

NOTE: DEMO BLD PERMIT / LSM NOT LINKED IN ADVANTAGE

INCLUDE OFFSITE TREES W/ OVER-PAVING BLD.

Arborist Report

Site/Address: Holy Family Church, 120 Ave NE, Kirkland, WA 98033
Date: March 10, 2009

• SETBACKS / READ LANDSCAPE BUFFER?

Arborist: E. John Deutsch ISA Certified Arborist # PN 3994A
810 19th Lane West Kirkland, WA 98033

- 1. TREE TAGS OK
- 2. INVENTORY - APB REPORT
- 3. SITE PLAN

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① CLARIFY
SUEET L.I. GRADING
RETAINED? REMOVED? IMPACTED?
FENCE LOCATION/LOD?
③ ID #
axg tags OK.
ALL IN AS NOTED
WY LETTER

Site: Multi-purpose use, church site.

This site is a multi-use site with a church parish, education building, and offices located on a property that is several acres in size and extends from NE 70 ST to NE 75 ST along 120 Ave NE.

An arborist assessment of the significant trees (minimum 6 inch DBH) located on the property is presented in this report. The trees have been evaluated in terms of viability: overall health and safety. The City of Kirkland will determine which trees are to be retained and which trees may be removed. Note: a COK permit is required to remove significant trees.

SUMMARY: I was asked to prepare a report for certain trees that will be remaining after major removal is undertaken in preparation for a major building project for this site. Again, this report does not include all significant trees on the property. The site map provided by the architects shows many of the trees which will be removed during construction. The "wavy" line indicates the proposed clearing/limits of disturbance. This report focuses only some on the trees located along the south property line area, and the south portion of the west property line.

Many of the trees in this area have been tagged previously, and are perhaps included in another earlier arborist report that may be on file with the City of Kirkland. Because many of these trees have been tagged already, this report does not number the trees as that may cause confusion. The trees are instead lettered from "A" to "T" inclusive. Where tag numbers exist, they are included with the appropriate tree in the chart below.

NEEDS TO INCLUDE WEST R + RETAINED ADJACENT TO SOUTH R. RETAINED?
INCOMPLETE

Protective fencing. Protective fencing must be installed for all significant trees that are going to be retained which are in close proximity of building construction. Protective fencing is also required for any significant trees that are close to construction related vehicle traffic (excavators, supply trucks etc) Protective fencing is not required for non-significant trees. Protective fencing distances are indicated in Column G below (Limits of Disturbance). They indicate the minimum distance of the protective fencing from the trunk of each tree.

TR009-00059
LSM 0A-00004
BLD09-00076

TREE INVENTORY

- A) Tree #
- D) Height: in feet
- G) Limits of Disturbance: Distance for TREE FENCE LOCATION
- H) LCR% Estimated percentage of live crown
- J) Structure Form: Sym. Symmetrical, Minor asymmetry, Major asymmetry
- K) Trunk: Condition and/or Lean, Straight, Bowed, Serpentine
- M) Health: overall health of the tree
- O) Tree Density Credits based on trunk DBH

- B) Species
- E) Width of entire canopy
- F) DBH: trunk diameter (in inches) at 4.5 ft from ground level
- I) Crown Class: Dominant, Co-dominant, Intermediate, Suppressed
- L) Root system
- N) Viability: Viability for retention, recommendation
na = not applicable

(All measurements are in feet, except for Item C: DBH, which is in inches)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Tree #	Species	DBH	Height	Width	Dripline	Limits Disturb.	LCR %	Crown Class	Structure & Form	Trunk	Root system	Overall	Viable	Tree Credits
3	Cherry #3007 #3009	9-11	40	30	15	7		Co-Dom.	Major Assym.	Poor	Good	Poor	No	4
<p>Conclusion/Recommendation: Photo A and B, extreme left, Photo G: close-up of four trunks. Tagged previously as #3007, #3009. Major cavity wounds, bark damage, stubs, major lean, little aesthetic value, removal an option, not a major risk.</p>														

A	Cottonwood	30	60	35	20	18		Co-Dom.	Major Assym	Poor	Good	Poor	No	11
<p>Conclusion/Recommendation: Photos D and E, Tagged previously as #3010 Major decay on top, medium lean towards busy NE 70 ST (heavy traffic and pedestrian use), Loosely attached leaders approx. 25 ft from ground level, no practical measures to correct structural deformity, major risk and removal is recommended.</p>														

