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State of Washington
King County

Affidavit of Brian K. Gilles, Consulting Arborist, concerning the Nouri Short Plat at 7502 132nd Avenue NE in Redmond, Washington. Sworn on this **11th** day of **November 2015.**

CASE #: LAND-2014-01980

ASSIGNMENT

I was engaged by Sandra Eisert, of 13315 NE 77th Street, Redmond, Washington, to review the relevant paperwork concerning the trees and the short plat process for the Nouri Short plat at 7502 132nd Avenue NE, in Redmond, Washington. Ms. Eisert informed me that several neighbors are upset about losing the large trees on the subject property and the impact the loss of trees will have on the neighborhood. In addition they are concerned about the fact that a homeowner in the neighborhood cannot cut down a tree deemed as a Landmark Tree according to Redmond Code but the developer appears to be given permission to do so.

She requested that I review the following materials:

- The Shoffner Consulting arborist report, 5 pages, dated September 29, 2014.
- The Nouri Short Plat Appeal, Fifth Pre-Hearing Order Setting Hearing Schedule, dated October 16, 2016.
- The Nouri Short Plat Improvement Plans, 13 pages, dated September 2, 2015.
- The Review of Tree Retention Plan by Tina Cohen, Certified Arborist, dated October 9, 2015.
- The Certificate of Service, dated October 16, 2015.
- And,
- A City of Redmond Appeal Application Form, filled out and dated October 13, 2015.

On Monday morning, October 12, 2015 I met with Ms. Eisert and Mr. Tom Hinman, another concerned neighbor. We met on 75th Avenue NE, Redmond, Washington, across from the Nouri property. Ms. Eisert and Mr. Hinman oriented me to the site, informed me of their understanding of the process so far, and what decisions had been made. Ms.

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Eisert then returned to her home and Mr. Hinman then walked me around the subject property on all four sides—with permission from the neighbors to the north and east. We walked the rights-of-way on the west and south. At no time did I enter the property. However, I studied the trees using binoculars.

After this orientation Mr. Hinman left and I retraced our steps to perform a visual evaluation of the trees.

Ms. Eisert requested that I consolidate my observations, conclusions, and recommendations into this affidavit for her use with the Hearing Examiner for this case.

METHODOLOGY

To evaluate the trees, as well as to prepare this affidavit, I drew upon my 30+ years of experience in the field of arboriculture and my formal education in natural resources management, dendrology, forest ecology, plant identification, and plant physiology. I followed the protocol of the International Society of Arboriculture (ISA) for tree risk assessment. Published in 2011, the *Best Management Practices, Tree Risk Assessment, ANSNI A300 Part 9* was developed to aid in the interpretation of professional standards and guide work practices based upon current science and technology. Using this process, now called the *Tree Risk Assessment Qualification,* or TRAQ for short, I performed a restricted Level Two assessment which included looking at the overall health of the tree as well as the site conditions. This is a scientifically based process to look at the entire site, surrounding land and soil, as well as a complete look at the tree itself.

In examining each tree, I looked at such factors as: size, vigor, canopy and foliage condition, density of needles, injury, insect activity, root damage and root collar health, crown health, evidence of disease-causing bacteria, fungi or virus, dead wood and hanging limbs.

OBSERVATIONS AND CONCLUSIONS

I first collected my own data on the condition of the trees. Then I reviewed the arborist report submitted for the subject property, noted above, and the Cohen review of that plan and comments on the trees, also noted above. I have the following comments:

1. It appears that the placement of trees in the northern property extension are not accurate.
    a. The trees in question are: 19, 18, 17, 16, and 15.
    b. Since these trees are slated for retention this may not be an issue. However, it does call into question the accuracy of the other tree placement on the survey.

c. This could be an issue with the location of the improvements and how they will impact the tree roots. When excavating for construction the difference of two or three feet can mean the difference between a tree surviving and not.

2. I question the determination of condition and status of some of the trees in the original arborist report for the development.
    a. The arborist report for the applicant lists several large trees as being non-significant due to their condition.
        i. These include trees # 3, 4, and 5.
        ii. These are a 42-inch, a 34-inch and a 26-inch Douglas Firs respectively.
        iii. Trees 3 and 4 do have multiple tops but my examination of them does not reveal any obvious decay pockets or columns immediately below the forks.
        iv. Therefore, I judge these trees to be if Fair or Good Condition and, therefore, are *Landmark Trees.*
            1. I judge that they need to be treated and managed as Landmark trees.
            2. This includes going through the standard City of Redmond process and procedures for the removal of a *Landmark Tree*, including restoration planting.
        v. Tree # 6 does appear to be in poor/declining health and is likely a *Non-Significant Tree.*
    b. Two of the trees in the in the northern extension, slated for retention, have decay in their lower trunks.
        i. They appear to be structurally unstable.
        ii. I question their inclusion as *Significant Trees.*
        iii. I would recommend that the trees first be properly located on the survey, and that the trees be give a thorough risk assessment, as currently taught by the International Society of Arboriculture to determine whether or not they actually are structurally sound.
            1. If they are, then all is well.
            2. If they are not, then they should be removed from the tree retention calculations.

