet. A minimum 0.5 percent fall should be maintained throughout the drain and non-perforated pipe outlet. Down spouts and roof drains should not be connected to the foundation drains in order to reduce the potential for clogging. The footing drains should include clean-outs to allow periodic maintenance and inspection. Grades around the proposed structure should be sloped such that surface water drains away from the building. Footing drain recommendations are given to prevent detrimental effects of groundwater on foundations, and should not be expected to eliminate all potential sources of water entering a crawlspace. An adequate grade to a low point outlet drain in the crawlspace is required by code.

Seismic Design

Structures should be designed to resist earthquake loading in accordance with the methodology described in the 2010 ASCE-7 Standard. We recommend Site Class D be used for design. Design values determined for the site using the USGS (United States Geological Survey) *U.S. Seismic Design Maps* tool (Version 3.1.0) are summarized on Table 4.

Table 4. Recommended Earthquake Ground Motion Parameters (2010 ASCE-7)

Parameter	Value
Location (Lat, Long), degrees	45.360, -122.650
Mapped Spectral Acceleration Values (MCE, Site Class D):	
Peak Ground Acceleration	0.413
Short Period, S_s	0.951 g
1.0 Sec Period, S_1	0.409 g
Soil Factors for Site Class D:	
F_a	1.119
F_v	1.591
Residential Site Value = 2/3 x F_a x S_s	0.710 g
Residential Seismic Design Category	D_1

Soil liquefaction is a phenomenon wherein saturated soil deposits temporarily lose strength and behave as a liquid in response to earthquake shaking. Soil liquefaction is generally limited to loose, granular soils located below the water table. Following development, on-site soils will consist predominantly of engineered fill or native fine-grained soils, which are not considered susceptible to liquefaction. Therefore, it is our opinion that special design or construction measures are not required to mitigate the effects of liquefaction.

UNCERTAINTIES AND LIMITATIONS

We have prepared this report for the owner and their consultants for use in design of this project only. This report should be provided in its entirety to prospective contractors for bidding and estimating purposes; however, the conclusions and interpretations presented in this report should not be construed as a warranty of the subsurface conditions. Experience has shown that soil and groundwater conditions can vary significantly over small distances. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, GeoPacific should be notified for review of the recommendations of this report, and revision of such if necessary.

Sufficient geotechnical monitoring, testing and consultation should be provided during construction to confirm that the conditions encountered are consistent with those indicated by explorations. The checklist attached to this report outlines recommended geotechnical observations and testing for the project. Recommendations for design changes will be provided should conditions revealed during construction differ from those anticipated, and to verify that the geotechnical aspects of construction comply with the contract plans and specifications.

Within the limitations of scope, schedule and budget, GeoPacific attempted to execute these services in accordance with generally accepted professional principles and practices in the fields of geotechnical engineering and engineering geology at the time the report was prepared. No warranty, expressed or implied, is made. The scope of our work did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous or toxic substances in the soil, surface water, or groundwater at this site.

We appreciate this opportunity to be of service.

Sincerely,

GEOPACIFIC ENGINEERING, INC.

EXPIRES: 06/30/2015

Beth K. Rapp, C.E.G.
Senior Engineering Geologist

James D. Imbrie, P.E., G.E.
Principal Geotechnical Engineer

Attachments: References
Checklist of Recommended Geotechnical Testing and Observation
Figure 1 – Vicinity Map
Figure 2 – Site and Exploration Plan
Figure 3 – Fill Slope Detail
Test Pit Logs (TP-1 – TP-5)

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CHECKLIST OF RECOMMENDED GEOTECHNICAL TESTING AND OBSERVATION

Item No.	Procedure	Timing	By Whom	Done
1	Preconstruction meeting	Prior to beginning site work	Contractor, Developer, Civil and Geotechnical Engineers	
2	Fill removal from site or sorting and stockpiling	Prior to mass stripping	Soil Technician/ Geotechnical Engineer	
3	Stripping, aeration, and root-picking operations	During stripping	Soil Technician	
4	Compaction testing of engineered fill (90% of Modified Proctor)	During filling, tested every 2 vertical feet	Soil Technician	
5	Compaction testing of trench backfill (95% of Standard Proctor)	During backfilling, tested every 4 vertical feet for every 200 lineal feet	Soil Technician	
6	Street Subgrade Compaction (95% of Standard Proctor)	Prior to placing base course	Soil Technician	
7	Base course compaction (95% of Modified Proctor)	Prior to paving, tested every 200 lineal feet	Soil Technician	
8	AC Compaction (92% (bottom lift) / 92% (top lift) of Rice)	During paving, tested every 200 lineal feet	Soil Technician	
9	Final Geotechnical Engineer's Report	Completion of project	Geotechnical Engineer	

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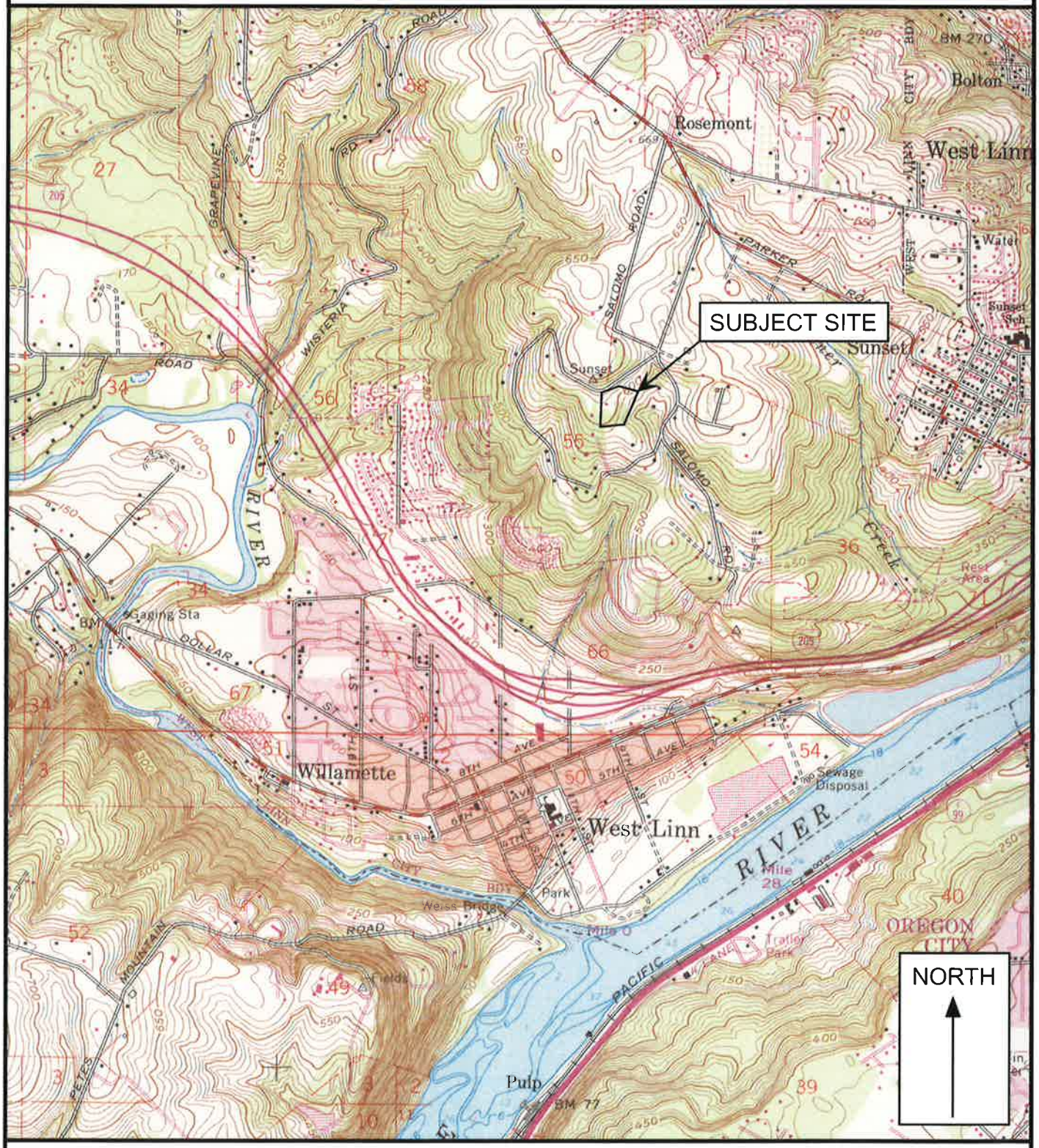
VICINITY MAP



Legend

Approximate Scale 1 in = 2,000 ft

Date: 2/11/2015
Drawn by: EKR

Base map: U.S. Geological Survey 7.5 minute Topographic Map Series, Canby, Oregon Quadrangle, 1961 (Photorevised 1985).

Project: Weatherhill II West Linn, Oregon	Project No. 14-3636	FIGURE 1

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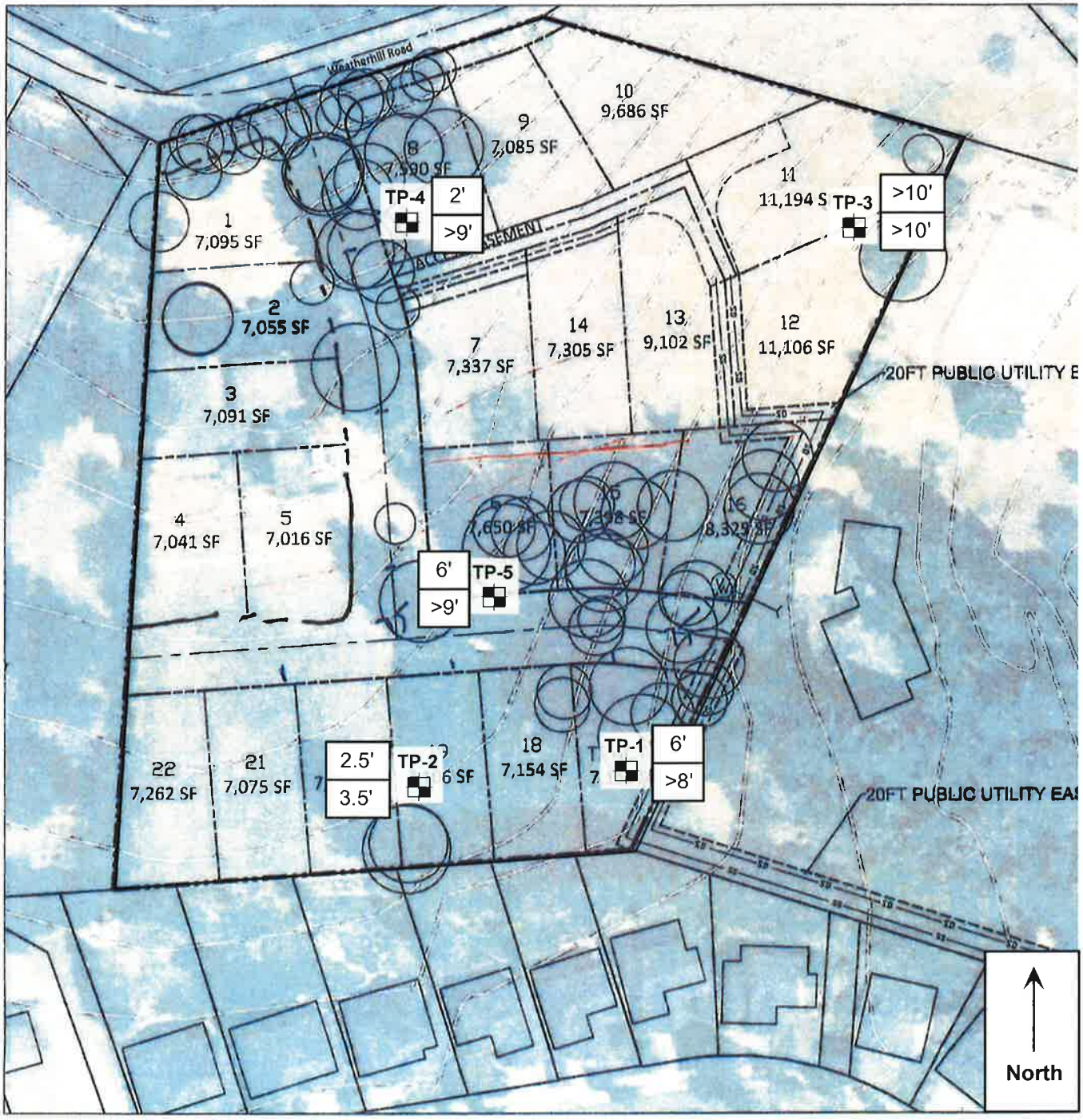
SITE PLAN AND EXPLORATION LOCATIONS



Legend

TP-1
Test Pit Designation and Approximate Location

2.5'	2.5' = Depth at Which Rock is First Encountered
3.5'	3.5' = Depth of Practical Refusal on Rock
	>9'= Depth is Beyond Maximum Exploration Depth

Date: 2/11/2015
Drawn by: EKR

0 100'
APPROXIMATE SCALE 1"=100'

Project: Weatherhill II West Linn, Oregon	Project No. 14-3636	FIGURE 2

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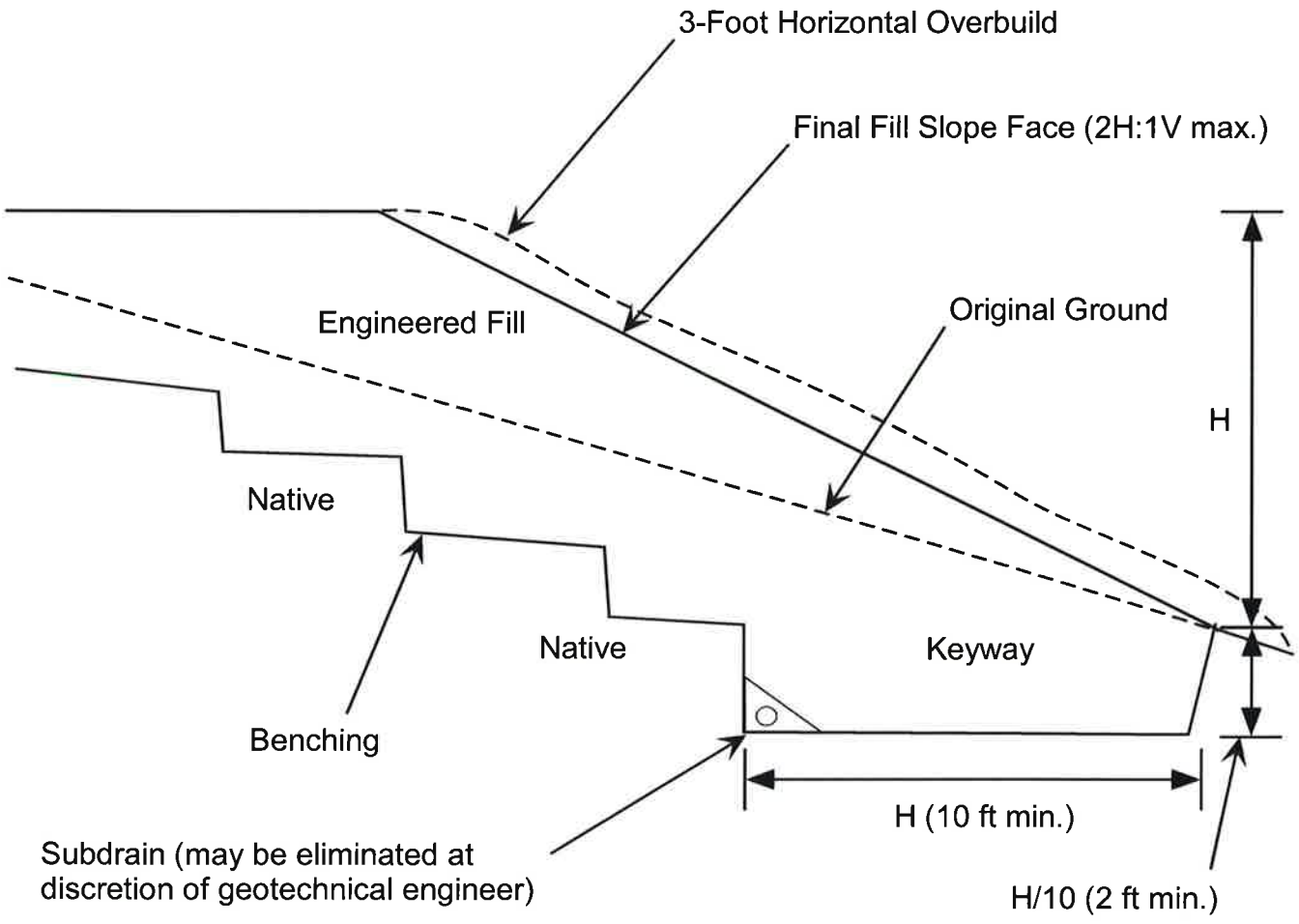
FILL SLOPE DETAIL

TYPICAL KEYWAY, BENCHING & FILL SLOPE DETAIL



Recommended subdrain is minimum 3-inch-diameter ADS Heavy Duty grade (or equivalent), perforated plastic pipe enveloped in a minimum of 3 cubic feet per lineal foot of 2" to 1/2" open-graded gravel drain rock wrapped with geotextile filter fabric (Mirafi 140N or equivalent).

Project: Weatherhill II West Linn, Oregon	Project No. 14-3636	FIGURE 3

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TEST PIT LOG

Project: Weatherhill II
West Linn, Oregon

Project No. 14-3636

Test Pit No. **TP-1**

Depth (ft)	Pocket Penetrometer (tons/ft²)	Sample Type	In-Situ Dry Density (lb/ft³)	Moisture Content (%)	Water Bearing Zone	Material Description
1	1.0					Moderately organic SILT (OL-ML), brown, loose, fine roots throughout, moist (Topsoil)
2	1.5					Medium stiff to very stiff, silty CLAY (CL) to clayey SILT (ML), trace basalt fragments below 5.5 feet, light reddish-brown, subtle orange and gray mottling, trace fine roots, moist (Residual Soil)
3	2.0					
4	3.0					
5						
6						
7						Extremely soft (R0) to very soft (R1), highly weathered BASALT, trace reddish-brown silty clay to clayey silt matrix, light gray, trace black staining, yellow secondary mineralization, damp to moist (Columbia River Basalt)
8						Test Pit Terminated at 8 Feet.
9						
10						Note: No seepage or groundwater encountered.
11						
12						

LEGEND

Bag Sample

Bucket Sample


Shelby Tube Sample


Seepage


Water Bearing Zone


Water Level at Abandonment

Date Excavated: 12/18/2014
Logged By: B. Rapp
Surface Elevation:

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TEST PIT LOG

Project: Weatherhill II
West Linn, Oregon

Project No. 14-3636

Test Pit No. **TP-2**

Depth (ft)	Pocket Penetrometer (tons/ft²)	Sample Type	In-Situ Dry Density (lb/ft³)	Moisture Content (%)	Water Bearing Zone	Material Description
1	3.0					Moderately organic SILT (OL-ML), brown, loose, fine roots throughout, moist (Topsoil)
2	2.0					Stiff to very stiff, silty CLAY (CL) to clayey SILT (ML), trace gray basalt fragments, light reddish-brown, subtle orange and gray mottling, trace fine roots, moist (Residual Soil)
3	4.5					Extremely soft (R0) to very soft (R1), highly weathered BASALT, trace reddish-brown silty clay to clayey silt matrix, light gray, trace black staining, yellow secondary mineralization, damp to moist (Columbia River Basalt)
4						Practical Refusal on Medium Hard (R3) Basalt at 3.5 Feet.
5						Note: No seepage or groundwater encountered.
6						
7						
8						
9						
10						
11						
12						

LEGEND

Bag Sample

Bucket Sample


Shelby Tube Sample


Seepage


Water Bearing Zone


Water Level at Abandonment

Date Excavated: 12/18/2014
Logged By: B. Rapp
Surface Elevation:

GeoPacific Engineering, Inc.
14835 SW 72nd Avenue
Portland, Oregon 97224
Tel: (503) 598-8445 Fax: (503) 941-9281

TEST PIT LOG

Project: Weatherhill II
West Linn, Oregon

Project No. 14-3636

Test Pit No. **TP-3**

Depth (ft)	Pocket Penetrometer (tons/ft²)	Sample Type	In-Situ Dry Density (lb/ft³)	Moisture Content (%)	Water Bearing Zone	Material Description
1	3.0					Moderately organic SILT (OL-ML), brown, loose, fine roots throughout, moist (Topsoil)
2	3.0					
3	3.5					Stiff to very stiff, silty CLAY (CL) to clayey SILT (ML), light reddish-brown, subtle orange and gray mottling, trace fine roots to 2.5 feet, trace black staining, moist (Residual Soil)
4	3.5					
5						
6						
7						
8						
9						
10						Test Pit Terminated at 10 Feet.
11						Note: No seepage or groundwater encountered.
12						