B	Decid	10-12	30	25	15	8		Co-Dom.	Major Assym	Poor	Good	Poor	No	3
<p>Conclusion/Recommendation: Photo C, 3 trunk, Two trunks have major lean towards busy NE 70 ST (heavy traffic and pedestrian use), These two trunks are growing into the street light and will interfere with illumination in future years, Little aesthetic value, Significant risk, Removal a viable option.</p>														

C	Douglas Fir	28	40	25	15	15	>95%	Co-Dom.	Major Assym	Poor	Good	Satisf.	Yes	10
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prev. stripped or bowled

No tags 30+'' hemlock

Conclusion/Recommendation: Photo A (middle left), Photo B (to the right of 4 trunk deciduous), Photo H (to the right of scoreboard sign)
 Tagged previously as #3011, Previously topped. Not a significant risk.

D	Hemlock	32	90	30	15	15	>95%	Co-Dom.	Sym	Good	Good	Good	Yes	12
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Conclusion/Recommendation: Photo H (tallest conifer, middle right), Tagged previously as #3012 Good form

E	Cedar Deodora	12	35	25	15	8	>95%	Co-Dom.	Sym	Good	Good	Good	Yes	2
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Conclusion/Recommendation: Photo F (right side), Photo H (left side), Slight, self-corrected lean, Good form

F	Cedar Deodora	8, 12	40	25	15	8	>95%	Co-Dom.	Sym	Good	Good	Good	Yes	2
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Conclusion/Recommendation: Photo F (left side), Photo H (right side), Two trunk, Satisfactory form

H	West Red Cedar	21	40	25	10	12	>95%	Inter.	Minor Assym	Fair	Good	Satisf.	Yes	6
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Conclusion/Recommendation: Photo K and L, Minor lean towards NE 70 ST, End-weight problem: 80% of canopy weight is on the south (NE 70 ST) side, Tagged previously as #4777 Not a major hazard and removal is not necessary.

I	Hemlock	15	30	20	10	8	>95%	Inter.	Major Assym	Poor	Good	Poor	No	3
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Conclusion/Recommendation: Photos I and J, Extreme excessive lean towards NE 70 ST, 100% canopy weight on south (NE 70 ST) side, Tagged previously as #3173, Long term prognosis poor,

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Tree #	Species	DBH	Height	Width	Dripline	Limits Disturb.	LCR %	Crown Class	Structure & Form	Trunk	Root system	Overall	Viable	Free Credits

	Douglas Fir	27	80	25		15	>95%	Inter.	Sym	Good	Good	Good	Yes		
J	Conclusion/Recommendation: Photo M and N, Tagged previously as #3042 Good aesthetic value. Healthy and in good structural form.														

	Douglas Fir	29	90	30		15	>95%	Inter.	Sym	Good	Good	Good	Yes		
K	Conclusion/Recommendation: Photo O (right side), Good aesthetic value, p Tagged previously as # 3067. Healthy and in good structural form.														

	Douglas Fir	30	90	30			>95%	Inter.	Sym	Good	Good	Good	Yes		
L	Conclusion/Recommendation: Photo O (left side), Tagged previously as # 3063, Major sap flow at base of trunk, otherwise healthy and in good structural form.														

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Tree #	Species	DBH	Height	Width	Dripline	Limits Disturb.	LCR %	Crown Class	Structure & Form	Trunk	Root system	Overall	Viable	Tree Credits

Appendix: Recommendations for Protection of Trees on Construction Sites

Construction activities usually have an adverse or detrimental affects on trees. This can sometimes result in death, severe short and long term decline or physical failure of the tree. To preserve certain mature trees within a construction site some precautions must be taken to assure that neither the trunk, limbs nor root system of the tree are excessively damaged. The root system of a tree is the most vital and the most delicate part of the plant, and the most easily damaged. The root system extends far from the trunk, often beyond the drip-line of the tree. Most authorities emphasize that the root zones may well be the most important part of our trees on construction sites. The root zones of most trees extend well beyond the spread of the branches, and 80% to 90% of their absorbing root systems are in the top 6" to 12" of soil, (Harris, 1992, Shigo, 1986). The roots and the soil in this surface layer must be protected from injury. Any encroachment, disturbance, or compaction of the soil around the tree will damage or destroy the fine absorbing roots. Injury caused by cutting, crushing, suffocation, poisoning, or moisture stress by inundation or dehydration can result in the death of the tree. Injuries caused during construction projects may not be finally apparent for many years after the completion of the project, but can ultimately kill the tree.