3. Process and Procedure:
    a. I was not able to go to City Hall and spend the time to fully and completely review the entire file on the Nouri Short Plat. That said, in the documents I did review, I did not see any mention of the trees on the adjacent property to the north.

b. My experience of City of Redmond policies and procedures in the past, the City has required that all large trees within 50 feet of the subject property be included in the survey, in the arborist report, and in the tree retention/protection plan.
c. I did not see any of this work included in the materials I was provided.
d. To that end, there are six trees just feet north of the north property line on the adjacent property to the north. They have canopies, and likely roots, that extend over and onto the subject property.
e. This is significant in that the proposed new homes show foundations excavated right to the 10-foot minimum building setback line—that is, the excavation is proposed to be within the driplines of these trees.
    i. This means the excavations for houses 2 and 3 will be within the driplines of several trees. There are two large trees that are very close to the property line that could be seriously damaged.
    ii. The excavation, unless controlled and done properly, could remove as much as 40% or even 45% of the critical root zone of the two largest and closest trees. They cannot sustain such a loss.
    iii. I recommend that extraordinary tree protection measures be implemented to protect these trees. These measures at a minimum should include:
        1. Hiring an International Society of Arboriculture *Certified Arborist* and/or an American Society of Consulting Arborists *Registered Consulting Arborist* to be on site during the excavation to oversee **and control** the work. The work includes:
            a. Hiring a qualified International Society of Arboriculture *Certified Arborist* to properly prune the trees on the adjacent property for clearance of the new homes and their construction.
                i. This means using all current safety and proper pruning techniques as spelled out by the American National Standards Institute, (ANSI).
                ii. Using an air spade or vactor truck to properly expose and cleanly cut all roots at the furthest/northernmost edge of the excavation for the homes and any associated utilities.
                iii. Minimizing the over-dig within the driplines of the trees to 10-inches or less north of the northern face of the house foundations. This is to provide space for forms and storm drain pipes.

4. Review of the Proposed Development Plans:
    a. Ms. Eisert requested that I review the proposed development in relation to the retained trees and whether or not the plans accurately reflect the amount of damage to the critical root zones of the retained trees. A few things did catch my attention.
    b. There is a stormwater dry well that is apparently located within the dripline of tree # 8, which is slated for retention.
        i. Tree # 8 is listed as a 12-inch diameter Douglas Fir with a dripline diameter of 32 feet.
        ii. Sheet C5.0 of the Nouri Short Plat, title, CCR Submittal, Grading and Stormwater Plan, shows a drywell approximately 30 feet from the center of the trunk of the tree as it enters the ground.
            1. This means the excavation is within the dripline.
        iii. The note on Sheet C5.0 says, "5. Install infiltration drywell, Typ. Per Detail 2, Sheet C0.2.
            1. When one looks at sheet C0.2, Detail 2, it shows the installation. It provides the diameter of the hole to be filled with 1.5 – 3-inch washed rock lined with filter fabric.
            2. However it says, "See Geotechnical report for dry well depths."
                a. As noted above, I did not have access to the geotechnical report.
            3. However, standard excavation methodology would require an over-dig of the well that would extend considerably farther into the dripline and critical root zone of the tree.
                a. If the depth is greater than 48 inches OSHA and WISHA safety rules require the over dig to be as much as the depth of the hole to the east to protect the workers.
                b. This means the encroachment into the critical root zone could be dramatic and could cause the demise of the tree.
        iv. If this is to be done, and if the depth is no more than four feet, it also will require extraordinary excavation methodology as noted above. Hiring an International Society of Arboriculture *Certified Arborist* and/or an American Society of Consulting Arborists *Registered Consulting Arborist* to be on site during the excavation to oversee and control the work. The work includes:
            1. Hiring a qualified International Society of Arboriculture *Certified Arborist* to properly prune the trees on the adjacent property for clearance of the new homes and their construction.

a. This means using all current safety and proper pruning techniques as spelled out by the American National Standards Institute, (ANSI).
b. Using an air spade or a vactor truck to properly expose and cleanly cut all roots at the furthest/northernmost edge of the excavation for the homes.
c. Minimizing the over-dig within the driplines of the trees to 10-inches or less north of the northern face of the house foundations.