LEGEND

Bag Sample

Bucket Sample


Shelby Tube Sample


Seepage


Water Bearing Zone


Water Level at Abandonment

Date Excavated: 12/18/2014
Logged By: B. Rapp
Surface Elevation:

GeoPacific Engineering, Inc.
14835 SW 72nd Avenue
Portland, Oregon 97224
Tel: (503) 598-8445 Fax: (503) 941-9281

TEST PIT LOG

Project: Weatherhill II
West Linn, Oregon

Project No. 14-3636

Test Pit No. **TP-4**

Depth (ft)	Pocket Penetrometer (tons/ft²)	Sample Type	In-Situ Dry Density (lb/ft³)	Moisture Content (%)	Water Bearing Zone	Material Description
						Moderately organic SILT (OL-ML), brown, loose, fine roots throughout, moist (Topsoil)
1	3.0					Stiff to very stiff, silty CLAY (CL) to clayey SILT (ML), trace gray basalt fragments, light reddish-brown, subtle orange and gray mottling, trace fine roots, moist (Residual Soil)
2	2.0					
3						
4						Extremely soft (R0) to soft (R2), weathered BASALT, trace reddish-brown silty clay to clayey silt matrix, light gray, basalt is subangular, trace black staining, trace yellow secondary mineralization, moist (Columbia River Basalt)
5						
6						
7						
8						
9						Test Pit Terminated at 9 Feet.
10						Note: No seepage or groundwater encountered.
11						
12						

LEGEND

Bag Sample (100 to 1,000 g) | Bucket Sample (5 Gal. Bucket) | Shelby Tube Sample | Seepage | Water Bearing Zone | Water Level at Abandonment

Date Excavated: 12/18/2014
Logged By: B. Rapp
Surface Elevation:

GeoPacific Engineering, Inc.
14835 SW 72nd Avenue
Portland, Oregon 97224
Tel: (503) 598-8445 Fax: (503) 941-9281

TEST PIT LOG

Project: Weatherhill II
West Linn, Oregon

Project No. 14-3636

Test Pit No. **TP-5**

Depth (ft)	Pocket Penetrometer (tons/ft²)	Sample Type	In-Situ Dry Density (lb/ft³)	Moisture Content (%)	Water Bearing Zone	Material Description
1	3.5					Moderately organic SILT (OL-ML), dark brown, loose, fine roots throughout, moist (Topsoil)
2	2.5					Stiff to very stiff, silty CLAY (CL) to clayey SILT (ML), trace basalt fragments, light reddish-brown, subtle orange and gray mottling, trace fine roots, trace black staining, moist (Residual Soil)
3	4.5					
4	4.5					
5						
6						
7						Extremely soft (R0) to soft (R2), highly weathered BASALT, trace reddish-brown silty clay to clayey silt matrix, light gray, subangular, trace black staining, yellow secondary mineralization, damp to moist (Columbia River Basalt)
8						
9						Test Pit Terminated at 9 Feet.
10						Note: No seepage or groundwater encountered.
11						
12						

LEGEND

Bag Sample

Bucket Sample


Shelby Tube Sample


Seepage


Water Bearing Zone


Water Level at Abandonment

Date Excavated: 12/18/2014
Logged By: B. Rapp
Surface Elevation:

OPERATIONS AND MAINTENANCE

To be included in Final Stormwater Report

Morgan Holen & Associates LLC
Consulting Arborists and Urban Forest Management
971.409.9354
3 Monroe Parkway, Suite P 220
Lake Oswego, Oregon 97035
morgan.holen@comcast.net

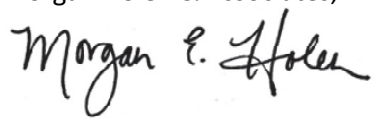
April 9, 2015

Planning and Building
City of West Linn
22500 Salamo Road #1000
West Linn, Oregon 97068

Re: Arborist Report and Tree Preservation Plan for Weatherhill Estates Subdivision
West Linn, Oregon
Project No. MHA1406 Weatherhill II

Please find enclosed the Arborist Report and Tree Preservation Plan for the Weatherhill Estates Subdivision project located at 22850 Weatherhill Road in West Linn, Oregon. Please contact us if you have questions or need any additional information.

Respectfully,
Morgan Holen & Associates, LLC



Morgan E. Holen, Owner
ISA Certified Arborist, PN-6145A
ISA Tree Risk Assessment Qualified
Forest Biologist

Morgan Holen & Associates LLC
Consulting Arborists and Urban Forest Management
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Lake Oswego, Oregon 97035
morgan.holen@comcast.net

Arborist Report and Tree Preservation Plan

Weatherhill Estates Subdivision
West Linn, Oregon

April 9, 2015

971.409.9354
3 Monroe Parkway, Suite P 220
Lake Oswego, Oregon 97035
morgan.holen@comcast.net

Table of Contents

Morgan Holen & Associates LLC
Consulting Arborists and Urban Forest Management
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Lake Oswego, Oregon 97035
morgan.holen@comcast.net

Weatherhill Estates Subdivision – West Linn, Oregon
Arborist Report and Tree Preservation Plan
April 9, 2015

MHA1406

Purpose

This Arborist Report and Tree Preservation Plan for the Weatherhill Estates Subdivision project in West Linn, Oregon, is provided pursuant to City of West Linn Community Development Code Chapter 55, Municipal Code Sections 8.500 and 8.600, and the West Linn Tree Technical Manual. This report describes the existing trees located on the project site, as well as recommendations for tree removal, retention and protection. This report is based on observations made by International Society of Arboriculture (ISA) Certified Arborist (PN-6145A) and Qualified Tree Risk Assessor Morgan Holen during a site visit conducted on December 18, 2014, a subsequent site meeting with the City Arborist Mike Perkins on January 16, 2015, and site plan coordination with 3J Consulting.

Scope of Work and Limitations

Morgan Holen & Associates, LLC, was contracted by J.T. Smith Companies to collect tree inventory data for individual trees measuring six inches and larger in diameter and to develop an arborist report and tree preservation plan for the project. The site is planned for residential development with new streets and 22 building lots. Site plans were provided by 3J Consulting illustrating the location of existing trees and potential construction impacts.

Visual Tree Assessment (VTA) was performed on individual trees located across the site. The enclosed tree inventory data and site plan demonstrate that all trees on site were physically identified. VTA is the standard process whereby the inspector visually assesses the tree from a distance and up close, looking for defect symptoms and evaluating overall condition and vitality of individual trees. Trees were evaluated in terms of general condition and potential construction impacts. Following the inventory fieldwork, we coordinated with 3J Consulting at J.T. Smith Companies to discuss tree protection recommendations.

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

General Description

The Weatherhill Estates Subdivision project site is located at 22850 Weatherhill Road in West Linn, Oregon. The site is sloping to the south and includes one existing single family residential home and a barn structure which are planned for demolition. The existing trees are scattered across the site, but are generally located along the north and east property boundaries, in the northern portion of the site between the existing home and Weatherhill Road, and in a dense grove in the southeast portion of the site. The location of individual trees is shown on site plan drawings and tree numbers correspond with the enclosed inventory data.

Tree Inventory

In all, 61 existing trees were inventoried, including 13 different tree species. Table 1 provides a summary of the number of inventoried trees by species. The enclosed tree inventory data provides a complete description of the individual trees.

Table 1. Number of On Site Trees by Species – Weatherhill Estates Subdivision.

Common Name	Species Name	Quantity	Percent
bigleaf maple	*Acer macrophyllum*	2	3.3
deodar cedar	*Cedrus deodara*	1	1.6
Douglas-fir	*Pseudotsuga menziesii*	36	59
English holly	*Ilex aquifolium*	1	1.6
European white birch	*Betula pendula*	5	8.2
fruit	unknown	1	1.6
giant sequoia	*Sequoiadendron giganteum*	1	1.6
Hinoki cypress	*Chamaecyparis obtusa*	2	3.3
Japanese maple	*Acer japonicum*	2	3.3
madrone	*Arbutus menziesii*	2	3.3
Oregon white oak	*Quercus garryana*	6	10
sweet cherry	*Prunus avium*	1	1.6
western redcedar	*Thuja plicata*	1	1.6
Total		**61**	**100%**

Douglas-fir (*Pseudotsuga menziesii*) is most prominent, accounting for more than half of the inventoried trees. Several are located in the northern portion of the site, but most are in a dense even-aged grove in the southeast portion of the site. These trees are most sustainable and suitable for retention intact, as an undisturbed group in their relatively natural condition; removal of individual trees from the group will likely expose remaining trees making them susceptible to windthrow and potentially hazardous. Individual stand grown trees were evaluated in terms of potential impacts from adjacent tree removal and small groups of trees within the grove were identified as being suitable for preservation if retention of all trees within each group would be possible.

Native Oregon white oaks (*Quercus garryana*) in generally good condition account for 10-percent of the inventoried trees. These trees are all located in the northern portion of the site and adjacent to the existing home.

English holly (*Ilex aquifolium*), European white birch (*Betula pendula*), and sweet cherry (*Prunus avium*) are widely accepted as being invasive tree species in our region and account for approximately 11-percent of the inventoried trees located on site. Invasive species are broadly defined as species that were introduced by humans to locations outside of their native range that spread and persist over large areas, outcompeting native species. Invasive species negatively impact natural ecosystems by displacing native species, reducing biological diversity and interfering with natural succession.

The remaining trees include a mix of species in variable condition that were primarily planted for landscaping purposes. The most notable is a 22-inch diameter deodar cedar (*Cedrus deodara*) with no major defects located on proposed lot 1.

Significant trees will be determined by the City Arborist. Based on our evaluation of the size, type, location, health, and long term survivability of the individual trees located on site, 27 (44%) trees were identified as potentially being significant.

Tree Preservation Plan

We coordinated with the project team to discuss trees suitable for preservation in terms of potential construction impacts under various site plan iterations. The proposed site plan provides the greatest retention of total tree canopy based on evaluation of each site plan option investigated. Table 2 provides a summary of the number of non-significant and potentially significant trees by treatment recommendation.

Table 2. Number of On Site Trees by Treatment Recommendation and Significance.

Treatment	Remove	Retain	Total
Non-Significant Trees	32	2	**34**
Potentially Significant Trees	18	9	**27**
Total	**50**	**11**	**61**

Of the 61 on site trees, 50 are recommended for removal either for construction or because of poor or hazardous condition, including 18 potentially significant trees, such as tree number 4019, a 28-inch diameter open grown Douglas-fir with no major defects which must be removed to accommodate grading for street construction; adequate protection is not possible. The remaining 11 trees are recommended for retention, including 9 potentially significant trees.

Based on the proposed site plan, two groups of potentially significant stand grown Douglas-firs are recommended for retention; these seven trees are suitable for preservation as intact groups of three and four trees each, even though removal of adjacent stand grown trees is necessary for the purposes of construction. In addition, a potentially significant open grown Douglas-fir located in the rear of proposed lot 8, the deodar cedar and a Douglas-fir located on proposed lot 1, and one potentially significant Oregon white oak located in the rear of proposed lot 2 are suitable for preservation and recommended for retention. Recommendations for tree protection are provided in the next section.

Tree Protection Standards

Trees to be protected will need special consideration to assure their protection during construction. Street and sidewalk construction adjacent to lots 10, 12 and 13 should be built up from existing grade to avoid root zone excavation within the City's standard tree protection zone, which is 10-feet beyond the dripline of protected trees. Also, building plans compatible with tree protection measures will be needed at lots 1, 2, 8, 10, 12 and 13. Any work that is necessary within the standard tree protection zone should be performed under the guidance of a qualified arborist. Tree protection measures include:

Before Construction

1. **Tree Protection Zone.** The project arborist shall designate the Tree Protection Zone (TPZ) for each tree to be protected. Where feasible, the size of the TPZ shall be established at the dripline of the tree plus 10-feet. Alternatively, the TPZ shall be established at the dripline of protected trees. Where infrastructure (retaining walls, driveways, buildings, and utilities) must be installed closer to the tree(s), the TPZ may be established within the dripline area if the project arborist, in coordination with the City Arborist, determines that the tree(s) will not be unduly damaged. The location of TPZs shall be shown on construction drawings.

2. **Protection Fencing.** Protection fencing shall serve as the tree protection zone and shall be erected before demolition, grubbing, grading, or construction begins. All trees to be retained shall be protected by six-foot-high chain link fences installed at the edge of the TPZ. Protection fencing shall be secured to two-inch diameter galvanized iron posts, driven to a depth of a least two feet, placed no further than 10-feet apart. If fencing is located on pavement, posts may be supported by an appropriate grade level concrete base. Protection fencing shall remain in place until final inspection of the project permit, or in consultation with the project arborist.

3. **Signage.** An 8.5x11 –inch sign stating, "WARNING: Tree Protection Zone," shall be displayed on each protection fence at all times.

4. **Designation of Cut Trees.** Trees to be removed shall be clearly marked with construction flagging, tree-marking paint, or other methods approved in advanced by the project arborist. Trees shall be carefully removed so as to avoid either above or below ground damage to those trees to be preserved. Roots of stumps that are adjacent to retained trees shall be carefully severed prior to stump extraction.

5. **Preconstruction Conference.** The project arborist shall be on site to discuss methods of tree removal and tree protection prior to any construction.

6. **Verification of Tree Protection Measures.** Prior to commencement of construction, the project arborist shall verify in writing to the City Arborist that tree protection fencing has been satisfactorily installed.

During Construction

7. **Tree Protection Zone Maintenance.** The protection fencing shall not be moved, removed, or entered by equipment except under direction of the project arborist, in coordination with the City Arborist.

8. **Storage of Material or Equipment.** The contractor shall not store materials or equipment within the TPZ.

9. **Excavation within the TPZ.** Excavation with the TPZ shall be avoided if alternatives are available. If excavation within the TPZ is unavoidable, the project arborist shall evaluate the proposed excavation to determine methods to minimize impacts to trees. This can include tunneling, hand digging or other approaches. All construction within the TPZ shall be under the on-site technical supervision of the project arborist, in coordination with the City Arborist.

10. **Tree Protection Zone.** The project arborist shall monitor construction activities and progress, and provide written reports to the developer and the City at regular intervals. Tree protection inspections shall occur monthly or more frequently if needed.

11. **Quality Assurance.** The project arborist shall supervise proper execution of this plan during construction activities that could encroach on retained trees. Tree protection site inspection monitoring reports shall be provided to the Client and City on a regular basis throughout construction.

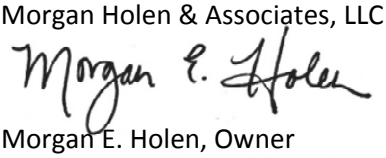
Post Construction

12. **Final Report.** After the project has been completed, the project arborist shall provide a final report to the developer and the City. The final report shall include concerns about any trees negatively impacted during construction, and describe the measures needed to maintain and protect the remaining trees for a minimum of two years after project completion.

It is the Client's responsibility to implement this plan and to monitor the construction process. The project arborist will be available during construction to help with tree related issues.

Please contact us if you have questions or need any additional information. Thank you for choosing Morgan Holen & Associates, LLC, to provide consulting arborist services for the Weatherhill Estates Subdivision project.

Thank you,
Morgan Holen & Associates, LLC



Morgan E. Holen, Owner
ISA Certified Arborist, PN-6145A
ISA Tree Risk Assessment Qualified
Forest Biologist

Enclosures: MHA1406 Weatherhill Estates Subdivision – Tree Data 12-18-14

No.	Common Name	Species Name	DBH*	C-Rad^	Defects and Comments	Sig?	Recommendation
4008	Douglas-fir	*Pseudotsuga menziesii*	2x44	28	codom just above ground level, well adapted, few dead branches	Yes	retain
4018	giant sequoia	*Sequoiadendron giganteum*	6	8	young tree, no major defects, suitable for transplanting	No	remove
4019	Douglas-fir	*Pseudotsuga menziesii*	28	26	open grown, long lateral limbs, no major defects	Yes	remove
4020	Oregon white oak	*Quercus garryana*	16,18	20	codom just above ground level, well adapted, no major defects	Yes	retain
4022	Douglas-fir	*Pseudotsuga menziesii*	10	14	surrounded by arborvitae, some crown asymmetry	No	retain
4023	deodar cedar	*Cedrus deodara*	22	16	no major defects	No	retain
4024	European white birch	*Betula pendula*	14	14	invasive species, poor structure	No	remove
4025	Douglas-fir	*Pseudotsuga menziesii*	14	14	young tree	No	remove
4026	European white birch	*Betula pendula*	14	12	invasive species, dead top, broken branches	No	remove
4027	European white birch	*Betula pendula*	12	10	invasive species, few broken branches	No	remove
4028	European white birch	*Betula pendula*	12	10	invasive species, poor structure	No	remove
4029	European white birch	*Betula pendula*	12	12	invasive species, poor structure	No	remove
4030	fruit	unknown	10	10	small, well-maintained	No	remove
4031	Douglas-fir	*Pseudotsuga menziesii*	12	14	young tree	No	remove
4032	western redcedar	*Thuja plicata*	22	14	numerous leaders, appears stable and well adapted	No	remove
4033	Oregon white oak	*Quercus garryana*	2x14,18	20	codom just above ground level, southernmost leader has stem decay with hollows at ~3' and ~8', few dead branches	No	remove
4036	Oregon white oak	*Quercus garryana*	44	28	located in asphalt roundabout, codom at ~6', no major defects	Yes	remove
4037	Japanese maple	*Acer japonicum*	6	6	well-maintained ornamental, weeping variety	No	remove
4038	Hinoki cypress	*Chamaecyparis obtusa*	6	8	no major defects	No	remove
4039	Hinoki cypress	*Chamaecyparis obtusa*	6	8	no major defects	No	remove
4040	Japanese maple	*Acer japonicum*	8	10	well-maintained ornamental, some trunk decay and root damage	No	remove

No.	Common Name	Species Name	DBH*	C-Rad^	Defects and Comments	Sig?	Recommendation
4041	Douglas-fir	*Pseudotsuga menziesii*	38	30	twig dieback, thin crown, small cones	No	remove
4042	Oregon white oak	*Quercus garryana*	22,24	30	codom just above ground level, some included bark	Yes	remove
4043	Oregon white oak	*Quercus garryana*	2x16	14	codom just above ground level, upright crown	Yes	remove
4044	Oregon white oak	*Quercus garryana*	8,10,14	22	codom just above ground level, some asymmetry	Yes	remove
4045	Douglas-fir	*Pseudotsuga menziesii*	28	24	no major defects, suitable for retention with 4046 only	Yes	remove
4046	Douglas-fir	*Pseudotsuga menziesii*	34	32	large buttress roots, suitable for retention with 4045 only	Yes	remove
4047	Douglas-fir	*Pseudotsuga menziesii*	20	20	below dominant canopy of 4045 and 4046	No	remove
4048	Douglas-fir	*Pseudotsuga menziesii*	6	10	young tree	No	remove
4049	Douglas-fir	*Pseudotsuga menziesii*	34	30	no major defects, suitable for retention in group only	Yes	remove
4050	Douglas-fir	*Pseudotsuga menziesii*	26	20	crown asymmetry, suitable for retention in group only	Yes	remove
4051	Douglas-fir	*Pseudotsuga menziesii*	26	20	crown asymmetry, suitable for retention in group only	Yes	remove
4052	Douglas-fir	*Pseudotsuga menziesii*	20	24	crown asymmetry, suitable for retention in group only	Yes	remove
4053	Douglas-fir	*Pseudotsuga menziesii*	22	20	crown asymmetry, suitable for retention in group only	Yes	remove
4054	madrone	*Arbutus menziesii*	16	20	twig dieback, suspect foliar disease	No	remove
4055	madrone	*Arbutus menziesii*	8	16	twig dieback, suspect foliar disease	No	remove
4056	Douglas-fir	*Pseudotsuga menziesii*	26	26	no major defects, suitable for retention in group only	Yes	remove
4057	Douglas-fir	*Pseudotsuga menziesii*	42	22	no major defects, suitable for retention in group only	Yes	retain
4058	Douglas-fir	*Pseudotsuga menziesii*	34	22	no major defects, suitable for retention in group only	Yes	retain
4059	Douglas-fir	*Pseudotsuga menziesii*	42	22	no major defects, suitable for retention in group only	Yes	retain
4060	Douglas-fir	*Pseudotsuga menziesii*	36	24	crown asymmetry, suitable for retention in group only	Yes	retain
4061	English holly	*Ilex aquifolium*	4x4,6	10	invasive species, poor structure	No	remove
4062	Douglas-fir	*Pseudotsuga menziesii*	24	24	no major defects, suitable for retention in group only	Yes	remove
4063	Douglas-fir	*Pseudotsuga menziesii*	30	24	no major defects, suitable for retention in group only	Yes	remove
4064	Douglas-fir	*Pseudotsuga menziesii*	60	18	no major defects, suitable for retention in group only	Yes	remove
4065	Douglas-fir	*Pseudotsuga menziesii*	28	28	trunk wounds, below dominant canopy	No	remove
4066	bigleaf maple	*Acer macrophyllum*	22	24	stem and branch decay	No	remove
4067	bigleaf maple	*Acer macrophyllum*	8x6	20	poor structure, likely old stump sprout	No	remove

