

October 4, 2018

Planning Dept.
City of Lake Forest Park
17425 Ballinger Way NE
Lake Forest Park, WA 98155

Re: Reasonable Economic Use Exception for 4611 NE 178th St.; Kg. Co. Parcel #401930-1515
Trenching and Paving in Critical Root Zone of Exceptional Tree—Or Removal

Overview: The subject lot is a 6875 sq. ft. relatively flat single family parcel in an RS-15 zoning. There is a 52.2" diameter co-dominant stem Douglas fir (CDS DF indicated by #6 on application), which is deemed exceptional by the City of Lake Forest Park, straddling the front property/R.O.W. boundary. A tree of that size has an Interior Critical Root Zone (ICRZ) diameter of 56 feet, and a 108 ft. diameter Perimeter Critical Root Zone (PCRZ). The lot is less than 55 feet wide. There is a dedicated sewer stub to the NW quadrant of the lot, installed 55 years ago which is approximately 9 ft. from the tree trunk at a depth of 6.5 ft. according to records. Additionally the ICRZ circle is only 6 ft. from the east property boundary, which is too narrow for an adequate driveway. Strict protection the ICRZ of this tree from any impact would eliminate any ingress to the property and would prevent a residential side sewer connection. If an exception is not granted for the removal of, or allowing considerable disturbance of this tree's interior critical roots, then Reasonable Economic Use for this property will be forfeited.

Since my original permit application in January 2018 a 41.8" diameter co-dominant stem Douglas fir has grown to 42.05", crossing the threshold of exceptional tree, so this amended report addresses two exceptional trees instead of one. The city's recommendation for this tree is removal.

Economic Use: The main economic use for this property is that of a single family residence. The lot is zoned Residential, and it is ideally located in a pleasant neighborhood close to schools, transportation, shopping, and recreation. The land is relatively flat and very favorable for a single family home.

Definition: The Reasonable Economic Use Exception should be the minimum extent necessary to allow reasonable use of the property, without posing an unreasonable threat to the public health, safety and welfare on or off the proposed site. A legal lot has the right to access street utilities and to ingress and egress. The connection to its existing side sewer stub on the property can only be done through excavation, as it is 6-1/2 ft. underground. Excavation impact to the tree roots can be mitigated by techniques such as hydro excavation if the outcome of the hearing is to keep the #6 DF 52" CDS. Regarding pavement in the ICRZ, the Lake Forest Park standards for residential driveways over 50 ft. in length is 12' min. (15.10.045 IFC Sec. 503). However, the city will approve a slightly narrower driveway for the sake of the 52" DF root zone.

One thing to keep in mind when reading the word "minimal" in the reports regarding this tree is that there is nothing particularly minimal about excavating a crater 10' wide and 6.5 ft. deep just feet away from the trunk to locate a sewer that has been buried 55 years. And ANY incursion into the ICRZ, whether digging, driving or paving, is much beyond the ISA's concept of minimal disturbance.

Description: There are two pathways to obtaining Reasonable Use of the property: the first is to work inside the ICRZ of the tree using techniques that lessen trauma to the root system, and the second is to remove the tree completely. Any activity within the 56' circle of this tree triggers the need for a reasonable use exemption, because the city's municipal code prohibits digging or paving in the ICRZ of a tree designated for saving, and both sewer and driveway paving are essential to creating a residence on this parcel.

Option 1.a: This scenario preserves the #6 DF 52" tree and locates the residence as far east and as far south on the lot as zoning and stormwater drainage setbacks will allow. And it also keeps the residence footprint completely outside of the ICRZ. The primary impact to the exceptional tree will be connecting to the sewer, which will require a 6.5 ft. deep hole centered approximately 9 ft. from the trunk to locate and connect to the sewer stub. I have received a proposal from Bravo Environmental to hydro excavate the area of my sewer stub (\$3,047). Hydro excavation causes no damage to buried fiber-optic lines, cables, pipelines, and roots, and the vac-trucks have the capacity to remove the roughly 10-12 yard of soil necessary to locate the sewer and connect. Water and gas service lines could also benefit from the excavation, eliminating ground disturbance in other areas.