c. The Construction Impact on Trees # 8, 9, 11, *and* the large evergreen tree in the back yard of the adjacent property:
    i. There are multiple issues:
        1. The home at 13304 NE 75th Street is relatively new. Its recent construction has had an impact on the roots and stability of the tree.
            a. The lot went from dense forest to the tree being retained but exposed.
            b. The construction had to have a negative impact upon its roots.
        2. The new home at 13304 has also had an impact on trees # 8, 9, and 11.
            a. There had to be some root loss and impact on these trees as well when the new house was built.
        3. New wind exposure:
            a. The removal of trees # 3, 4, 5, 6, 7, 10, 12, and 13, will mean that trees 8, 9, & 11 will be struck by wind and storm forces that they are not adapted to.
            b. They could be vulnerable to wind throw.
        4. The excavation and utility installation for house 3 is going to create more negative impact for trees 8, 9, and 11.
        5. I am told that there is only 1 foot of top soil and then compacted glacial till below that does not allow root penetration.
            a. This means that the tree roots are very shallow.
            b. This, combined with the altered soil moisture regimes resulting from the new home and utilities construction, could have a substantially negative impact on the trees. They could be vulnerable to windthrow—that is, catastrophic failure from the roots.

d. The Construction Impact on Tree # 14:
    i. It appears that the construction of House # 3 will intrude into the dripline, and the critical root zone of Tree # 14.
    ii. Tree # 14 is listed as a 28-inch diameter Black Cottonwood with a dripline of 56 feet.
    iii. It appears that the northeast corner of the house and what looks to be a hard surface patio extend into the dripline in what appears to be more than 12 feet.
        1. While this does not sound like a lot, I question the impact on the tree.
    iv. Natural History of Black Cottonwood Trees:
        1. Black Cottonwood trees are one of the trees known as "primary cultivators" by forest ecologists.
            a. These trees fill the ecological niche of colonizing an area after disturbance such as forest fire, logging, or construction.
            b. The Black Cottonwood's natural history is to grow fast and large, reproduce profusely, and then to die rapidly.
            c. They have a short lifespan compared to other trees—sixty to eighty years is considered an average lifespan for Black Cottonwood trees.
        2. Because so much energy is placed into rapid growth and reproduction, these trees tend to be more brittle and have inadequate immune response systems.
            a. This results in Black Cottonwood trees being prone to failure in adverse weather conditions, being susceptible to several kinds of pathogenic disease—especially after root disturbance, as well as losing large limbs on hot summer days when little or no wind is present.
            b. Once disturbed, especially by construction, Black Cottonwood trees are highly susceptible to root disease and insect infestations. It is common for Black Cottonwood trees to rapidly become hazards after construction activity.
        3. Conclusion:
            a. This tree is already the giant size where they start to lose large limbs unpredictably. I judge this tree not a wise tree for retention when it is within striking distance of multiple homes and yards.

Signature of Affiant

Brian K. Gilles, Consulting Arborist
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ISA TRAQ Qualified
ISA TRAQ Certified Instructor

WAIVER OF LIABILITY

There are many conditions affecting a tree's health and stability, which may be present and cannot be ascertained, such as, root rot, previous or unexposed construction damage, internal cracks, stem rot and more which may be hidden. Changes in circumstances and conditions can also cause a rapid deterioration of a tree's health and stability. Adverse weather conditions can dramatically affect the health and safety of a tree in a very short amount of time. While I have used every reasonable means to examine these trees, this evaluation represents my opinion of the tree health at this point in time. These findings do not guarantee future safety nor are they predictions of future events.

The tree evaluation consists of an external visual inspection of an individual tree's root flare, trunk, and canopy from the ground.

As conditions change, it is the responsibility of the property owners to schedule additional site visits by the necessary professionals to ensure that the long-term success of the project is ensured. It is the responsibility of the property owner to obtain all required permits from city, county, state, or federal agencies. It is the responsibility of the property owner to comply with all applicable laws, regulations, and permit conditions. If there is a homeowners association, it is the responsibility of the property owner to comply with all Codes, Covenants, and Restrictions (CC&R's) that apply to tree pruning and tree removal.

This tree evaluation is to be used to inform and guide the client in the management of their trees. This in no way implies that the evaluator is responsible for performing recommended actions or using other methods or tools to further determine the extent of internal tree problems without written authorization from the client. Furthermore, the evaluator in no way holds that the opinions and recommendations are the only actions required to insure that the tree will not fail. A second opinion is recommended. The client shall hold the evaluator harmless for any and all injuries or damages incurred if the evaluator's recommendations are not followed or for acts of nature beyond the evaluator's reasonable expectations, such as severe winds, excessive rains, heavy snow loads, etc.

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