No.	Common Name	Species Name	DBH*	C-Rad^	Defects and Comments	Sig?	Recommendation
4068	sweet cherry	*Prunus avium*	8	6	invasive species, poor structure and condition	No	remove
4085	Douglas-fir	*Pseudotsuga menziesii*	36	24	no major defects, few dead branches	Yes	remove
4086	Douglas-fir	*Pseudotsuga menziesii*	16	16	overtopped by 4085, could retain with 4085 and 4087	No	remove
4087	Douglas-fir	*Pseudotsuga menziesii*	30	22	few dead branches, suitable for retention with 4085 only	No	remove
4088	Douglas-fir	*Pseudotsuga menziesii*	46	22	somewhat one-sided, below-average vigor, suitable for retention in group only	Yes	remove
4089	Douglas-fir	*Pseudotsuga menziesii*	16	10	one-sided crown to east, suitable for retention in group only	No	remove
4090	Douglas-fir	*Pseudotsuga menziesii*	16	10	one-sided crown to east, suitable for retention in group only	No	remove
4091	Douglas-fir	*Pseudotsuga menziesii*	36	26	no major defects, suitable for retention with 9092 and 9093 only	Yes	retain
4092	Douglas-fir	*Pseudotsuga menziesii*	52	20	some history of branch failure, suitable for retention with 9091 and 9093 only	Yes	retain
4093	Douglas-fir	*Pseudotsuga menziesii*	37	26	few dead and broken branches, suitable for retention with 9091 and 9092 only	Yes	retain
4094	Douglas-fir	*Pseudotsuga menziesii*	50	24	some twig dieback, numerous conks up/down/around trunk, severe *Phellinus pini* infection	No	remove
4095	Douglas-fir	*Pseudotsuga menziesii*	38	22	some twig dieback, resin flow 0-6' on south side, not suitable for retention with removal of 4094	No	remove
4096	Douglas-fir	*Pseudotsuga menziesii*	10	12	small tree, crown asymmetry	No	remove

***DBH** is tree diameter measured at breast height, 4.5-feet above the ground level (inches); codominant trunks splitting below DBH are measured individually and separated by a comma, except for codominant stems of equal size are noted as quantity x size.

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

Sig? asks whether or not the tree is considered potentially significant, either Yes (likely significant) or No (not considered significant).

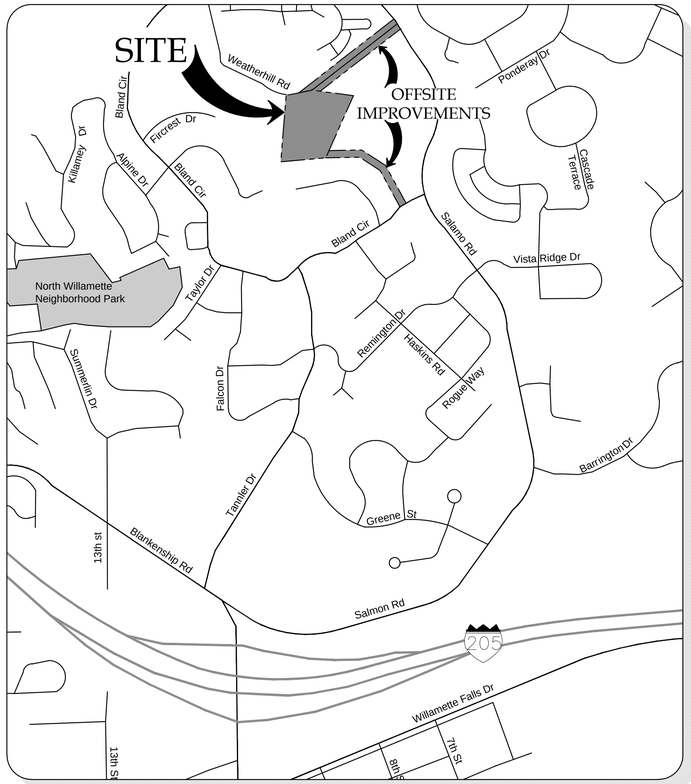
LAND USE DOCUMENTS

FOR

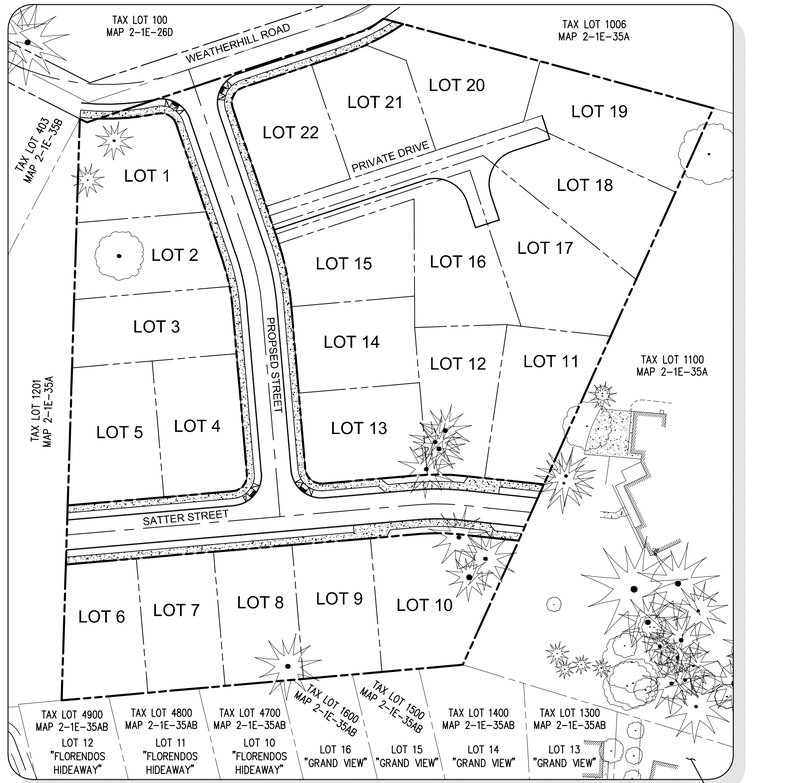
WEATHERHILL ESTATES SUBDIVISION

PREPARED FOR

BLACK DIAMOND PROPERTIES, LLC



VICINITY MAP
NOT TO SCALE



SITE MAP
Scale: NTS

SITE INFORMATION

SITE ADDRESS
22850 WEATHERHILL ROAD
WEST LINN, OR 97068

TAX LOT(S)
21E35A 1200 & 1202

FLOOD HAZARD
MAP NUMBER: 41005C0257D ZONE X (UNSHADED)

JURISDICTION
CITY OF WEST LINN

ZONING
R-7

UTILITIES & SERVICES

WATER, STORM, SEWER
CITY OF WEST LINN

POWER
PGE

GAS
NORTHWEST NATURAL

CABLE
COMCAST

FIRE
TUALATIN VALLEY FIRE & RESCUE

POLICE, SCHOOLS, ROADS, PARKS
CITY OF WEST LINN

SHEET INDEX

PROJECT TEAM

OWNER/APPLICANT
LF 7, LLC
C/O: J.T. SMITH COMPANIES
5285 MEADOWS ROAD, SUITE #171
LAKE OSWEGO, OR 97035
CONTACT: JESSE NEMEC
PHONE: (503) 730-8620
EMAIL: jnemec@jtsmithco.com

PLANNING CONSULTANT
3J CONSULTING, INC
5075 SW GRIFFITH DR, SUITE 150
BEAVERTON, OR 97005
CONTACT: ANDREW TULL
PHONE: 503-946-9365
EMAIL: andrew.tull@3j-consulting.com

LAND SURVEYOR
COMPASS SURVEYING
4107 SE INTERNATIONAL WAY, SUITE 705
MILWAUKIE, OR 97222
CONTACT: DON DEVLAEMINCK, PLS
PHONE: 503-653-9093
EMAIL: dond@compass-engineering.com

GEOTECHNICAL CONSULTANT
GEOPACIFIC ENGINEERING, INC.
14835 SW 72ND AVENUE
PORTLAND, OR 97224
CONTACT: JIM IMBRIE
PHONE: (503) 625-4455
EMAIL: jimbrie@geopacificeng.com

CIVIL ENGINEER
3J CONSULTING, INC.
5075 SW GRIFFITH DR, SUITE 150
BEAVERTON, OR 97005
CONTACTS:
CASEY FERGESON, PE
PHONE: (503) 946-9365
EMAIL: casey.fergeson@3j-consulting.com
AARON MURPHY, PE
PHONE: (503) 946-9365
EMAIL: aaron.murphy@3j-consulting.com

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

LAND USE APPROVAL	04/01/2015
REVISION SUMMARY	BY DATE
#	

COVER SHEET
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80051PE
OREGON
JULY 21, 2014
CASEY L. FERGESON
EXPIRES: 12/31/15
PRELIMINARY

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
COVER SHEET

SHEET NUMBER
C0.0

Scale: 1 inch = 30 feet

30 15 0 15 30

LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY
- CENTERLINE
- LOT LINE
- BUILDING
- 1 FT CONTOUR
- 200 5 FT CONTOUR
- FENCE LINE
- W WATER LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- OHP OVERHEAD POWER
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING TELEPHONE PEDESTAL
- C C UNDERGROUND CABLE LINE
- ASPHALT
- CONCRETE
- EXISTING TREES

NOTES

1. UTILITY INFORMATION SHOWN ON THIS MAP IS BASED UPON OBSERVED FEATURES, RECORD DATA AND TONE MARKS PROVIDED BY PUBLIC UTILITY LOCATION SERVICES. NO WARRANTIES ARE MADE REGARDING THE ACCURACY OR COMPLETENESS OF THE UTILITY INFORMATION SHOWN. ADDITIONAL UTILITIES MAY EXIST. INTERESTED PARTIES ARE HEREBY ADVISED THAT UTILITY LOCATIONS SHOULD BE VERIFIED PRIOR TO DESIGN OR CONSTRUCTION OF ANY CRITICAL ITEMS.
2. VERTICAL DATUM: NAVD '88 UTILIZING GPS POSITIONING TIED TO THE ORIGIN WITH REAL TIME CORRECTORS REFERENCED TO NAD 83(2011).
3. TOPOGRAPHIC FEATURES SHOWN ON THIS MAP WERE LOCATED USING STANDARD PRECISION TOPOGRAPHIC MAPPING PROCEDURES. THIRD PARTY USERS OF DATA FROM THIS MAP PROVIDED VIA AUTOCAD DRAWING FILES OR DATA EXCHANGE FILES SHOULD NOT RELY ON ANY AUTOCAD GENERATED INFORMATION WHICH IS BEYOND THE LIMITS OF PRECISION OF THIS MAP. THIRD PARTIES USING DATA FROM THIS MAP IN AN AUTOCAD FORMAT SHOULD VERIFY ANY ELEMENTS REQUIRING PRECISE LOCATIONS PRIOR TO COMMENCEMENT OF ANY CRITICAL DESIGN OR CONSTRUCTION. CONTACT COMPASS ENGINEERING FOR FURTHER INFORMATION. FURTHERMORE, COMPASS ENGINEERING WILL NOT BE RESPONSIBLE NOR HELD LIABLE FOR ANY DESIGN OR CONSTRUCTION RELATED PROBLEMS THAT ARISE OUT OF THIRD PARTY USAGE OF THIS MAP (IN AUTOCAD OR OTHER FORMAT) FOR ANY PURPOSE OTHER THAN SPECIFICALLY STATED HEREIN. THIS STATEMENT IS AN OFFICIAL PART OF THIS MAP.

EXISTING CONDITIONS PLAN

THIS PLAN IS INTENDED FOR USE AS AN EXISTING CONDITIONS PLAN SHOWING THE CONDITIONS OF THE SITE PRIOR TO CONSTRUCTION. INFORMATION SHOWN ON THIS PLAN WAS DEVELOPED FROM THE TOPOGRAPHIC SURVEY, AERIAL PHOTOS, AND SITE OBSERVATIONS BY THE ENGINEER . NOT ALL SURFACE FEATURES OR UTILITIES MAY BE SHOWN. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION TO DETERMINE WORK SPECIFIC DETAILS. TOPOGRAPHIC INFORMATION PROVIDED BY COMPASS LAND SURVEYORS DATED JANUARY, 2015 .

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

811 Know what's below. Call before you dig.

LAND USE APPROVAL	04/01/2015
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EXISTING CONDITIONS
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER 80055PE OREGON JULY 21, 2006 JAY L FERGESON EXPIRES: 12/31/15

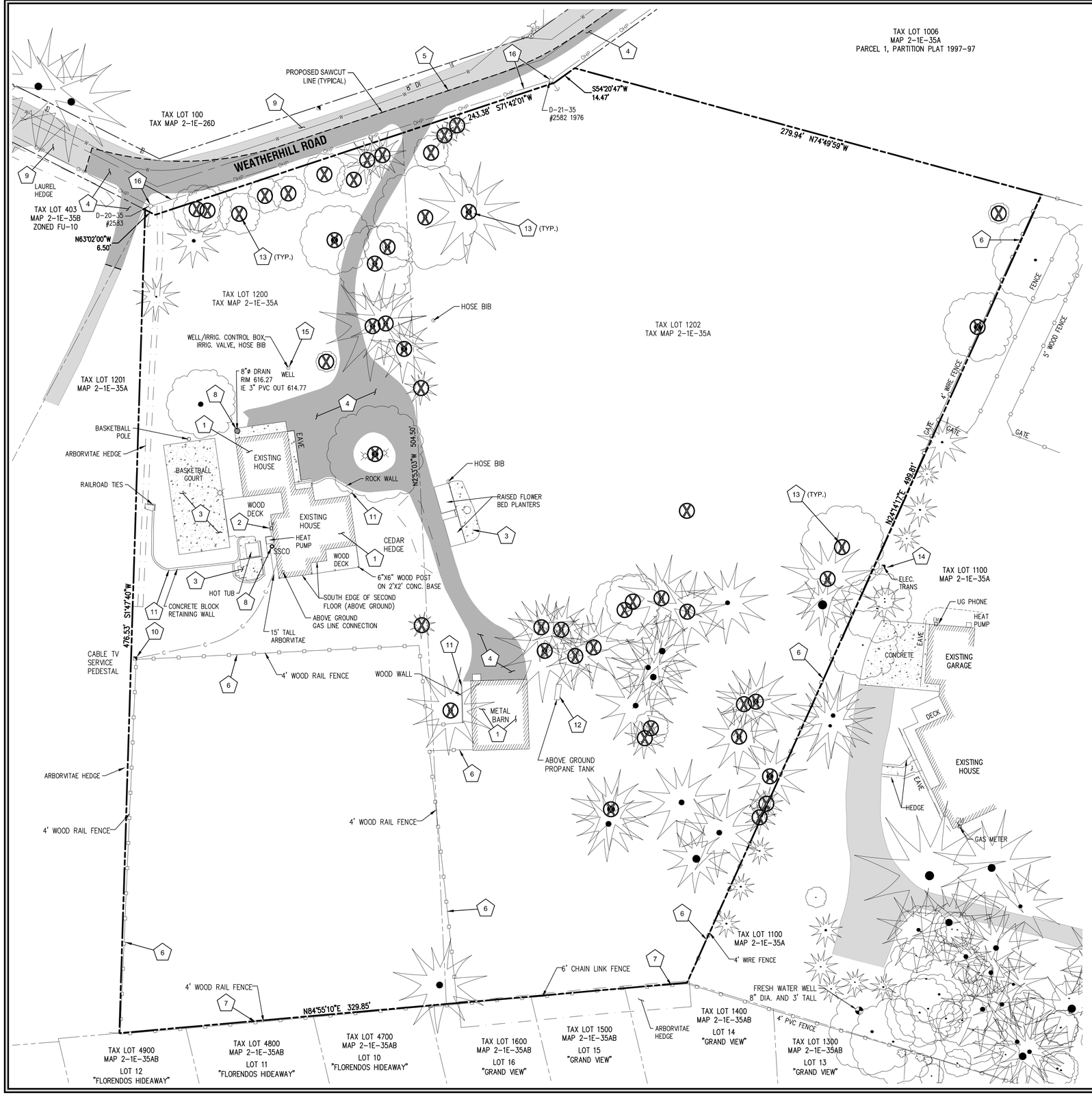
PRELIMINARY

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
EXISTING COND.'S

SHEET NUMBER
C1.0



Scale: 1 inch = 30 feet

30 15 0 15 30

LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY
- CENTERLINE
- EXISTING LOT LINE
- BUILDING
- FENCE LINE
- WATER LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- OVERHEAD POWER
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING TELEPHONE PEDESTAL
- UNDERGROUND CABLE LINE
- ASPHALT
- ASPHALT TO BE REMOVED
- CONCRETE
- EXISTING TREES TO REMAIN
- EXISTING TREES TO BE REMOVED
- SAWCUT LINE

DEMOLITION KEY

1	EXISTING BUILDING AND FOUNDATION TO BE DEMOLISHED. DEBRIS AND REFUSE TO BE DISPOSED OFF-SITE AT AN APPROVED LOCATION.
2	EXISTING POWER METER TO BE DISCONNECTED AND RETURNED TO POWER COMPANY. CAP SERVICE LINES AND REMOVE ALL CONDUITS AND WIRING WITHIN PROPERTY.
3	REMOVE EXISTING CONCRETE AND BASE ROCK. DISPOSE OF RUBBLE AND REFUSE OFF-SITE.
4	REMOVE EXISTING ASPHALT AND BASE ROCK. DISPOSE OF RUBBLE AND REFUSE OFF-SITE.
5	SAWCUT EXISTING ASPHALT PAVEMENT AS SHOWN.
6	REMOVE EXISTING FENCING AND DISPOSE OF OFF-SITE.
7	PROTECT EXISTING FENCING TO REMAIN.
8	REMOVE EXISTING STORM AND SEWER LINES AND STRUCTURES AND DISPOSE OF OFF-SITE (TYPICAL FOR ALL).
9	PROTECT EXISTING PAVEMENT TO REMAIN, SEE SHEET C2.1.
10	CABLE TV PROVIDER TO REMOVE EXISTING TELEPHONE PEDESTAL. CONTRACTOR TO COORDINATE WITH CABLE TV PROVIDER.
11	REMOVE EXISTING WALL AND DISPOSE OF REFUSE OFF-SITE (TYPICAL).
12	DECOMMISSION AND REMOVE PROPANE TANK. DISPOSE OF OFF-SITE.
13	REMOVE TREE
14	RELOCATE EXISTING TRANSFORMER AND PEDESTAL. CONTRACTOR TO COORDINATE WITH LAND OWNER AND ASSOCIATED PURVEYORS.
15	DECOMMISSION EXISTING WELL HEAD PER LOCAL, STATE AND FEDERAL REQUIREMENTS.
16	EXISTING UTILITIES TO BE INSTALLED UNDERGROUND. CONTRACTOR TO COORDINATE WITH PURVEYORS.