Hydro excavation will be able to remove soil without cutting or tearing of roots. The negative aspect of removing a dozen yards of soil under the roots of a 120+ foot tall tree near homes and a street is that it adds a degree of instability that is difficult to predict. Additionally, the vac-truck cannot be stationed more than 15 ft. away from the hole and the weight of a 67,000 lb. vehicle will compact the soil in the CRZ.

For ingress/egress a reduced width paved driveway will cover approximately 15% of ICRZ (378 sq. ft.) but with minimal surface grading. The LFP Building Dept. has indicated that it will accept a 1 ft. setback from the east property line for the driveway instead of the typical 5 feet, to minimize paving over the ICRZ. They will also approve a reduced width driveway. If this option is chosen by the examiner then an application will be made for the code exceptions of width and setback.

Option 1.b: This scenario is the same as 1.a with the exception that the dedicated side sewer will be abandoned and a Side Sewer Joint Use and Maintenance Agreement will be made with the eastern neighbor, Eric Evans, at 4625 178th Street NE. We had a dozen email exchanges regarding an agreement this spring but without a commitment. The conversation was revived last week and this week and he and I have an agreement that we can work with. On the whole it appears to benefit the #6 DF tree by eliminating any need for digging in the ICRZ, but he included one stipulation of acceptance that requires greater encroachment of paving in the ICRZ: he asks for the new residence to have a 10' setback from our shared property line, which pushes the footprint and driveway 5 feet closer toward the ICRZ. The residence footprint will

still remain completely outside but this new driveway location requires approximately 178 sq. ft. additional paving in the ICRZ to reach the garage, bringing the encroachment into the ICRZ to 22%.

Option 1.c: This scenario shares the exact residence footprint and driveway location as 1.a. The exception is that a new side sewer stub would be installed outside the ICRZ, tapped from the 8" public main in NE 178th Street, and the existing sewer stub will be abandoned. I have a proposal from a utility contractor, Creasey Bulldozing, who routinely works in the Sno-King area to tap the main, install a lateral stub, and restore asphalt for \$22,770 incl. tax. Dewatering, etc. would be additional. This new sewer stub would be a couple feet from the stub for my easterly neighbor at 4625.

I think this option is the least reasonable option because in addition to the thousands of dollars required for monitoring, maintaining, reporting and bonding the tree for 5 years, I must abandon a dedicated sewer stub I own and spend tens of thousands more dollars on a redundant sewer connection. The city will require a \$39,215 bond for tree #6 which is an additional heavy liability that falls at my feet if the tree does not survive.

Note for Option 1 Variations: It should be noted that every configuration that pushes the residence footprint south to avoid proximity to the #6 tree also increases the length of the driveway, thus consuming much of the maximum allowed impervious area of 2750 sq. ft. The "obvious" solution I have been told is to switch to pervious paving which only counts as 50% of traditional pavement. The knotty problems often surface in the implementation of solutions, not the proposal. Pervious paving is a technique where the organic topsoil is scraped off and 10-12 of crushed rock is applied as a base for pervious concrete or asphalt. The city has stipulated that the driveway be "no dig." With 53-73% of the driveway being in the ICRZ, depending on the scenario chosen, it is not a feasible option, especially if constructed in ribbons and intricate patterns outside the ICRZ.

Option 2: This scenario eliminates the #6 DF 52" tree and locates the house on the 20 ft. minimum front setback. The advantages of this configuration are that:

- a.) The new house would have the maximum possible setback from neighboring homes;
- b.) The driveway would be the shortest, and have the least total impervious surface;
- c.) The driveway would conform city's standard 12 ft. width, and would not need an exception to be constructed narrower. (15.10.045 IFC Sec. 503.2.1)
- d.) The driveway would conform to the city's standard 5 ft. setback to property boundaries, and would not need an exception from the city to be constructed within a foot of my east neighbor's property.
- e.) The backyard would have ample area to install stormwater infiltration trenches away from root zones of neighboring trees;
- f.) This proposal indisputably poses zero threat to the public health or safety, as opposed to Options 1 variations, which increase the threat to public safety, namely the hazard of a large compromised tree failing/falling in the future.