The following guidelines are minimum standards recommended for the preservation of trees. These guidelines should be incorporated in construction contracts, and the details made available to all parties involved with work on the site, including equipment operators. Obtain proper **advice from an Arborist** during the planning stage of construction. The involvement of an Arborist is an essential component to successfully managing trees.

Protection Barrier: A protection barrier should be installed around the tree or trees to be preserved prior to the commencement of ANY work. The barrier shall be constructed of durable fencing material. The fencing shall be maintained in good repair throughout the duration of the project, and shall not be removed, relocated, or encroached upon.

Storage of Materials: There shall be NO storage of materials or supplies of any kind within the area of the protection barriers. Concrete and cement materials, block, stone, sand and soil shall not be placed within the protection zone.

Grade Changes: Grade changes can be particularly damaging to trees. Even a few inches of fill can cause the death of a tree. Lowering the grade can destroy major portions of a root system as 90% of the roots are often in the top 30cm of soil. Any grade changes proposed should be approved by an ISA Certified Arborist.

Fuel Storage: Fuel storage shall NOT be permitted within 50 feet of any tree to be preserved. **Refueling, servicing and maintenance of equipment and machinery shall NOT be permitted within 50 feet of protected trees.** No storage, pouring, or leaking of any fuel, oil, or chemical may be allowed beneath a tree's canopy

Debris and Waste Materials: Debris and waste from construction or other activities shall NOT be permitted within protected areas.

Power Equipment: Equipment operators should be informed that machinery can cause great injury to standing trees. They must take care to operate with as much distance as possible between machines and trees—branches, trunks, and roots.

Maintenance activities: These include but are not limited to irrigation, soil amelioration, mulching, weed control, soil aeration and crown cleaning. Maintenance activities may be performed at any time during the construction process by qualified Arborists.

Soil moisture during construction shall be maintained at not less than 50% of field capacity. Irrigation may be applied by hand, automatic or manual irrigation system. Water is to be applied at a volume and frequency required to maintain turgor and leaf retention and encourage healthy root development.

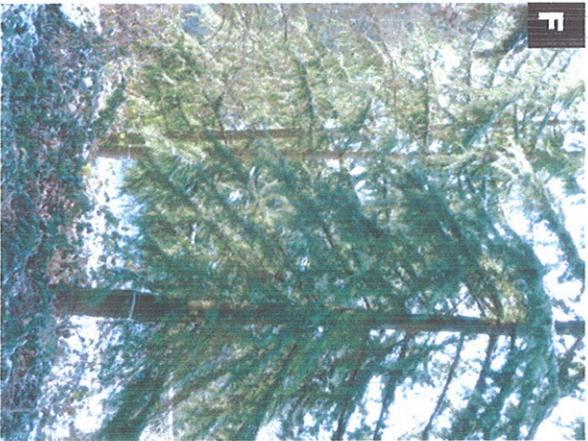
Mulch, when applied, will be free of weeds and shall be applied at no greater thickness than 10 cm

Pruning shall be performed in accordance with the standard by an arborist and in compliance

with the appropriate occupational health and safety regulations. Pruning of the tree canopies and branches should be done at the direction of the project arborist to remove any dead or broken branches, and to provide the necessary clearances for the construction equipment. Severed roots shall be pruned cleanly to healthy tissue, using proper pruning tools. All roots greater than 25mm in diameter that are required to be removed shall be cleanly cut and kept moist at all times and shall not be left exposed to the air. Where it is necessary to cut into a root zone, newly severed or exposed roots shall be protected. Broken branches or limbs shall be pruned according to standards of the International Society of Arboriculture.

PROHIBITED ACTIVITIES:

1. entry of machinery or people.
2. storage of building materials.
3. parking of any kind.
4. erection or placement of site facilities.
5. removal or stockpiling of soil or site debris.
6. disposal of liquid waste including paint and concrete wash.
7. excavation or trenching of any kind (including irrigation or electrical connections).
8. placement of waste disposal
9. pruning and removal of branches, unless supervised by an Arborist.





A



B



C



D



E



F



G