GENERAL DEMOLITION NOTES

1. DEMOLITION NOTES ARE FOR CLARIFICATION ONLY AND ARE SHOWN FOR THE CONTRACTOR'S BENEFIT. THESE NOTES ARE NOT INTENDED TO BE COMPREHENSIVE. THE CONTRACTOR SHALL REMOVE OR RELOCATE ALL EXISTING ON-SITE IMPROVEMENTS NECESSARY TO ACCOMMODATE THE PROPOSED CONSTRUCTION.
2. ALL EXISTING PROPERTY UTILITY SERVICES TO BE TERMINATED AND CAPPED AT THE RIGHT OF WAY PRIOR TO DEMOLISHING ANY EXISTING BUILDINGS.
3. CONTRACTOR IS TO REMOVE ALL EXISTING SURFACE IMPROVEMENTS AND DEBRIS WITHIN THE LIMITS OF WORK UNLESS OTHERWISE NOTED. ALL DEBRIS FOUND ON SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE STATE CODES.
4. CONTRACTOR TO PROTECT EXISTING FEATURES WHICH ARE TO REMAIN.
5. CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLE RIMS, DRAINAGE STRUCTURES, VALVE BOXES, VAULT LIDS AND UTILITY ACCESS STRUCTURES TO FINISH GRADE WITHIN AREAS AFFECTED BY PROPOSED CONSTRUCTION.
6. CONSTRUCTION AND DEMOLITION ACTIVITIES SHALL BE PHASED IN SUCH A MANNER AS TO ENSURE THAT PUBLIC ACCESS ROADS ARE NOT BLOCKED AND REMAIN OPERATIONAL.
7. SEE TREE PROTECTION AND REMOVAL PLAN (SHEET C1.3) FOR ALL TREE REMOVAL INFORMATION.

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

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LAND USE APPROVAL	04/01/2015
REVISION SUMMARY	BY DATE

DEMOLITION PLAN
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80051PE
OREGON
JULY 21, 2010
JEFFREY L. FERGESON
EXPIRES: 12/31/15
PRELIMINARY

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
DEMOLITION

SHEET NUMBER
C1.1

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

TAX LOT 1006
MAP 2-1E-35A
PARCEL 1, PARTITION PLAT 1997-97

TAX LOT 100
TAX MAP 2-1E-26D

WEATHERHILL ROAD

LAUREL HEDGE

TAX LOT 403
MAP 2-1E-35B
ZONED FU-10

TAX LOT 1201
MAP 2-1E-35A

ARBORVITAE HEDGE

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8 LOT 9 LOT 10 LOT 11 LOT 12 LOT 13 LOT 14 LOT 15 LOT 16 LOT 17 LOT 18 LOT 19 LOT 20 LOT 21 LOT 22

PRIVATE ACCESS DRIVE

PROPOSED STREET

SATTER STREET

TREE PROTECTION FENCING PLACED 10' BEYOND DRIP LINE OR AS SHOWN (TYPICAL).

TAX LOT 1100
MAP 2-1E-35A

HEAT PUMP
CONCRETE
EAVE
DECK
HEDGE

CONTRACTOR TO COORDINATE WITH DEVELOPER AND ADJACENT PROPERTY OWNER FOR OFF-SITE CONSTRUCTION.

TAX LOT 1300
MAP 2-1E-35AB

TAX LOT 1400
MAP 2-1E-35AB

TAX LOT 1500
MAP 2-1E-35AB

TAX LOT 1600
MAP 2-1E-35AB

TAX LOT 4700
MAP 2-1E-35AB

TAX LOT 4800
MAP 2-1E-35AB

TAX LOT 4900
MAP 2-1E-35AB

Scale: 1 inch = 30 feet
30 15 0 15 30

LEGEND

- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- 4042 - TREE NUMBER
- SIGNIFICANT TREE CANOPY TO REMAIN (DRIPLINE + 10 FT)
- SIGNIFICANT TREE CANOPY TO BE REMOVED (DRIPLINE + 10 FT)
- TREE TO BE REMOVED
- TREE PROTECTION FENCING
- BOUNDARY LINE
- PROPOSED LOT LINE
- BUILDING SETBACK
- BUILDING FOOTPRINT

GENERAL TREE INVENTORY STATISTICS

TOTAL PROPERTY AREA:	214,405 Sq. Ft. = 4.92 Ac.
TOTAL TREE INVENTORY (PROJECT BOUNDARY):	61 ea
TOTAL TREES RETAINED:	11 ea
TOTAL TREES REMOVED:	50 ea
TOTAL TREE CALIPER INCHES:	1,619 inches
TOTAL CALIPER INCHES RETAINED:	433 inches
TOTAL CALIPER INCHES REMOVED:	1,186 Inches

SIGNIFICANT TREE STATISTICS

SIGNIFICANT TREE INVENTORY:	27 ea
SIGNIFICANT TREES RETAINED:	9 ea
SIGNIFICANT TREES REMOVED:	18 ea
SIGNIFICANT TREE CALIPER INCHES:	995 inches
SIGNIFICANT CALIPER INCHES RETAINED:	401 inches
SIGNIFICANT CALIPER INCHES REMOVED:	594 inches
EXISTING SIGNIFICANT TREE CANOPY COVERAGE:	52,282 Sq. Ft.
SIGNIFICANT TREE CANOPY RETAINED:	18,205 Sq. Ft.
SIGNIFICANT TREE CANOPY REMOVED:	34,077 Sq. Ft.
SIGNIFICANT TREE CANOPY REMOVED DUE TO R.O.W. IMPROVEMENTS:	27,322 Sq. Ft.
TREE PRESERVATION AREA REQUIRED (*20% OF EXISTING CANOPY*):	10,456 Sq. Ft.
TREE PRESERVATION AREA PROVIDED (*35% OF EXISTING CANOPY*):	18,205 Sq. Ft.

Know what's **below.** **Call** before you dig.

LAND USE APPROVAL	04/01/2015
REVISION SUMMARY	BY DATE
#	

TREE PROTECTION AND REMOVAL PLAN

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80055PE
OREGON
JULY 21, 2010
CLAY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
TREE PLAN

SHEET NUMBER
C1.2

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

TREE INVENTORY

SURVEY POINT NUMBER	TREE SPECIES	NOMINAL CALIPER SIZE	SIGNIFICANT DESIGNATION	PROPOSED ACTION	REMOVE DUE TO CONDITION
4008	DOUGLAS-FIR	2X44	SIGNIFICANT	RETAIN	N/A
4018	GIANT SEQUOIA	6	NO	REMOVE	R.O.W. IMPROVEMENTS
4019	DOUGLAS-FIR	28	SIGNIFICANT	REMOVE	R.O.W. IMPROVEMENTS
4020	OREGON WHITE OAK	16,18	SIGNIFICANT	RETAIN	N/A
4022	DOUGLAS-FIR	10	NO	RETAIN	N/A
4023	DEODAR CEDAR	22	NO	RETAIN	N/A
4024	EUROPEAN WHITE BIRCH	14	NO	REMOVE	R.O.W. IMPROVEMENTS
4025	DOUGLAS-FIR	14	NO	REMOVE	R.O.W. IMPROVEMENTS
4026	EUROPEAN WHITE BIRCH	14	NO	REMOVE	R.O.W. IMPROVEMENTS
4027	EUROPEAN WHITE BIRCH	12	NO	REMOVE	R.O.W. IMPROVEMENTS
4028	EUROPEAN WHITE BIRCH	12	NO	REMOVE	R.O.W. IMPROVEMENTS
4029	EUROPEAN WHITE BIRCH	12	NO	REMOVE	R.O.W. IMPROVEMENTS
4030	FRUIT	10	NO	REMOVE	R.O.W. IMPROVEMENTS
4031	DOUGLAS-FIR	12	NO	REMOVE	R.O.W. IMPROVEMENTS
4032	WESTERN REDCEDAR	22	NO	REMOVE	R.O.W. IMPROVEMENTS
4033	OREGON WHITE OAK	2X14,18	NO	REMOVE	R.O.W. IMPROVEMENTS
4036	OREGON WHITE OAK	44	SIGNIFICANT	REMOVE	R.O.W. IMPROVEMENTS
4037	JAPANESE MAPLE	6	NO	REMOVE	R.O.W. IMPROVEMENTS
4038	HINOKI CYPRESS	6	NO	REMOVE	R.O.W. IMPROVEMENTS
4039	HINOKI CYPRESS	6	NO	REMOVE	R.O.W. IMPROVEMENTS
4040	JAPANESE MAPLE	8	NO	REMOVE	R.O.W. IMPROVEMENTS
4041	DOUGLAS-FIR	38	NO	REMOVE	CONSTRUCTION
4042	OREGON WHITE OAK	22,24	SIGNIFICANT	REMOVE	CONSTRUCTION
4043	OREGON WHITE OAK	2X16	SIGNIFICANT	REMOVE	R.O.W. IMPROVEMENTS
4044	OREGON WHITE OAK	8,10,14	SIGNIFICANT	REMOVE	R.O.W. IMPROVEMENTS
4045	DOUGLAS-FIR	28	SIGNIFICANT	REMOVE	R.O.W. IMPROVEMENTS
4046	DOUGLAS-FIR	34	SIGNIFICANT	REMOVE	R.O.W. IMPROVEMENTS
4047	DOUGLAS-FIR	20	NO	REMOVE	R.O.W. IMPROVEMENTS
4048	DOUGLAS-FIR	6	NO	REMOVE	R.O.W. IMPROVEMENTS
4049	DOUGLAS-FIR	34	SIGNIFICANT	REMOVE	CONSTRUCTION
4050	DOUGLAS-FIR	26	SIGNIFICANT	REMOVE	CONSTRUCTION
4051	DOUGLAS-FIR	26	SIGNIFICANT	REMOVE	CONSTRUCTION
4052	DOUGLAS-FIR	20	SIGNIFICANT	REMOVE	CONSTRUCTION
4053	DOUGLAS-FIR	22	SIGNIFICANT	REMOVE	CONSTRUCTION
4054	MADRONE	16	NO	REMOVE	POOR HEALTH
4055	MADRONE	8	NO	REMOVE	POOR HEALTH
4056	DOUGLAS-FIR	26	SIGNIFICANT	REMOVE	CONSTRUCTION
4057	DOUGLAS-FIR	42	SIGNIFICANT	RETAIN	N/A
4058	DOUGLAS-FIR	34	SIGNIFICANT	RETAIN	N/A
4059	DOUGLAS-FIR	42	SIGNIFICANT	RETAIN	N/A
4060	DOUGLAS-FIR	36	SIGNIFICANT	RETAIN	N/A
4061	ENGLISH HOLLY	4X4,6	NO	REMOVE	R.O.W. IMPROVEMENTS
4062	DOUGLAS-FIR	24	SIGNIFICANT	REMOVE	CONSTRUCTION
4063	DOUGLAS-FIR	30	SIGNIFICANT	REMOVE	CONSTRUCTION
4064	DOUGLAS-FIR	60	SIGNIFICANT	REMOVE	CONSTRUCTION
4065	DOUGLAS-FIR	28	NO	REMOVE	POOR HEALTH
4066	BIGLEAF MAPLE	22	NO	REMOVE	POOR HEALTH
4067	BIGLEAF MAPLE	8X6	NO	REMOVE	POOR HEALTH
4068	SWEET CHERRY	8	NO	REMOVE	INVASIVE
4085	DOUGLAS-FIR	36	SIGNIFICANT	REMOVE	CONSTRUCTION
4086	DOUGLAS-FIR	16	NO	REMOVE	R.O.W. IMPROVEMENTS
4087	DOUGLAS-FIR	30	NO	REMOVE	R.O.W. IMPROVEMENTS
4088	DOUGLAS-FIR	46	SIGNIFICANT	REMOVE	R.O.W. IMPROVEMENTS
4089	DOUGLAS-FIR	16	NO	REMOVE	R.O.W. IMPROVEMENTS
4090	DOUGLAS-FIR	16	NO	REMOVE	R.O.W. IMPROVEMENTS
4091	DOUGLAS-FIR	36	SIGNIFICANT	RETAIN	N/A
4092	DOUGLAS-FIR	52	SIGNIFICANT	RETAIN	N/A
4093	DOUGLAS-FIR	37	SIGNIFICANT	RETAIN	N/A
4094	DOUGLAS-FIR	50	NO	REMOVE	POOR HEALTH
4095	DOUGLAS-FIR	38	NO	REMOVE	POOR HEALTH
4096	DOUGLAS-FIR	10	NO	REMOVE	R.O.W. IMPROVEMENTS

LAND USE APPROVAL 04/01/2015

#	REVISION SUMMARY	BY	DATE

TREE PROTECTION AND REMOVAL DETAILS

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

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REGISTERED PROFESSIONAL ENGINEER
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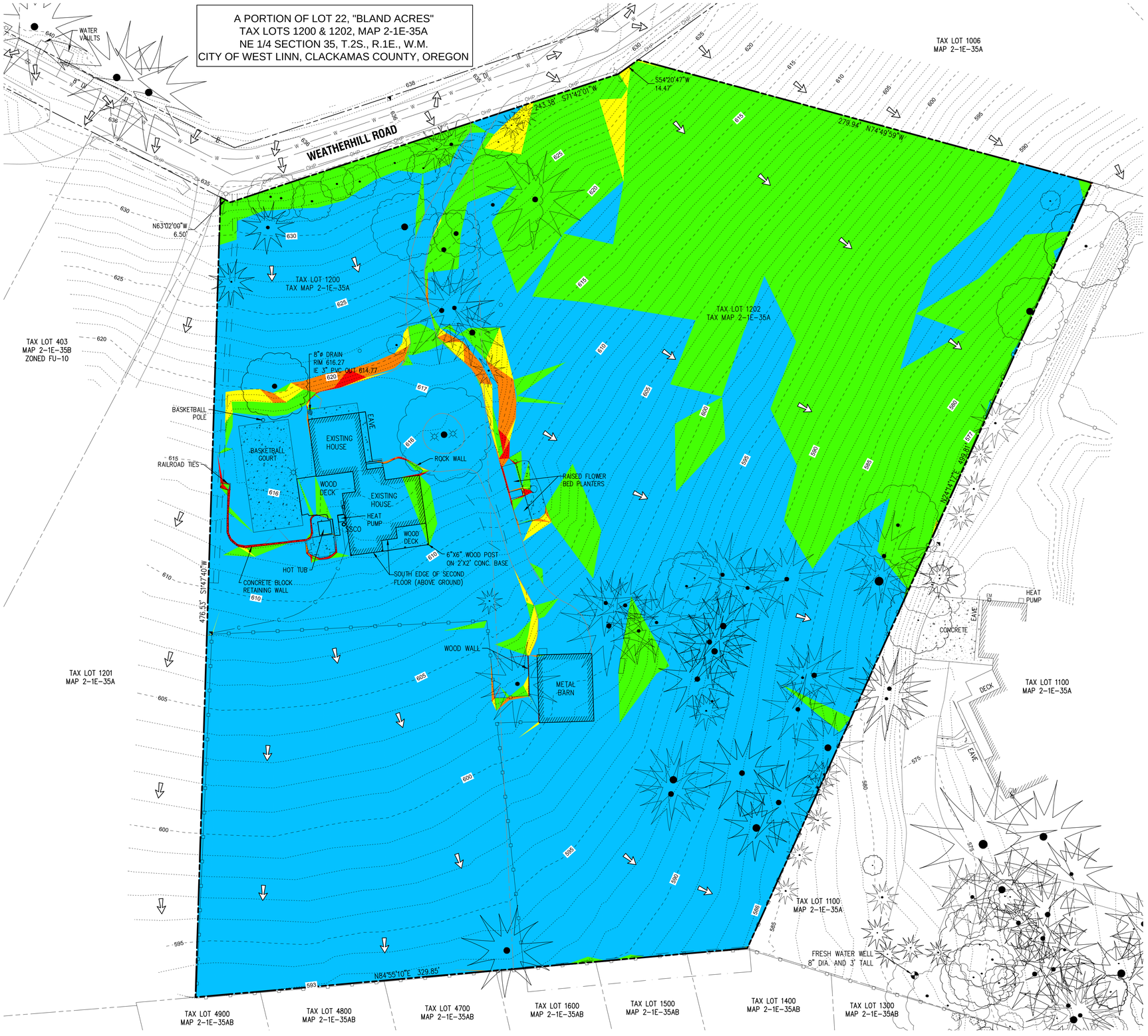
SHEET TITLE
TREE PLAN DETAIL

SHEET NUMBER
C1.3

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON



Scale: 1 inch = 30 feet
30 15 0 15 30

LEGEND

- BOUNDARY LINE
- 1 FOOT CONTOUR
- 5 FOOT CONTOUR (200)
- EXISTING TREES TO REMAIN
- EXISTING TREES TO BE REMOVED
- RUNOFF FLOW DIRECTION

SITE SLOPE ANALYSIS TABLE

Minimum Slope	Maximum Slope	Area (sf)	%	Color
0%	15%	148,728	69.5	
16%	25%	61,584	28.8	
26%	35%	2,122	1.0	
36%	50%	1,222	0.6	
>50%	--	410	0.1	

DATE	BY	REVISION SUMMARY
04/01/2015		LAND USE APPROVAL

SLOPE ANALYSIS PLAN
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

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SHEET TITLE
SLOPE ANALYSIS

SHEET NUMBER
C1.4

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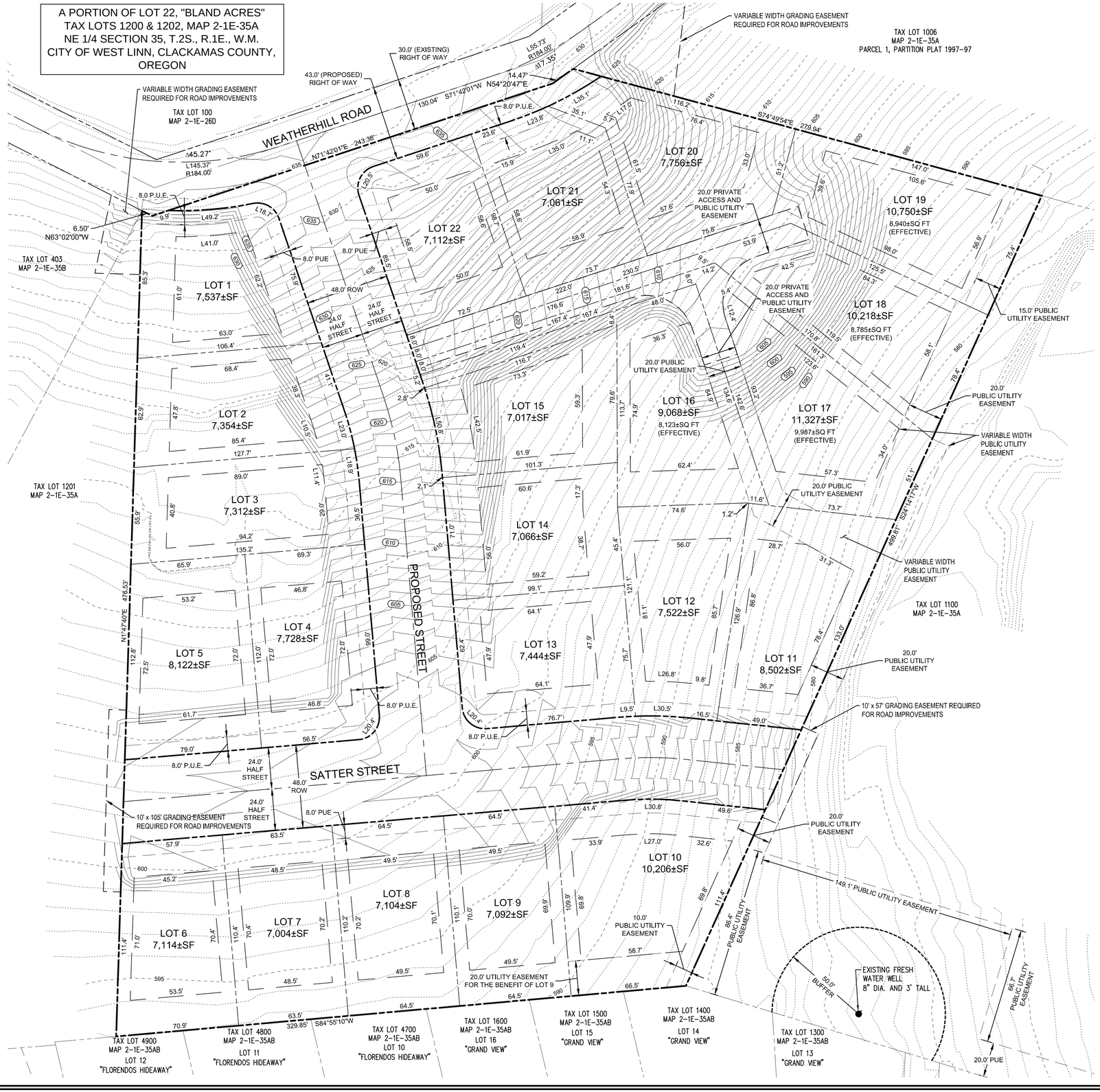
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON



Scale: 1 inch = 30 feet
30 15 0 15 30

LEGEND

- BOUNDARY LINE
- EXISITNG RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED LOT LINE
- PROPOSED CENTERLINE
- PROPOSED SETBACK LINE
- PROPOSED EASEMENT LINE
- EXISTING 1 FOOT CONTOUR
- EXISTING 5 FOOT CONTOUR
- PROPOSED 1 FOOT CONTOUR
- PROPOSED 5 FOOT CONTOUR

SITE STATISTICS	
SITE ADDRESS	22850 S WEATHERHILL RD
TAXLOT	21E35A 1200 & 1202
JURISDICTION	CITY OF WEST LINN
GROSS SITE AREA	4.92 ACRES
PROPERTY ZONING	R-7
FLOOD HAZARD MAP NUMBER	41005C0257D ZONE X (UNSHADED)

SUBDIVISION STATISTICS	
RIGHT OF WAY DEDICATION	0.85 ACRES
MINIMUM ALLOWABLE EFFECTIVE LOT SIZE	7,000 SF
MINIMUM LOT DENSITY	18 UNITS
MAXIMUM LOT DENSITY	25 UNITS
PROPOSED LOT DENSITY	5.4 UNITS/ACRE
MINIMUM LOT DENSITY (PER R-7 ZONING)	4.3 UNITS/ACRE
MAXIMUM LOT DENSITY (PER R-7 ZONING)	6.2 UNITS/ACRE
SETBACKS:	
FRONT	20 FEET
SIDE	7.5 FEET
REAR	20 FEET
STREET SIDE	15 FEET
MAX. HEIGHT	35 FEET

PROJECT TEAM

OWNER/APPLICANT
LF 7, LLC
C/O: J.T. SMITH COMPANIES
5285 MEADOWS ROAD, SUITE #171
LAKE OSWEGO, OR 97035
CONTACT: JESSE NEMEC
PHONE: (503) 730-8620
EMAIL: jnemec@jtsmithco.com

PLANNING CONSULTANT
3J CONSULTING, INC
10445 SW CANYON ROAD, SUITE 245
BEAVERTON, OR 97005
CONTACT: ANDREW TULL
PHONE: 503-946-9365
EMAIL: andrew.tull@3j-consulting.com

LAND SURVEYOR
COMPASS SURVEYING
4107 SE INTERNATIONAL WAY, SUITE 705
MILWAUKIE, OR 97222
CONTACT: DON DEVLAEMINCK, PLS
PHONE: 503-653-9093
EMAIL: dond@compass-engineering.com

GEOTECHNICAL CONSULTANT
GEOPACIFIC ENGINEERING, INC.
14835 SW 72ND AVENUE
PORTLAND, OR 97224
CONTACT: JIM IMBRIE
PHONE: (503) 625-4455
EMAIL: jimbrie@geopacificeng.com

CIVIL ENGINEER
3J CONSULTING, INC.
10445 SW CANYON ROAD, SUITE 245
BEAVERTON, OR 97005
CONTACTS:
CASEY FERGESON, PE
PHONE: (503) 946-9365
EMAIL: casey.fergeson@3j-consulting.com
AARON MURPHY, PE
PHONE: (503) 946-9365
EMAIL: aaron.murphy@3j-consulting.com

Know what's **below.** **Call** before you dig.