Option 2 is the scenario which was proposed in the building permit application. I considered this to be the most reasonable, effective, and considerate configuration for a foundation which will likely remain for over 100 years, as many of my neighbor's homes have.

General Comments. One public comment that has been repeated is that the site plans I have furnished are not to scale. The basis for the plans is a professional survey, and with additional features added from King County photogrammetric maps and from on-site measurements. Everything in the maps is to scale to the best of my ability. The K.C. photogrammetric maps are to scale but the overlays can be very misleading and must be corrected. On NE 178th Street the property line overlay was 28' off at the roadway and property lines routinely cut through the middle of homes. The images are imported into CAD, scaled, and then accurate property lines are superimposed using known landmarks. The misaligned property lines remain part of the image from King County and cannot be erased.

Conclusion: Two things are indisputable—a residence needs a driveway and a side sewer, and both will cause an unavoidable serious impact on the #6 DF 52”.

Option 1 variants come with serious warnings regarding the health and safety of #6 DF 52”. The LFP Municipal Code 16.14.30 states: “Disturbance of this area beneath a tree [ICRZ] would cause significant impact to the tree, potentially life threatening, and would require maximum post-care treatment to retain the tree.” The Urban Forestry Service’s report went even further” “*Protecting only* this area [ICRZ] would cause significant impact to the tree, potentially life threatening, and would require maximum Post Care Treatment to retain the tree.”*

The reality is that none of the Options 1 variant can stop at the boundary of the ICRZ, but require significant intrusion into ICRZ. “The absolute maximum disturbance allowed should leave the Interior CRZ undisturbed if the tree is to have any chance of survival.” *

The argument for saving the tree also comes with the arborist’s recommendations of crown reduction (topping) to minimize the hazard of failure. Regular intervals of topping will be required to minimize future risk of failure. This tree will be in the hospital for 5 years with regular visits (and bills) from professionals.

Options 1 variants also require unsound compromises in driveway width and routing which will affect the welfare of the occupants, guests, delivery vehicles, and fire apparatus for a century. NE 178th Street is a well-used shortcut for westbound vehicles on Bothell Way trying to avoid the backup at the Ballenger Way traffic signal. The street frontage for this parcel has no parking area because of the utility pole in the ROW and multiple utility cabinets, which complicate visibility of oncoming traffic as well.

Option 1 variants come with such a large protected area that normal construction activity is inhibited. Routine visits of trucks with GVW’s of 50,000-72,000 lbs. must cross through the ICRZ: aggregate, concrete, pumpers, lumber, trusses, siding, drywall, roofing. The city suggested storing large construction materials in the R.O.W, but the cluster of utility cabinets, protected trees, and power pole with guy wire leave only enough room for ingress/egress.

On every count I see superior arguments for Option 2. Reasonable Use cannot avoid serious disturbance within the ICRZ of DF 52", so it seems senseless to make broad concessions for a tree that likely has no chance of survival, while handicapping the function of a permanent residence that has every reason to endure over a century. The same arborist company that appraised the value of #6 DR tree at \$39,215 also writes "the Interior CRZ must be undisturbed if the tree is to have any chance of survival." I wonder if I am being set up for an immense failure.

In spite of my own apprehension over the longevity of the #6 tree I have researched the alternatives in Option 1 for tree preservation. There are hundreds of remedies and solutions available, too many to list in this report, but I am prepared to take every measure to preserve the health of #6 DF if this is the outcome of the hearing. There is no reasonable remedy that solves the disturbance in the #6 ICRZ, they just lessen the severity.

The last comment I would like to make is that I am not a rapacious carpetbagger intent on pillaging the forests of Lake Forest Park. I've lived in Lake Forest Park for a long time. I like my city, but I resent all the reckless accusations made about my character and motives. Every house I've built for 25 years had been thoughtfully designed for its setting and built to a high standard. I typically spend too much money & time on each home, but it is my passion. I haven't become wealthy—I'm still middle class. And my arborist is a not an unscrupulous skill, as intimated in public comments. He is an honorable, hardworking, licensed ISA professional who has had over a dozen years in the trade. He has even spent long days clearing downed trees on the streets of Lake Forest Park after storms.