DATE	BY	REVISION SUMMARY
04/01/2015		LAND USE APPROVAL

TENTATIVE SUBDIVISION PLAT
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER 80051 OREGON JULY 21, 2014 CASEY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

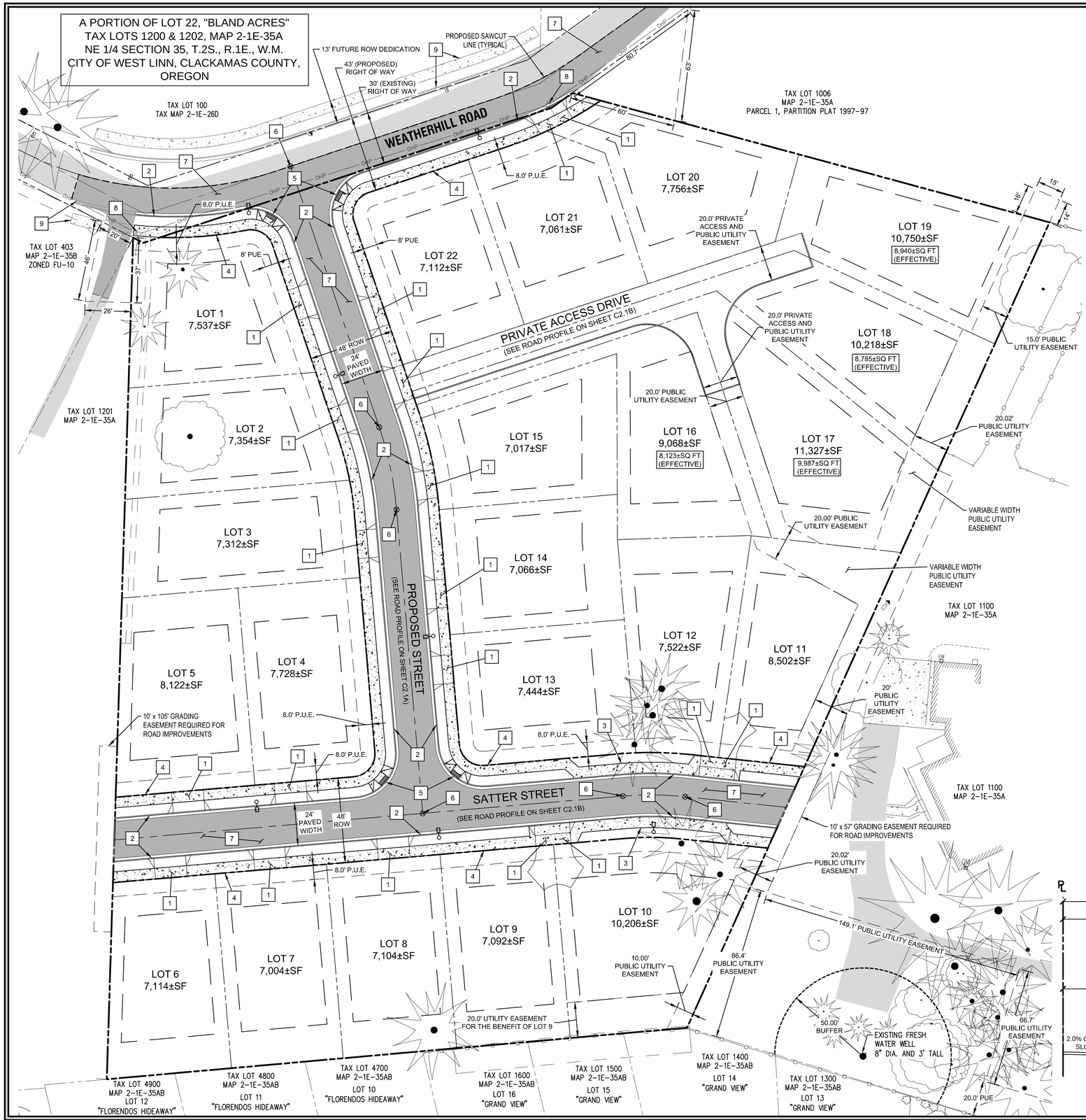
3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
SUBDIVISION PLAT

SHEET NUMBER
C2.0

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON



Scale: 1 inch = 30 feet
30 15 0 15 30

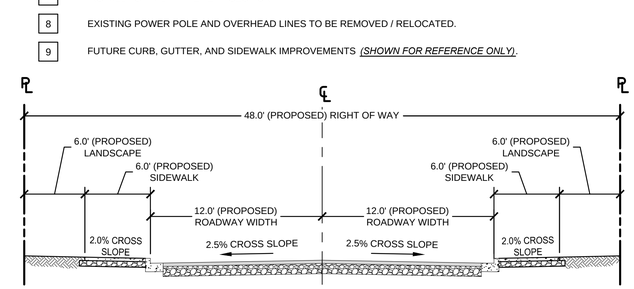
Know what's **below.** **Call** before you dig.

LEGEND

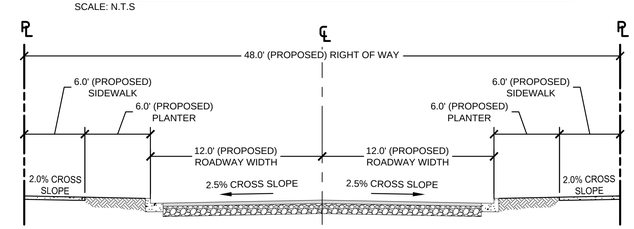
- BOUNDARY LINE
- EXISTING RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING TREES TO REMAIN
- EXISTING ASPHALT
- OHP — OVERHEAD POWER WIRE
- EXISTING UTILITY POLE WITH GUY WIRE
- PROPOSED MONUMENT
- PROPOSED BUILDING SETBACK
- PROPOSED LOT LINE
- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- PROPOSED EASEMENT
- PROPOSED RIGHT-OF-WAY
- PROPOSED CENTERLIINE
- PROPOSED STREET LIGHT

CONSTRUCTION KEY NOTES

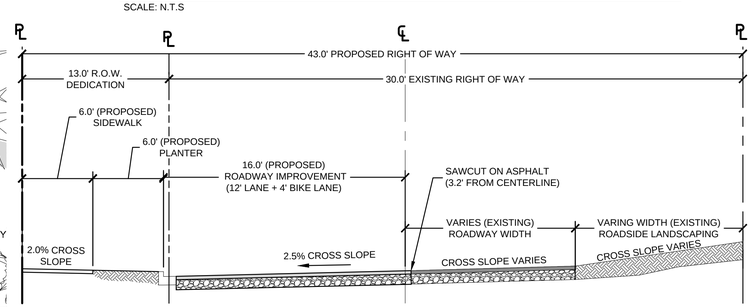
1. PROPOSED LOT ACCESS LOCATION.
2. CONSTRUCT STANDARD CURB AND GUTTER PER CITY OF WEST LINN STANDARD DETAIL WL-501 (TYPICAL CURBS).
3. CONSTRUCT 6 FT WIDE CURB TIGHT SIDEWALK PER CITY OF WEST LINN STANDARD DETAIL WL-508 (CONCRETE SIDEWALK CROSS SECTION).
4. CONSTRUCT 6 FT WIDE DETACHED SIDEWALK PER CITY OF WEST LINN STANDARD DETAIL WL-508 (CONCRETE SIDEWALK CROSS SECTION).
5. CONSTRUCT CURB RAMP PER CITY OF WEST LINN STANDARD DETAIL WL-507A (SINGLE CURB RAMP).
6. INSTALL SURVEY MONUMENT PER CLACKAMAS COUNTY SPECIFICATIONS.
7. INSTALL ASPHALT PAVEMENT SECTION.
8. EXISTING POWER POLE AND OVERHEAD LINES TO BE REMOVED / RELOCATED.
9. FUTURE CURB, GUTTER, AND SIDEWALK IMPROVEMENTS *(SHOWN FOR REFERENCE ONLY)*.



TYPICAL SECTION - SATTER STREET (CURB TIGHT SIDEWALK)
SCALE: N.T.S



TYPICAL SECTION - SATTER ST. / PROPOSED STREET IMPROVEMENTS
SCALE: N.T.S



TYPICAL SECTION - WEATHERHILL RD IMPROVEMENTS
SCALE: N.T.S

DATE	BY	REVISION SUMMARY
04/01/2015		LAND USE APPROVAL

SITE PLAN
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

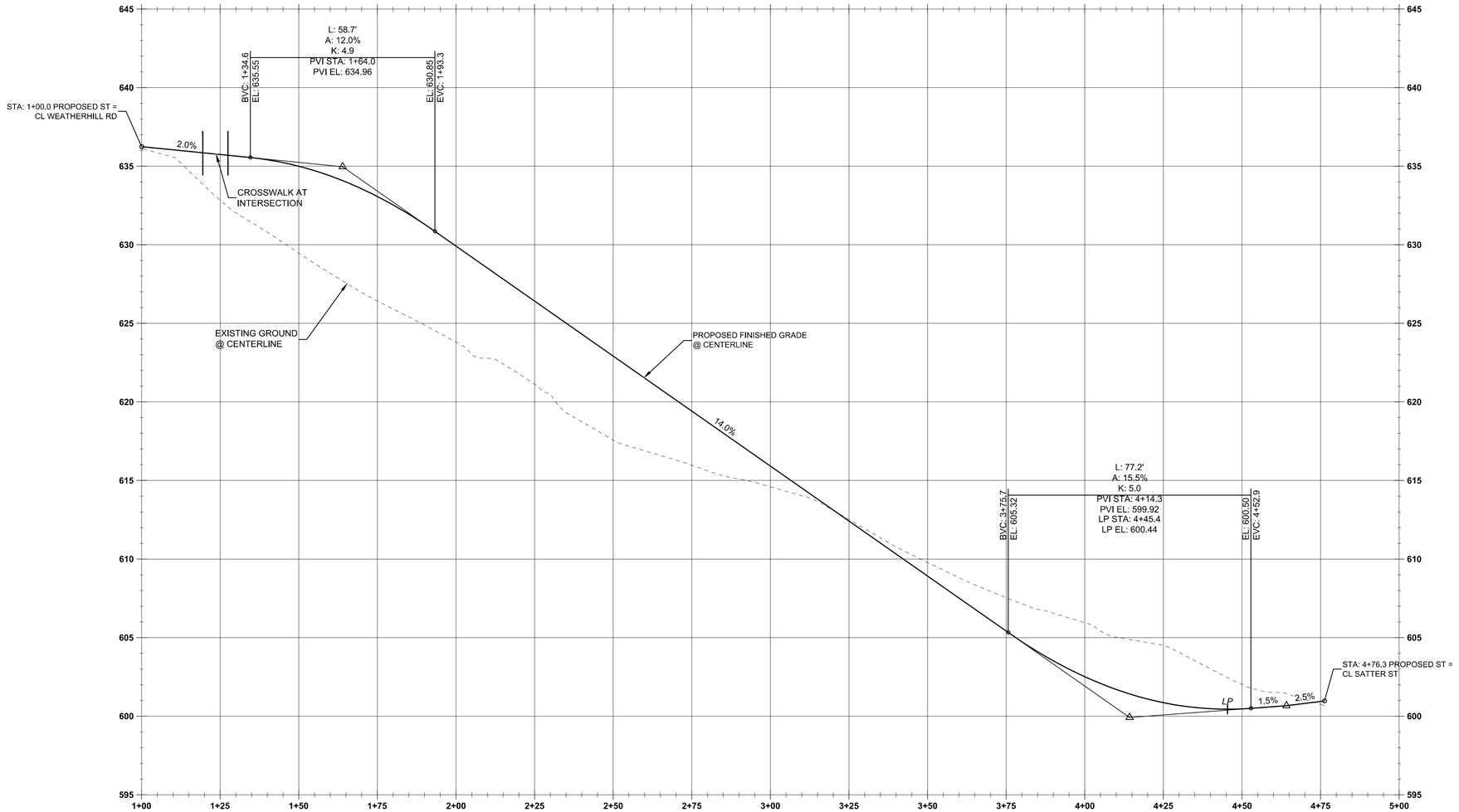
REGISTERED PROFESSIONAL ENGINEER 80055 OREGON JULY 21, 2010 CLAY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
SITE PLAN

SHEET NUMBER
C2.1



CL-PROPOSED STREET PROFILE
(STA:1+00.00 - STA:5+00.00)
SCALE: HORIZ 1"=20'
VERT 1"=4'

LAND USE APPROVAL	04/01/2015
# REVISION SUMMARY	BY DATE

PROPOSED STREET PROFILE

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

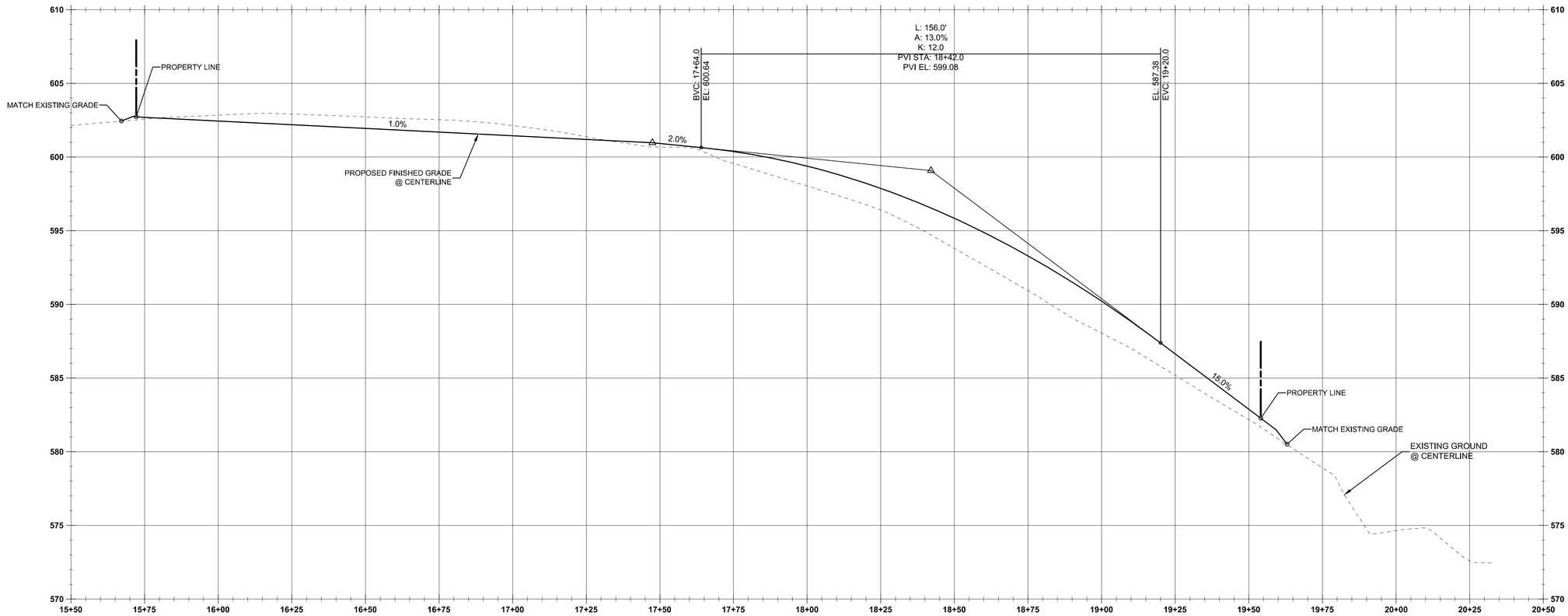
REGISTERED PROFESSIONAL ENGINEER
80055PE
OREGON
JULY 21, 2010
JAY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
PROP. STREET PROF.

SHEET NUMBER
C2.1A



CL-SATTER STREET PROFILE
(STA:15+50.00 - STA:20+50.00)
SCALE: HORIZ 1"=20'
VERT 1"=4'

LAND USE APPROVAL	04/01/2015
# REVISION SUMMARY	BY DATE

SATTER STREET PROFILE
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

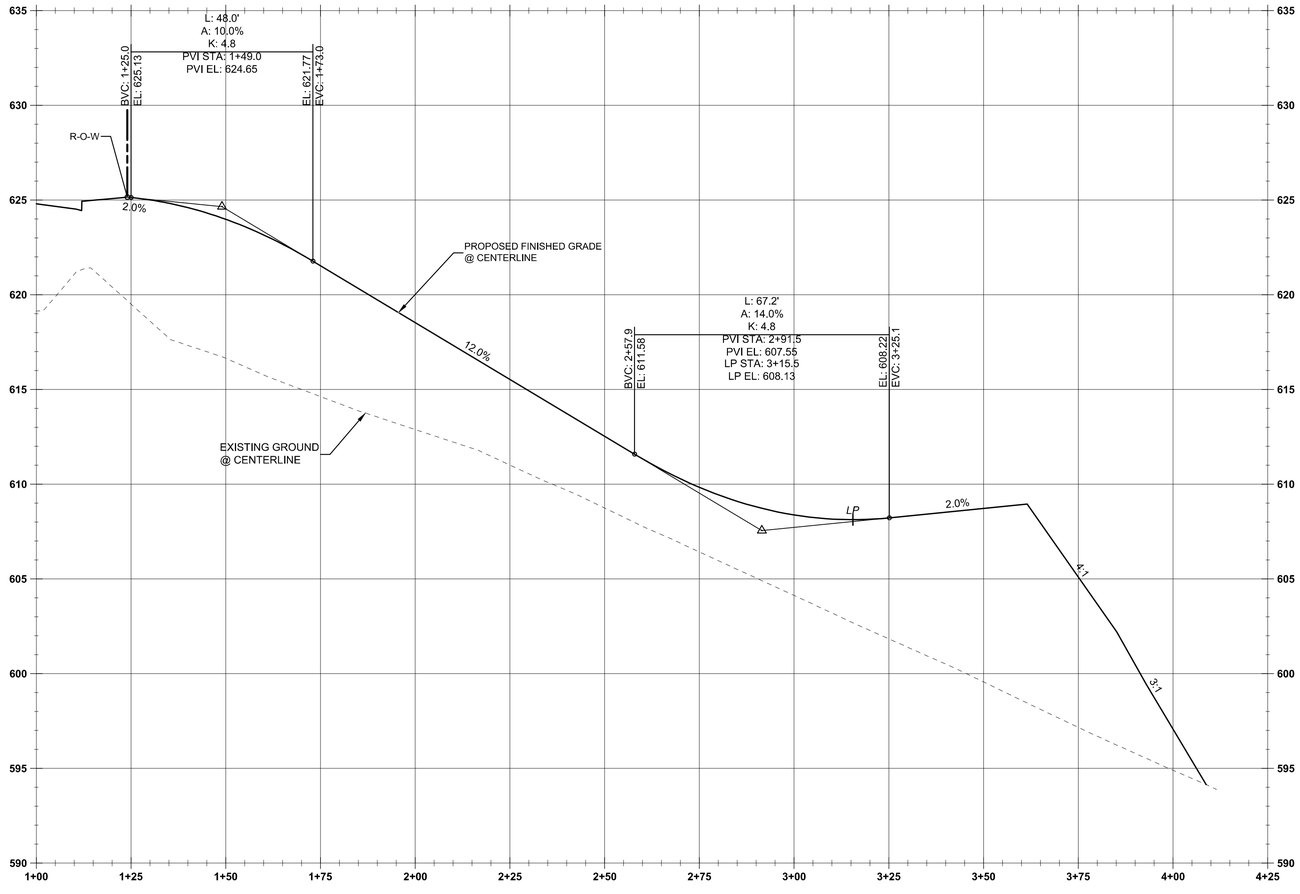
REGISTERED PROFESSIONAL ENGINEER
80051PE
OREGON
JULY 21, 2014
JEFFREY L. FERGESON
EXPIRES: 12/31/15
PRELIMINARY

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
SATTER ST. PROF.

SHEET NUMBER
C2.1B



CL-PRIVATE ACCESS DR PROFILE
(STA:1+00.00 - STA:4+25.00)
SCALE: HORIZ 1"=20'
VERT 1"=4'

LAND USE APPROVAL	04/01/2015
REVISION SUMMARY	BY DATE
#	

PRIVATE STREET PROFILE

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80055PE
OREGON
JULY 21, 2006
CLAY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

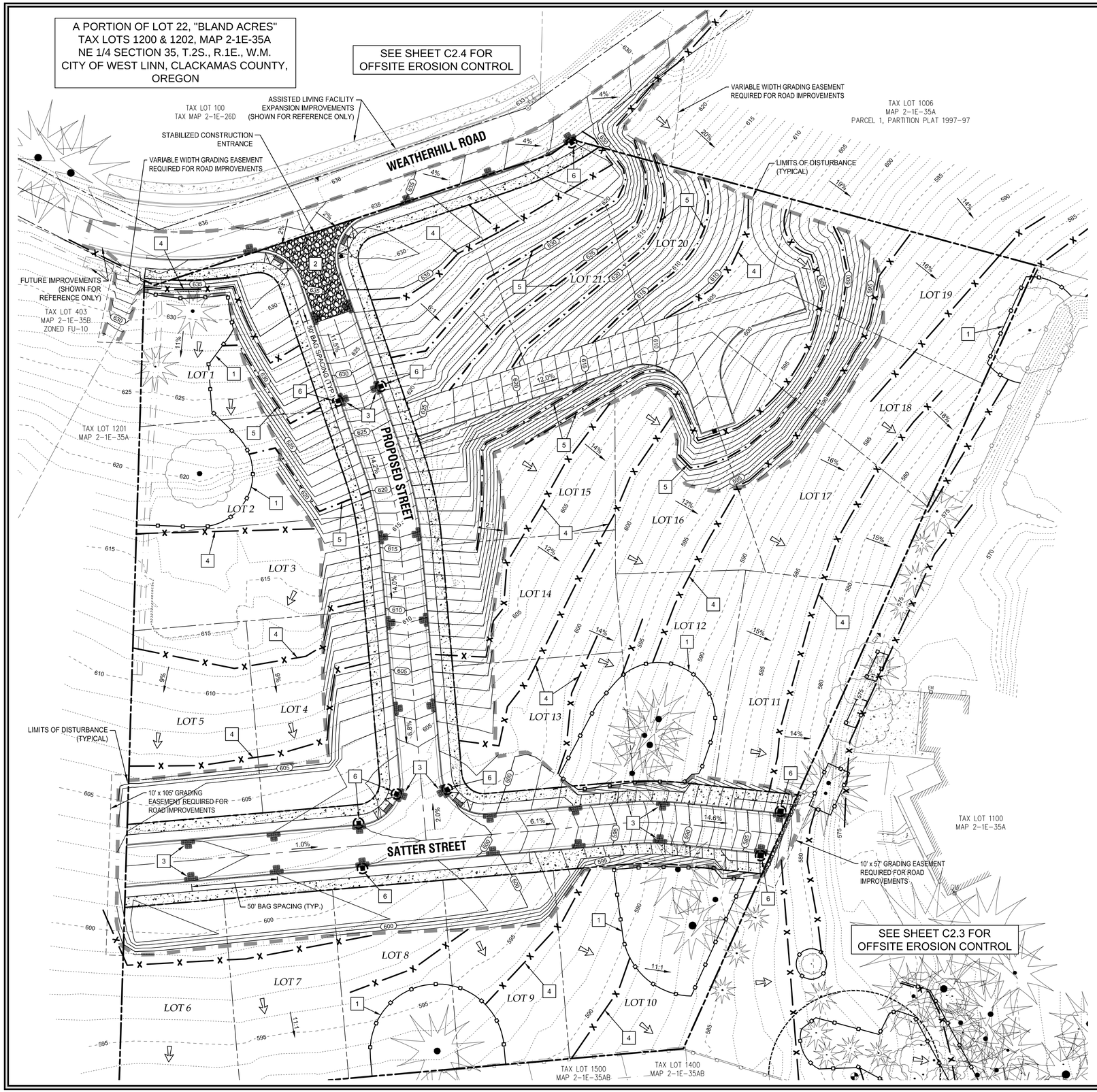
3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
PRIVATE ST. PROF.

SHEET NUMBER
C2.1C

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

SEE SHEET C2.4 FOR OFFSITE EROSION CONTROL



Scale: 1 inch = 30 feet
30 15 0 15 30

LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING ON-SITE TREES TO REMAIN
- 207 EXISTING 1FT CONTOUR
- 208 EXISTING 5FT INDEX CONTOUR
- PROPOSED LOT LINE
- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE
- 207 PROPOSED 1FT CONTOUR
- 208 PROPOSED 5FT INDEX CONTOUR
- EROSION CONTROL: SILT FENCING (BLACK)
- EROSION CONTROL: FESCUE STRAW WATTLE
- EROSION CONTROL: BIO BAG CHECK DAM
- EROSION CONTROL: CONSTRUCTION ENTRANCE
- LIMITS OF GRADING/DISTURBANCE
- SURFACE RUN-OFF FLOW ARROW
- EROSION CONTROL: INLET PROTECTION
- TREE PROTECTION FENCING

SITE GRADING INFORMATION	
NEAT LINE CUT	1,371 CY
NEAT LINE FILL	14,037 CY
STRIPPINGS*	2,090 CY
MAXIMUM CUT DEPTH	4.4 FT
MAXIMUM FILL DEPTH	12.5 FT
MAXIMUM PROPOSED SLOPE	2:1 (H:V)
TOTAL AREA OF DISTURBANCE	2.59 ACRES

(ASSUMED REPLACEMENT / STOCKPILE ON SITE OUTSIDE BUILDING ENVELOPE)*

GRADING KEY NOTES	
1	PLACE TREE PROTECTION FENCING AT LIMITS OF GRADING AND FOR CONSTRUCTION WHERE SHOWN
2	CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AT LOCATION SHOWN
3	PLACE BIO-BAG CHECK DAM FOR SEDIMENT CONTROL ADJACENT TO ALL NEW CONCRETE WORK WITHIN RIGHT OF WAY
4	PLACE SILT FENCING AT LIMITS OF GRADING AND CONSTRUCTION WHERE SHOWN
5	INSTALL STRAW WATTLE
6	INSTALL INLET PROTECTION
7	CONSTRUCT FRENCH TO INTERCEPT RUNOFF ONTO NEIGHBORING PROPERTY

GRADING GENERAL NOTES:

1. ALL GRADING ACTIVITIES SHALL CONFORM TO THE UNIFORM BUILDING CODE AND THE OREGON SPECIALTY CODE AMENDMENTS, INCLUDING APPENDIX J.

Know what's below. Call before you dig.

#	REVISION SUMMARY	BY	DATE
	LAND USE APPROVAL		04/01/2015

GRADING AND EROSION CONTROL PLAN
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80059PE
OREGON
JULY 21, 2012
JEFFREY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

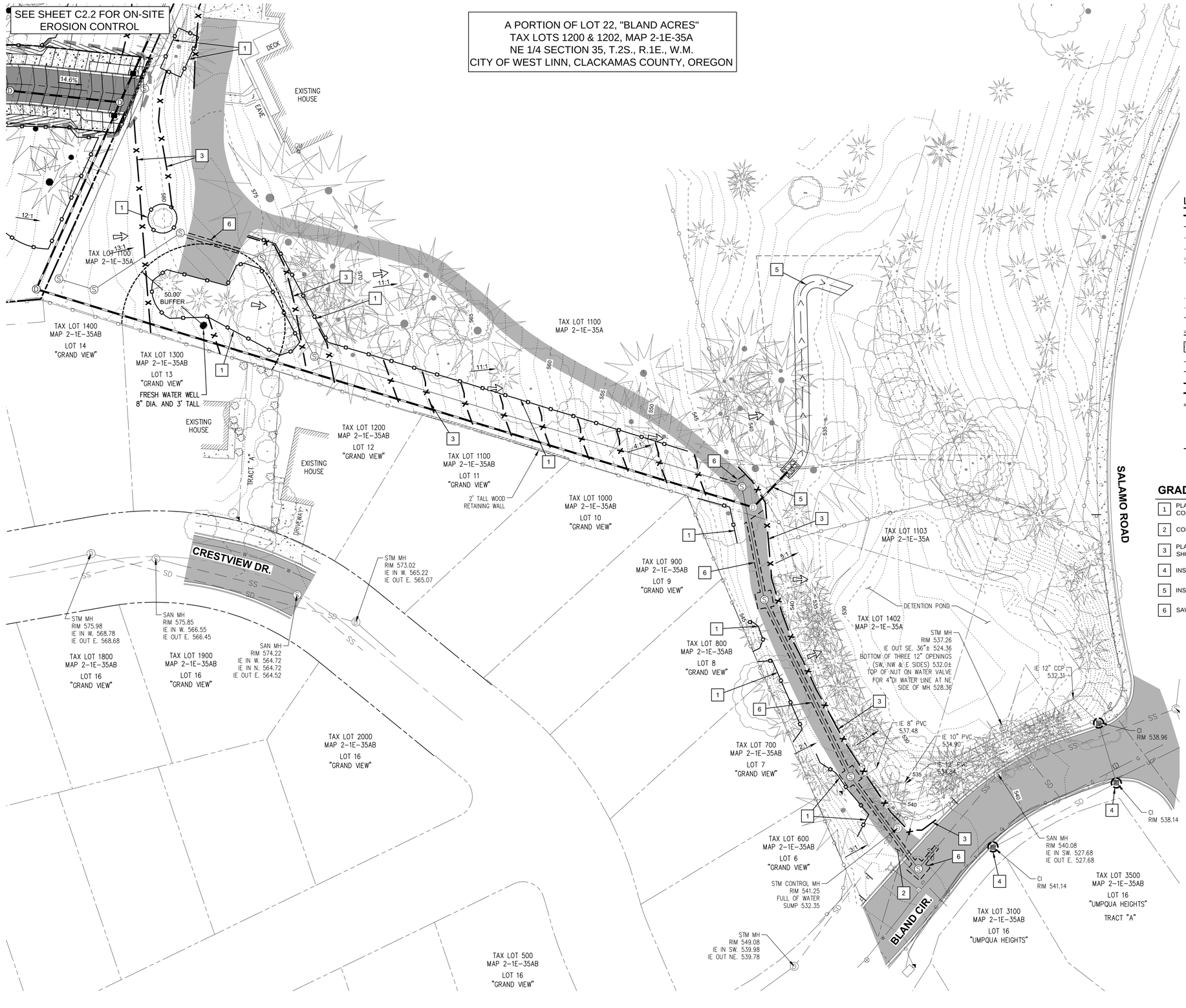
3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
GRADING / ESCP

SHEET NUMBER
C2.2

SEE SHEET C2.2 FOR ON-SITE EROSION CONTROL

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON



Scale: 1 inch = 30 feet
30 15 0 15 30

LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING CURB AND GUTTER
- EXISTING TREES TO REMAIN
- EXISTING 1FT CONTOUR
- EXISTING 5FT INDEX CONTOUR
- PROPOSED LOT LINE
- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE
- PROPOSED 1FT CONTOUR
- PROPOSED 5FT INDEX CONTOUR
- EROSION CONTROL: SILT FENCING (BLACK)
- EROSION CONTROL: FESCUE STRAW WATTLE
- LIMITS OF GRADING/DISTURBANCE
- SURFACE RUN-OFF FLOW ARROW
- EROSION CONTROL: INLET PROTECTION
- TREE PROTECTION FENCING

GRADING KEY NOTES

1. PLACE TREE PROTECTION FENCING AT LIMITS OF GRADING AND FOR CONSTRUCTION WHERE SHOWN
2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AS REQUIRED
3. PLACE SILT FENCING AT LIMITS OF GRADING AND CONSTRUCTION WHERE SHOWN
4. INSTALL INLET PROTECTION
5. INSTALL 150' DRAINAGE SWALE UPSTREAM OF EXISTING DETENTION POND
6. SAWCUT, REMOVE, AND REPLACE PAVEMENT TO MATCH EXISITNG

GRADING GENERAL NOTES:

1. ALL GRADING ACTIVITIES SHALL CONFORM TO THE UNIFORM BUILDING CODE AND THE OREGON SPECIALTY CODE AMENDMENTS, INCLUDING APPENDIX J.
2. APPROXIMATE EXCAVATION REQUIRED FOR DRAINAGE SWALE = 56 CY.

811 Know what's below. Call before you dig.

LAND USE APPROVAL	BY	DATE
REVISION SUMMARY		
#		

OFFSITE GRADING AND EROSION CONTROL PLAN

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

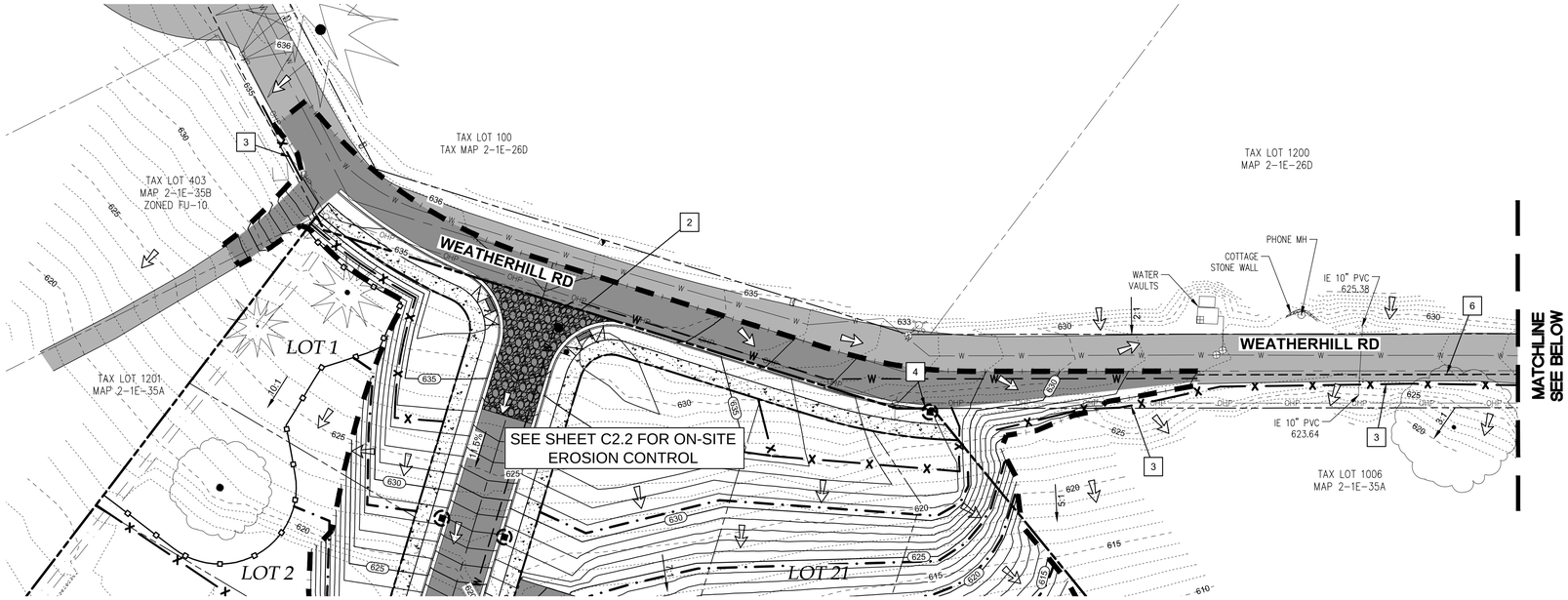
REGISTERED PROFESSIONAL ENGINEER
80055PE
OREGON
JULY 21, 2015
JEFFREY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

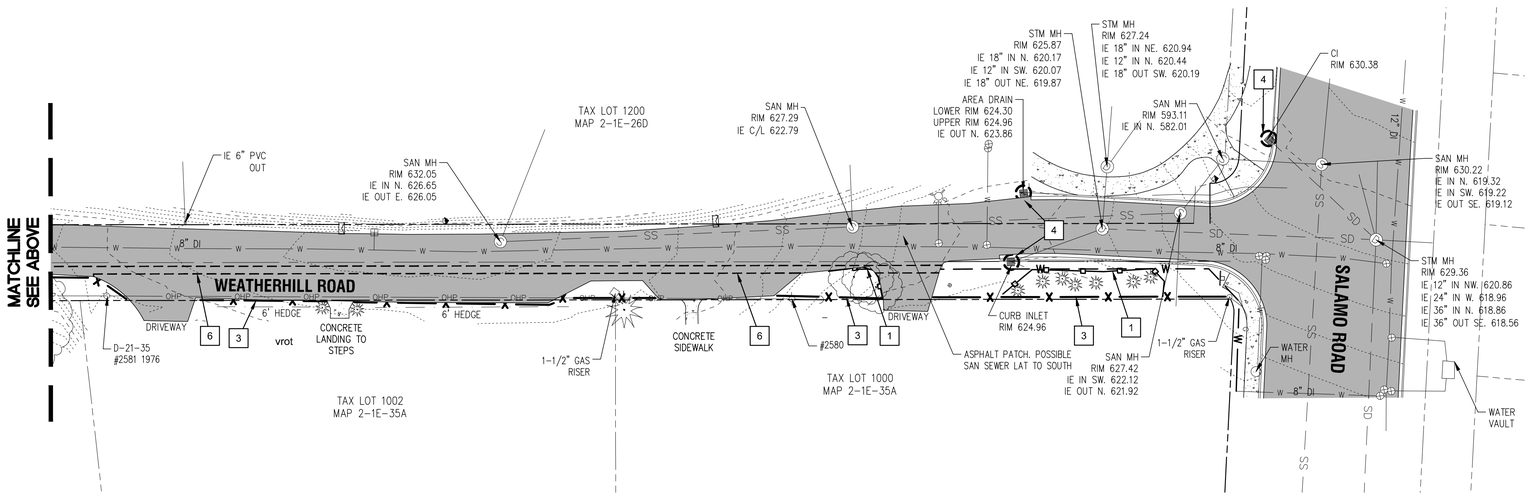
3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
OFFSITE ESCP

SHEET NUMBER
C2.3





Scale: 1 inch = 30 feet

30 15 0 15 30

LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING CURB AND GUTTER
- EXISTING TREES TO REMAIN
- EXISTING 1FT CONTOUR
- EXISTING 5FT INDEX CONTOUR
- PROPOSED LOT LINE
- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE
- PROPOSED 1FT CONTOUR
- PROPOSED 5FT INDEX CONTOUR
- EROSION CONTROL: SILT FENCING (BLACK)
- EROSION CONTROL: FESCUE STRAW WATTLE
- LIMITS OF GRADING/DISTURBANCE
- SURFACE RUN-OFF FLOW ARROW
- EROSION CONTROL: INLET PROTECTION
- TREE PROTECTION FENCING

GRADING KEY NOTES

1. PLACE TREE PROTECTION FENCING AT LIMITS OF GRADING AND FOR CONSTRUCTION WHERE SHOWN
2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AS REQUIRED
3. PLACE SILT FENCING AT LIMITS OF GRADING AND CONSTRUCTION WHERE SHOWN
4. INSTALL INLET PROTECTION
5. SAWCUT, REMOVE, AND REPLACE PAVEMENT TO MATCH EXISITNG

GRADING GENERAL NOTES:

1. ALL GRADING ACTIVITIES SHALL CONFORM TO THE UNIFORM BUILDING CODE AND THE OREGON SPECIALTY CODE AMENDMENTS, INCLUDING APPENDIX J.