There is a prevalent attitude in the 70+ pages of public comment pointing to greed and speculation. Ninety percent of the homes in Lake Forest Park were built by speculators. Construction isn't easy and there are many risks— that's why only a few of us do it. The first automobile was conceived by a speculator and the most impressive electric cars were perfected by Elon Musk with other speculators. Your favorite coffee stand got its start with someone who speculated with much or all of his life savings to follow his passion. Unless you're referencing Wall Street, speculation is far more associated with courage than greed. Can we move away from all the inflammatory rhetoric about the hidden motives, and reason together on what Reasonable Use really means for each property owner in the city?

Respectfully submitted,


Stephen Crane
Lake Forest Park, WA

* Urban Forestry Services Inc., Sheet 1, Critical Root Zone (CRZ) Explanation.



Estimate

Hydro excavate 6.5' D x 8" Dia hole

Date: 08-29-2018

Expiration Date: 09-29-2018

6437 S 144th St
Tukwila, WA 98168
T 425-424-9000 F 425-424-9002
www.bravoenvironmental.com

Bravo Environmental NW Inc
Tony Calhoon
Phone: 424-424-9000
Email: tcalhoon@bravonw.com

SUBMITTED TO:
SM Crane General Contractor
Steve
4611 NE 178th St
Lake Forest Park, WA 98155

Item#	Item Name	Quantity	Unit	Unit Price	Total
1	Vactor Truck & Operator	12	HR	\$ 190.00	\$ 2,280.00
2	Overtime	4	HR	\$ 40.00	\$ 160.00
3	TSNW Disposal	2	EA	\$ 160.00	\$ 320.00

Sub Total: \$ 2,760.00

Inclusions:

1. Hydro excavate 8' diameter x 6.5' deep to locate sewer line and disposal.

Tax: \$ 287.04

Exclusions:

- 1. Any traffic control, Signs, Permits or Permitting fees.
- 2. Any additional water needed for excavation.

Total: \$ 3,047.04

Disposal amounts may vary and actual amounts will be invoiced.

A 3 hour daily minimum applies to all work performed unless noted otherwise on this quote.
Any cancellations must be made with a minimum of 24 hour notice before scheduled start time or a 3 hour minimum charge applies.
This is a good faith estimate, actual time and materials will be invoiced
All services invoiced portal to portal and subject to a fuel surcharge
Signature below acknowledges understanding and approval of this estimate

Signature : _____ Date: _____

Printed Name: _____ Company: _____

Thank you for your business!

9/30/2017

Proposal Submitted to

Steve Crane

Proposal # 3464

Address of Work to be performed

4611 NE 178th St
Lake Forest Park, Wa.

Creasey Bulldozing Inc will provide all the equipment, materials, and labor necessary to complete the following work.

Scope of work

- 1) Install new sewer lateral in right of way connected to sewer main
- 2) Includes restoration of asphalt in trench area only. Does not include possible de-watering

All material is guaranteed to be as specified and the above work to be completed in a workmanlike manner.

Payment

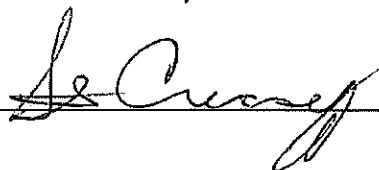
The amount of the work is \$20,700.00 plus tax.

Note* Owner agrees to allow for reasonable access. Any alternation or deviation from above specifications involving extra cost, will be executed only upon written orders, and will become an extra charge over and above the estimate.

All agreements contingent upon strikes, accidents or delays beyond our control. Owners to carry fire and other necessary insurance upon above work. Workman's Compensation and public liability insurance on above work to be taken out by Creasey Bulldozing Inc.

Signature on this contract will be considered your notice of our intent to lien this project if necessary.

Respectfully Submitted by
Steve Creasey
Creasey Bulldozing, Inc

 10/1/2018

Note* This proposal may be withdrawn by us if not accepted within 30 days.

ACCEPTANCE OF PROPOSAL

The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Accepted by _____
Signature

Date _____