Know what's **below.**
Call before you dig.

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

#	REVISION SUMMARY	BY	DATE
	LAND USE APPROVAL		04/01/2015

OFFSITE GRADING AND EROSION CONTROL PLAN

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80051PE
OREGON
JULY 21, 2010
CLAY L. FERGESON
EXPIRES: 12/31/15
PRELIMINARY

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
OFFSITE ESCP

SHEET NUMBER
C2.4

Scale: 1 inch = 30 feet

30 15 0 15 30

LEGEND

- BOUNDARY LINE
- EXISITNG RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CENTERLINE
- PROPOSED LOT LINE
- PROPOSED CURB
- PROPOSED SIDEWALK
- PROPOSED SETBACK LINE
- SANITARY SEWER LINE AND MANHOLE
- STORM DRAIN LINE AND MANHOLE
- DOMESTIC WATER SERVICE & METER
- STORM SEWER LATERAL AS NOTED
- SANITARY SEWER LATERAL AS NOTED
- STORM SEWER CURB INLET
- PROPOSED STREET LIGHT
- UTILITY/ACCESS EASEMENT

STORM SEWER CONSTRUCTION NOTES

1. PROVIDE 4" PRIVATE STORM DRAIN LATERAL CONNECTION FOR INDIVIDUAL LOT SERVICE. EXTEND SERVICE LATERAL 3' BEYOND PUE.
2. CONSTRUCT STANDARD 48" STORM SEWER MANHOLE.
3. CONSTRUCT CURB INLET WITH 10" STORM LINE.
4. INSTALL 6" CLEAN OUT AS REQUIRED.
5. CONSTRUCT FLOW-THRU CURB INLET WITH STORM LINE SIZED AS NOTED.
6. CAP PROPOSED 12" STORM MAIN.

SANITARY SEWER CONSTRUCTION NOTES

1. PROVIDE NEW 4" SANITARY SEWER LATERAL FOR INDIVIDUAL LOT SERVICE. EXTEND SERVICE LATERAL 3' BEYOND PUE.
2. CONSTRUCT STANDARD 48" SANITARY SEWER MANHOLE.
3. CONSTRUCT STANDARD 48" SANITARY SEWER MANHOLE.
3. INSTALL 6" CLEAN OUT AS REQUIRED.

WATER CONSTRUCTION NOTES

1. INSTALL SINGLE WATER METER FOR INDIVIDUAL LOT SERVICE. EXTEND 1" SERVICE LATERAL 3' BEYOND PUE.
2. INSTALL STANDARD BLOW-OFF.

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

Know what's below. Call before you dig.

LAND USE APPROVAL	04/01/2015
REVISION SUMMARY	BY DATE

COMPOSITE UTILITY PLAN
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

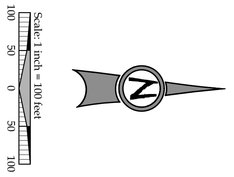
REGISTERED PROFESSIONAL ENGINEER
80059PE
OREGON
JULY 21, 2006
JEFFREY L. FERGESON
EXPIRES: 12/31/15
PRELIMINARY

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
UTILITY PLAN

SHEET NUMBER
C3.0



SHEET NUMBER
C3.1

SHEET TITLE
OFFSITE KEYMAP

3J JOB ID # | 13171
LAND USE # |
TAX LOT #'S |
DESIGNED BY | CLF
CHECKED BY | JDH

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

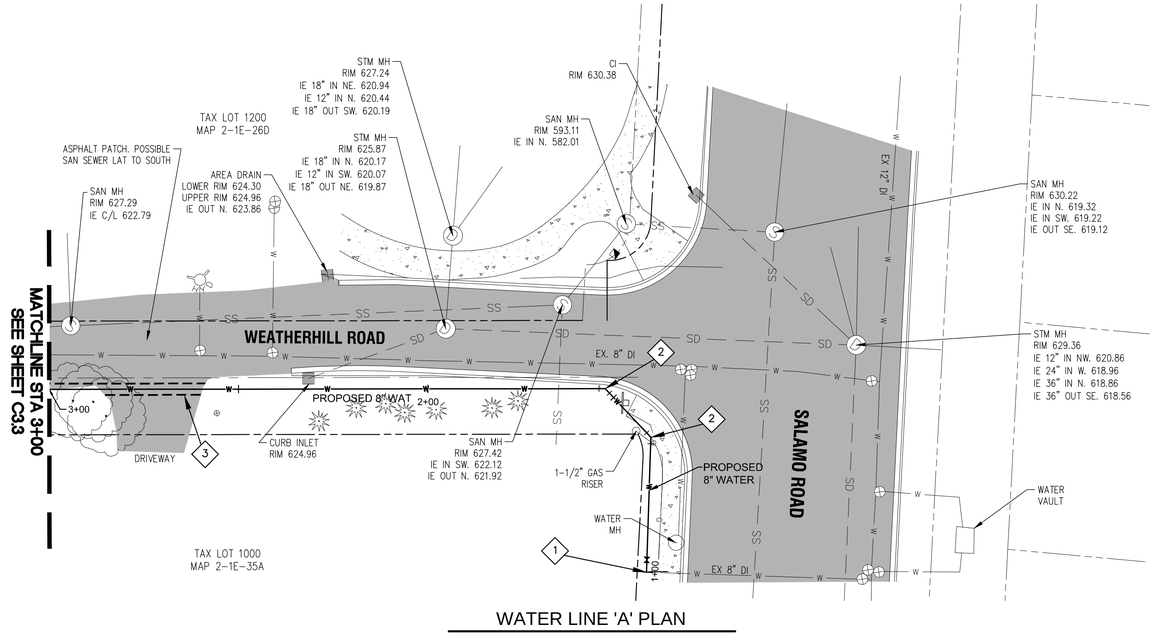
PRELIMINARY
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 9, 2014
J. FERGASON
EXPIRES: 12/31/15

J.T. SMITH companies

OFFSITE UTILITY KEYMAP
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

LAND USE APPROVAL *04/01/2015*

#	REVISION SUMMARY	BY	DATE



WATER LINE 'A' PLAN

Scale: 1 inch = 20 feet

20 10 0 10 20

LEGEND

- BOUNDARY LINE
- EXISITNG RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING CURB
- EXISTING ASPHALT
- EXISTING SIDEWALK
- EXISTING LIGHT POLE
- PROPOSED WATER MAIN

WATER LINE CONSTRUCTION NOTES

1. REMOVE EXISTING BLOW-OFF AND CONNECT TO EXISTING 8" D.I.P.
2. INSTALL BENDS AS REQUIRED.
3. SAWCUT, REMOVE, AND REPLACE PAVEMENT TO MATCH EXISITNG

Know what's below. Call before you dig.

LAND USE APPROVAL	04/01/2015
REVISION SUMMARY	BY DATE
#	

OFFSITE WATER IMPROVEMENTS

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR

BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80055PE
OREGON
JULY 21, 2006
GARY L. FERGESON
EXPIRES: 12/31/15

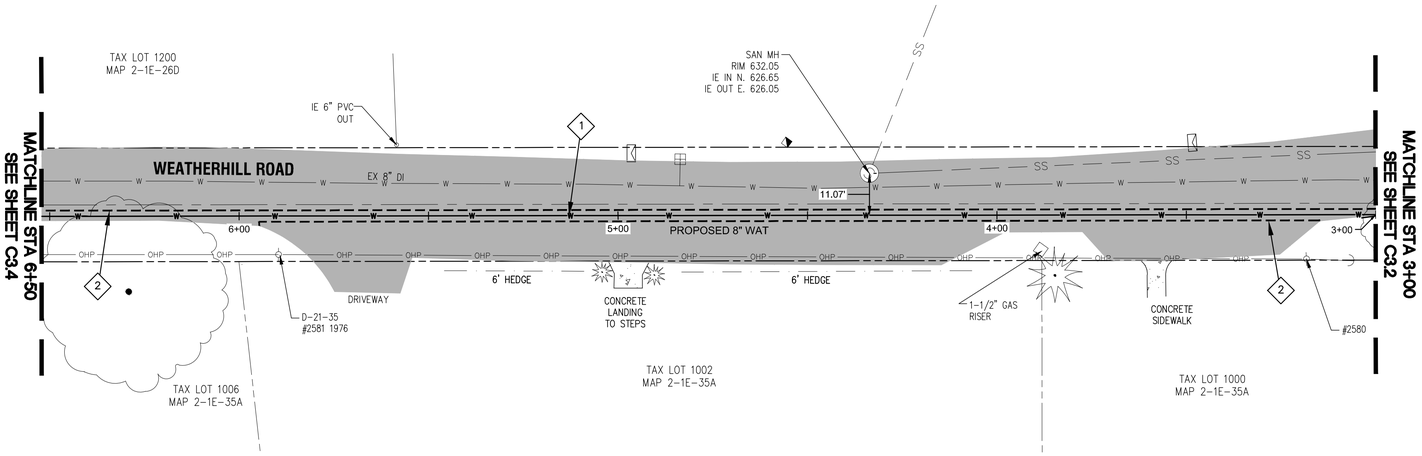
PRELIMINARY

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

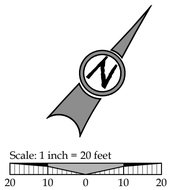
3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
OFFSITE WATER

SHEET NUMBER
C3.2



WATER LINE 'A' PLAN



LEGEND

- BOUNDARY LINE
- EXISITNG RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING CURB
- EXISTING ASPHALT
- EXISTING SIDEWALK
- EXISTING LIGHT POLE
- PROPOSED WATER MAIN

WATER LINE CONSTRUCTION NOTES

1. CONSTRUCT 8" WATER MAIN PER CITY OF WEST LINN STANDARDS
2. SAWCUT, REMOVE, AND REPLACE PAVEMENT TO MATCH EXISITNG

Know what's **below.**
Call before you dig.

LAND USE APPROVAL	BY	DATE
REVISION SUMMARY		
#1		

OFFSITE WATER IMPROVEMENTS

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

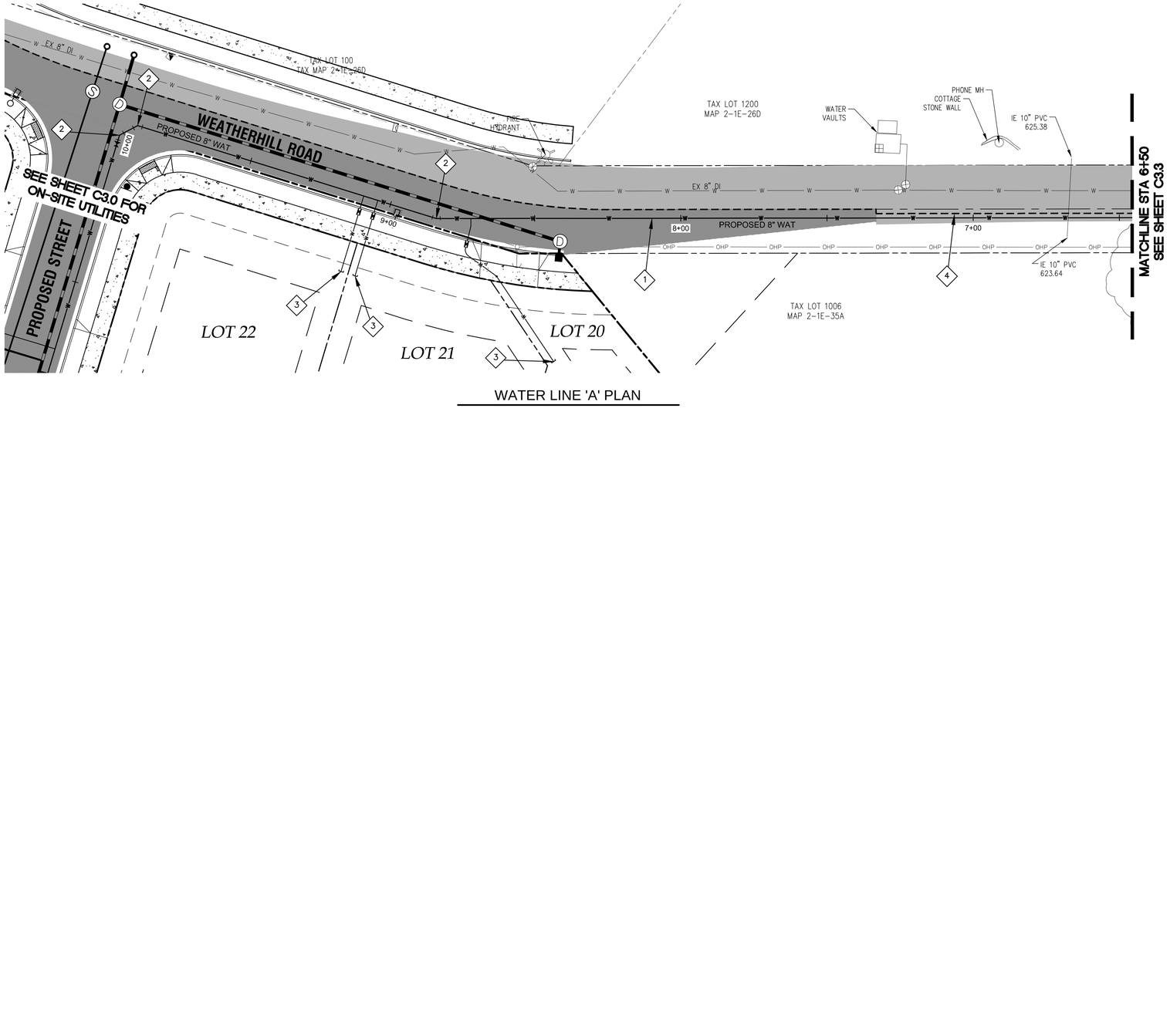
REGISTERED PROFESSIONAL ENGINEER
80055PE
OREGON
JULY 21, 2006
JERRY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
OFFSITE WATER

SHEET NUMBER
C3.3



WATER LINE 'A' PLAN

LEGEND

- BOUNDARY LINE
- EXISITNG RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING CURB
- EXISTING ASPHALT
- EXISTING SIDEWALK
- EXISTING LIGHT POLE
- PROPOSED WATER MAIN

WATER LINE CONSTRUCTION NOTES

1. CONSTRUCT 8" WATER MAIN PER CITY OF WEST LINN STANDARDS
2. INSTALL BENDS AS REQUIRED.
3. INSTALL SINGLE WATER METER FOR INDIVIDUAL LOT SERVICE. EXTEND 1" SERVICE LATERAL 3' BEYOND PUE.
4. SAWCUT, REMOVE, AND REPLACE PAVEMENT TO MATCH EXISITNG

Know what's **below.**
Call before you dig.

LAND USE APPROVAL	04/01/2015
REVISION SUMMARY	BY DATE
#	

OFFSITE WATER IMPROVEMENTS

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80058PE
OREGON
JULY 21, 2006
JERRY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
OFFSITE WATER

SHEET NUMBER
C3.4

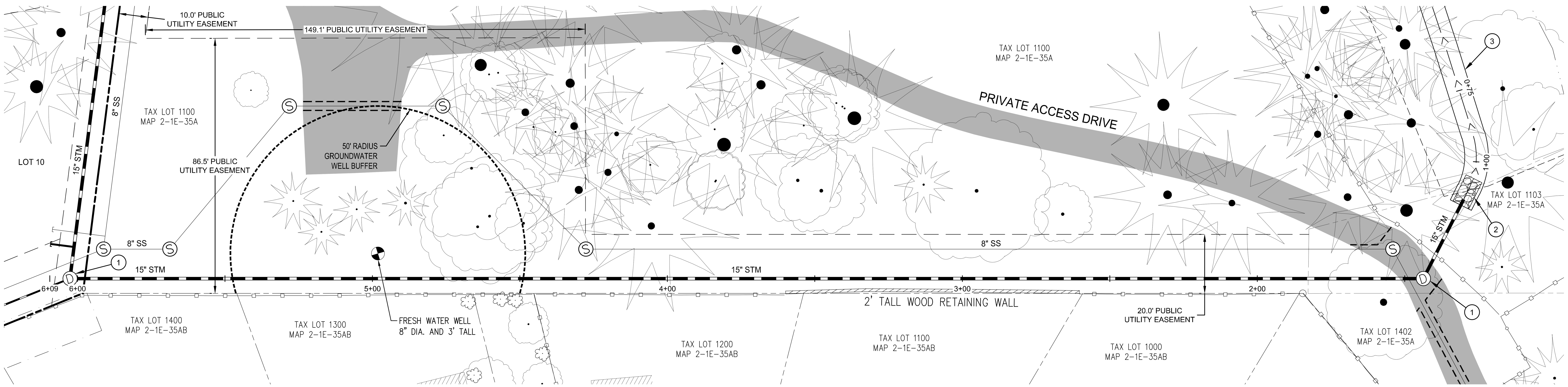
STORM SEWER CONSTRUCTION NOTES	
1	CONSTRUCT STANDARD 48" STORM SEWER MANHOLE
2	INSTALL RIP RAP OUTFALL PAD
3	CONSTRUCT APPROXIMATELY 8' WIDE X 2' DEEP X 150' LONG WQ QUALITY SWALE

LEGEND

- BOUNDARY LINE
- EXISITNG RIGHT-OF-WAY
- EXISTING LOT LINE
- EXISTING ASPHALT
- SANITARY SEWER LINE AND MANHOLE
- STORM DRAIN LINE AND MANHOLE
- UTILITY/ACCESS EASEMENT
- PROPOSED SAWCUT

Scale: 1 inch = 20 feet

20 10 0 10 20



OFFSITE STORM LINE 'O' PLAN

811 Know what's below. Call before you dig.

LAND USE APPROVAL 04/01/2015

REVISION SUMMARY | BY | DATE

OFFSITE STORM IMPROVEMENTS

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR

BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER 80055PE OREGON CASEY L. FERGESON EXPIRES: 12/31/15

PRELIMINARY

3J CONSULTING, INC

CIVIL ENGINEERING WATER RESOURCES LAND USE PLANNING

5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005 PHONE & FAX: (503) 946-9365

3J JOB ID # | 13171

LAND USE # |

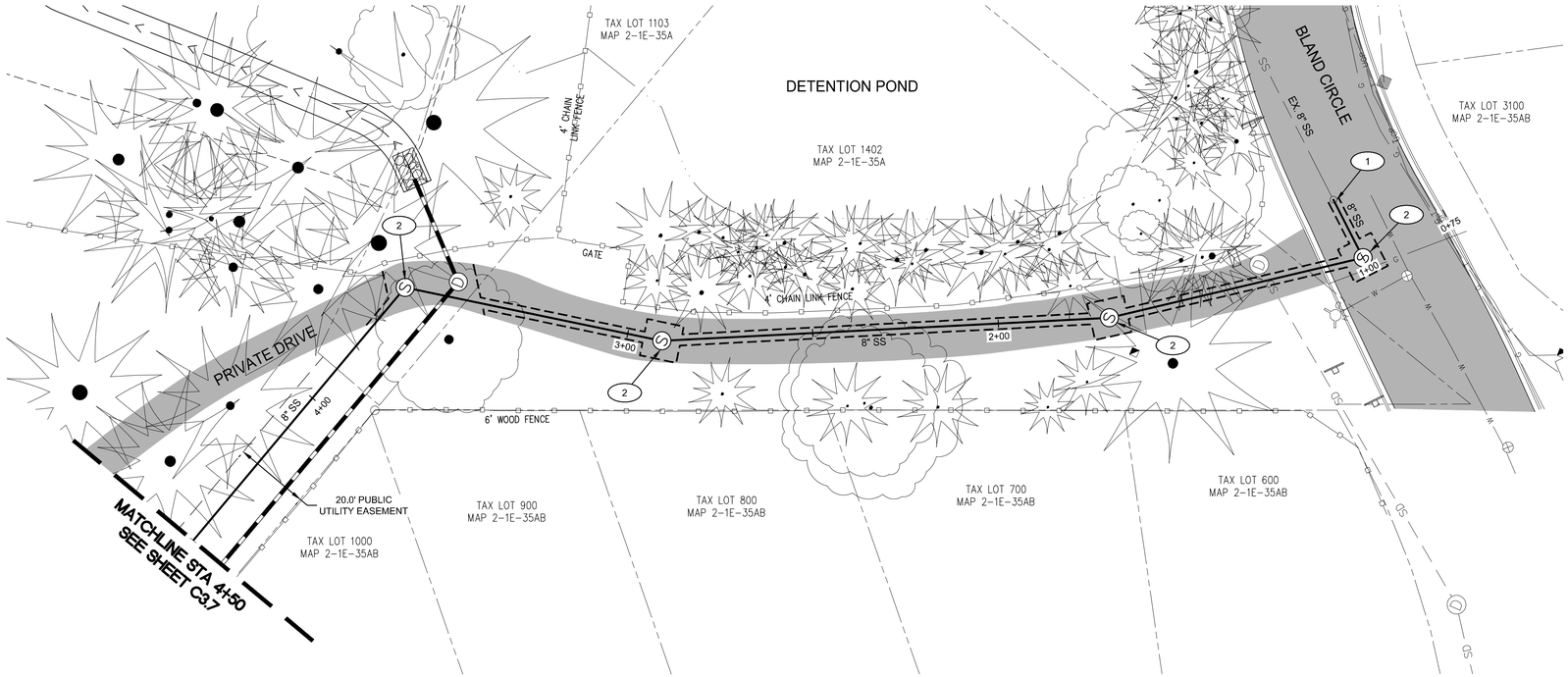
TAX LOT #'S |

DESIGNED BY | CLF

CHECKED BY | JDH

SHEET TITLE OFFSITE STORM

SHEET NUMBER C3.5



OFFSITE SANITARY MAIN 'O' PLAN

Scale: 1 inch = 20 feet

20 10 0 10 20

LEGEND

- BOUNDARY LINE
- EXISITNG RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING CURB
- SANITARY SEWER LINE AND MANHOLE
- STORM DRAIN LINE AND MANHOLE
- UTILITY/ACCESS EASEMENT
- PROPOSED SAWCUT

SANITARY SEWER CONSTRUCTION NOTES

1	REMOVE EXISTING CLEAN-OUT AND CONNECT TO EXISTING 8" SEWER MAIN
2	CONSTRUCT STANDARD 48" SANITARY SEWER MANHOLE

Know what's below. Call before you dig.

#	REVISION SUMMARY	BY	DATE
	LAND USE APPROVAL		04/01/2015

OFFSITE SANITARY IMPROVEMENTS

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR

BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

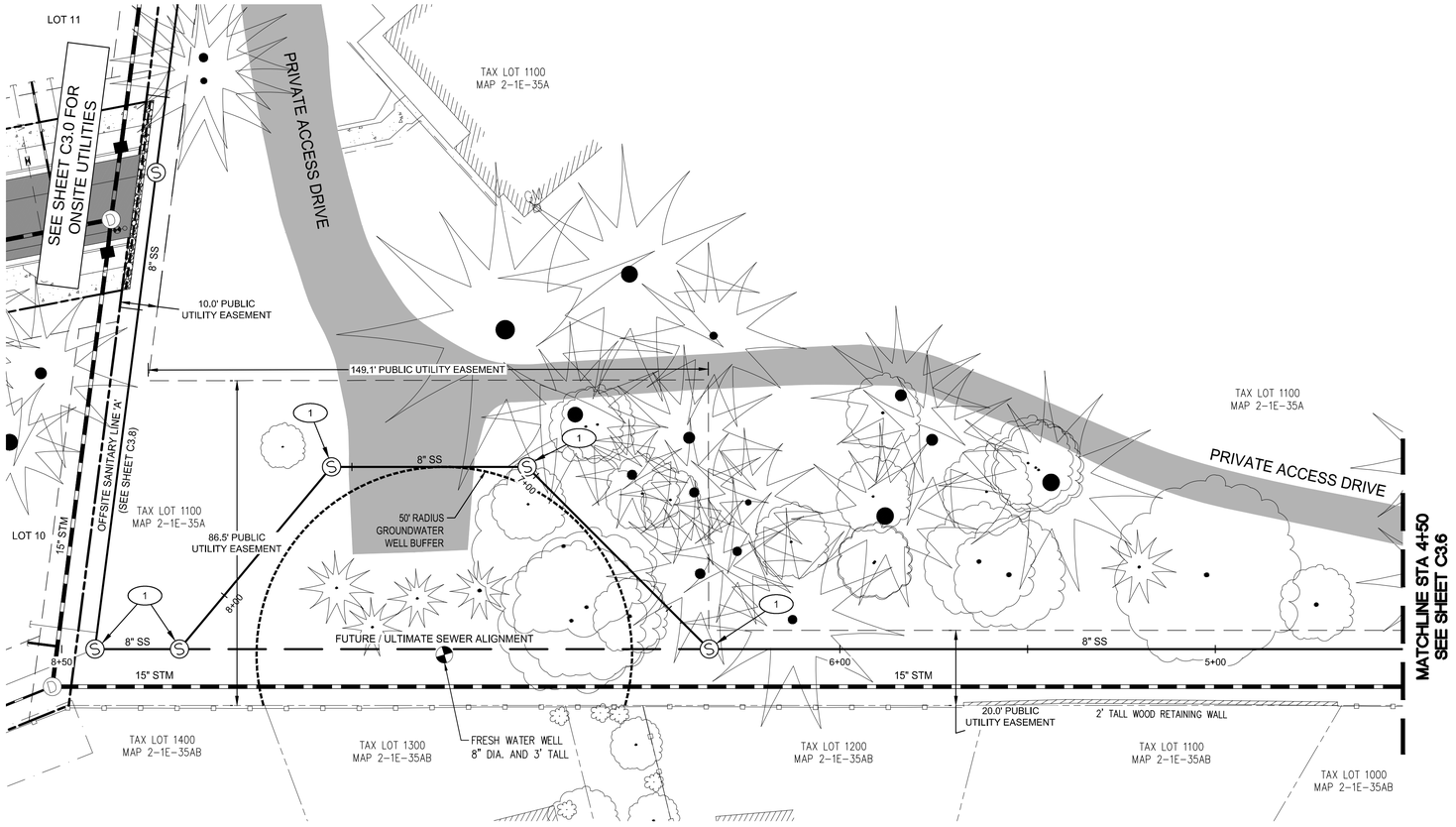
REGISTERED PROFESSIONAL ENGINEER
80055PE
OREGON
JULY 21, 2006
JEFFREY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
OFFSITE SANITARY

SHEET NUMBER
C3.6



OFFSITE SANITARY MAIN 'O' PLAN

Scale: 1 inch = 20 feet

20 10 0 10 20

LEGEND

- BOUNDARY LINE
- EXISITNG RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING CURB
- SANITARY SEWER LINE AND MANHOLE
- STORM DRAIN LINE AND MANHOLE
- UTILITY/ACCESS EASEMENT

SANITARY SEWER CONSTRUCTION NOTES

1	CONSTRUCT STANDARD 48" SANITARY SEWER MANHOLE

Know what's below. Call before you dig.

LAND USE APPROVAL 04/01/2015

REVISION SUMMARY BY DATE

OFFSITE SANITARY IMPROVEMENTS

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR

BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER 80058PE OREGON JULY 21, 2006 JEFFREY L. FERGESON

PRELIMINARY

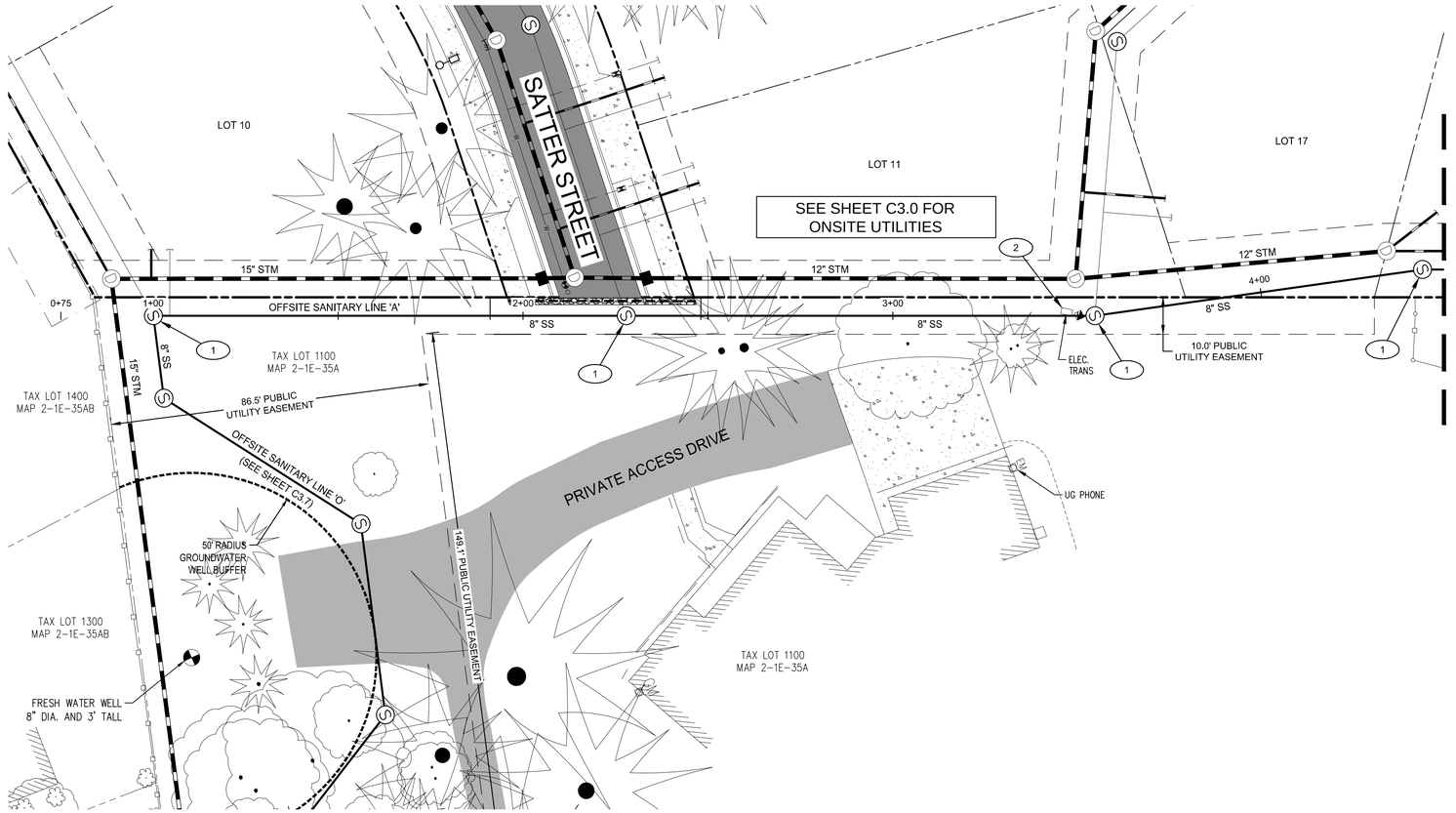
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
OFFSITE SANITARY

SHEET NUMBER
C3.7



OFFSITE SANITARY MAIN 'A' PLAN

Scale: 1 inch = 20 feet

20 10 0 10 20

LEGEND

- BOUNDARY LINE
- EXISITNG RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING CURB
- SANITARY SEWER LINE AND MANHOLE
- STORM DRAIN LINE AND MANHOLE
- UTILITY/ACCESS EASEMENT

SANITARY SEWER CONSTRUCTION NOTES

1	CONSTRUCT STANDARD 48" SANITARY SEWER MANHOLE
2	RELOCATE EXISTING TRANSFORMER AND PEDESTAL AND ASSOCIATED UTILITY LINES TO EXISTING RESIDENCE. CONTRACTOR TO COORDINATE WITH RESPECTIVE PURVEYORS.

Know what's below. Call before you dig.

LAND USE APPROVAL 04/01/2015

#	REVISION SUMMARY	BY	DATE

OFFSITE SANITARY IMPROVEMENTS

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR

BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

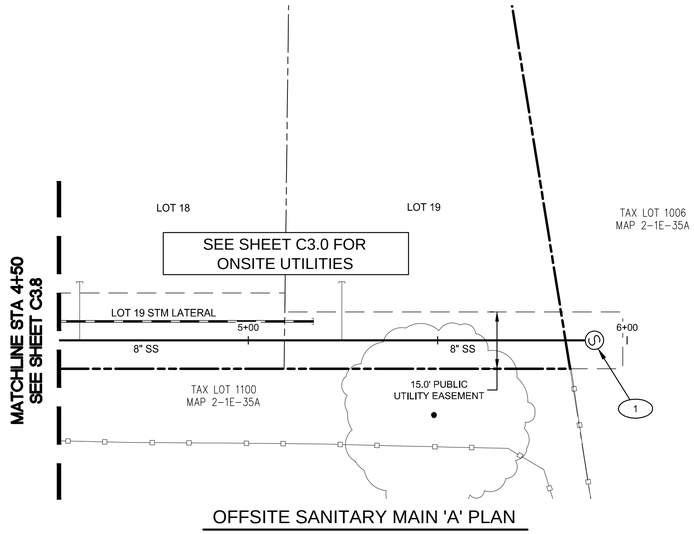
REGISTERED PROFESSIONAL ENGINEER
80056PE
OREGON
JULY 21, 2006
CLAY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

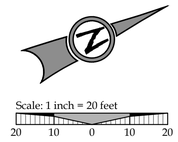
3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
OFFSITE SANITARY

SHEET NUMBER
C3.8



OFFSITE SANITARY MAIN 'A' PLAN



LEGEND

- BOUNDARY LINE
- EXISITNG RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING LOT LINE
- EXISTING CURB
- SANITARY SEWER LINE AND MANHOLE
- STORM DRAIN LINE AND MANHOLE
- UTILITY/ACCESS EASEMENT

SANITARY SEWER CONSTRUCTION NOTES

1	CONSTRUCT STANDARD 48" SANITARY SEWER MANHOLE

Know what's **below.**
Call before you dig.

LAND USE APPROVAL 04/01/2015

#	REVISION SUMMARY	BY	DATE

OFFSITE SANITARY IMPROVEMENTS

WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80059PE
OREGON
JULY 21, 2014
GARY L. FERGESON
EXPIRES: 12/31/15
PRELIMINARY

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
OFFSITE SANITARY

SHEET NUMBER
C3.9

Scale: 1 inch = 30 feet

30 15 0 15 30

LEGEND

- 0.5 FOOT CANDLE ISO-ILLUMINATION CONTOUR
- 0.1 FOOT CANDLE ISO-ILLUMINATION CONTOUR
- 0.7 FC - ILLUMINATION ANALYSIS POINT (FC)
- FC - FOOT CANDLE UNIT
- PROPOSED LUMINAIRE

SATTER STREET	PROPOSED	REQUIRED*
EXISTING LIGHT(S) INCLUDED	0 EA	
NEW LIGHTS PROPOSED	5 EA	
MAX. ILLUMINATION	1.0 FC	
MIN. ILLUMINATION	0.1 FC	
AVERAGE ILLUMINATION	0.50 FC	0.40 FC (MIN)
UNIFORMITY (AVG/MIN)	5.00	6.00 (MAX)

WEATHERHILL ROAD	PROPOSED	REQUIRED*
EXISTING LIGHT(S) INCLUDED	0 EA	
NEW LIGHTS PROPOSED	2 EA	
MAX. ILLUMINATION	1.0 FC	
MIN. ILLUMINATION	0.2 FC	
AVERAGE ILLUMINATION	0.58 FC	0.40 FC (MIN)
UNIFORMITY (AVG/MIN)	2.90	6.00 (MAX)

*PER CITY OF WEST LINN PUBLIC WORKS DESIGN STANDARDS

LUMINAIRE

CREE LEDWAY IP66 STREET LIGHT - TYPE 2 MEDIUM
STR-LWY-2M-HT-02-E-UL-BZ-700-40K-R-UTL-SPX

POST AND ARM

30 FT BRONZE POLE / 25 FT MOUNTING HEIGHT
6' BRONZE MAST ARM

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

Know what's **below.**
Call before you dig.

LAND USE APPROVAL	04/01/2015
REVISION SUMMARY	BY DATE
#	

ROADWAY ILLUMINATION PLAN
WEATHERHILL ESTATES SUBDIVISION

WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80059PE
OREGON
JULY 21, 2006
JEFFREY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
LIGHTING PLAN

SHEET NUMBER
C4.0

Scale: 1 inch = 30 feet

30 15 0 15 30

LEGEND

- SUBDIVISION BOUNDARY LINE
- EXISTING RIGHT OF WAY
- EXISTING PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED EASEMENT
- PROPOSED SETBACK LINE
- PROPOSED CONCRETE PAVING
- EXISTING TREES

PLANT MATERIALS SCHEDULE

COMMON NAME	BOTANICAL NAME	SIZE	SPACING	QUANTITY
SCARLET OAK	QUERCUS COCCINIA	2" CAL.	22' MIN	24
VINE MAPLE	ACER CIRCINATUM	6' / 2" CAL.	10' MIN	44
WESTERN RED CEDAR	THUJA PLICATA	2" CAL.	12' MIN	80

TOTAL PROPOSED TREE COUNT: 148
TOTAL PROPOSED CALIPER MEASUREMENT: 296"
TOTAL MITIGATION REQURIEMENT: 597" (CALIPER MEASUREMENT)

GENERAL LANDSCAPING NOTES

1. LANDSCAPE PLANTING SHALL CONFIRM TO THE STANDARDS ESTABLISHED UNDER THE WEST LINN STANDARDS FOR LANDSCAPE PLANTING
2. ALL PLANT BEDS SHALL HAVE A 3" DEPTH OF BARK MULCH
3. ALL PLANT MATERIAL DELIVERED TO THIS SITE SHALL MEET THE AMERICAN NURSERYMAN'S ASSOCIATION STANDARDS.
4. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FOR ALL PLANT MATERIAL SUBSTITUTIONS FROM THE CIVIL ENGINEER PRIOR TO INSTALLATION. PLANT SUBSTITUTIONS WITHOUT PRIOR WRITTEN APPROVAL THAT DO NOT COMPLY WITH THE DRAWINGS AND SPECIFICATIONS MAY BE REJECTED BY THE LANDSCAPE ARCHITECT AT NO COST TO THE OWNER. THESE ITEMS MAY BE REQUIRED TO BE REPLACED WITH PLANT MATERIALS THAT ARE IN COMPLIANCE WITH THESE DRAWINGS.

A PORTION OF LOT 22, "BLAND ACRES"
TAX LOTS 1200 & 1202, MAP 2-1E-35A
NE 1/4 SECTION 35, T.2S., R.1E., W.M.
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

Know what's below. Call before you dig.

LAND USE APPROVAL	04/01/2015
REVISION SUMMARY	BY DATE

MITIGATION PLANTING PLAN
WEATHERHILL ESTATES SUBDIVISION
WEST LINN, OR
BLACK DIAMOND PROPERTIES, LLC

J.T. SMITH companies

REGISTERED PROFESSIONAL ENGINEER
80058PE
OREGON
JULY 21, 2006
JAY L. FERGESON
PRELIMINARY
EXPIRES: 12/31/15

3J CONSULTING, INC
CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING
5075 SW GRIFFITH DRIVE, SUITE 150, BEAVERTON, OR 97005
PHONE & FAX: (503) 946-9365

3J JOB ID #	13171
LAND USE #	
TAX LOT #'S	
DESIGNED BY	CLF
CHECKED BY	JDH

SHEET TITLE
MITIGATION PLAN

SHEET NUMBER
L1.0