Arborist Report

2859 Bellevue Ave

District of West Vancouver, BC

October 24, 2018

Prepared by:

TALUS

arboriculture & landscape architecture

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Tree Risk Assessment Qualified (TRAQ)

Introduction:

Talus Consulting has been retained to provide an arborist report related to trees associated with the property at 2859 Bellevue Ave in the District of West Vancouver (Fig.1). This arborist report discusses 41-trees, 26-trees being located on the property and 15-trees off of the subject site. The report discusses the condition of the study trees as well as likely impacts from proposed development activities. Recommendations are included to ensure the urban forest is enhanced during and after the development process. This report has been prepared in keeping with the expectations of the District of West Vancouver and the rigorous standards of the International Society of Arboriculture.

Figure 1: Context (subject property bounded by red box)

Methods:

The trees in this arborist report were inventoried with a ground-based inspection on October 19, 2018. All trees located on the survey were included in the inventory, however some commentary is provided regarding smaller diameter ornamental trees that were not included in the original survey.

This arborist report presents tree inventory metrics and associated analysis of existing trees on and adjacent to the subject site. The following inventory data were collected for each tree:

- Location - based on ground survey as provided by client
- Tree Number
- Species
- DBH (diameter at breast height, assumed to be 1.4m above ground level)
- Height

- Condition, summarized as follows: Very Poor; Poor; Fair; Good; and Very Good
- Comments
- Health Rank Spectrum (1, 2, 3, 4, or 5), which are defined as follows:

    1) Trees that are healthy and robust with no abiotic or biotic disorders, located on ideal growing sites with ideal conditions, and well maintained by owner.
    2) Trees that are healthy, but have imperfect physiology that only slightly impede the trees condition such as stem form, irregular branching, or pruning wounds.
    3) Trees that have poor site conditions, physical ailments and structural issues that are coupled with inconsistent tree maintenance that exacerbates the stresses on the tree. These trees are at risk of entering into a spiral of decline.
    4) Trees that exhibit the symptoms of both abiotic and biotic stresses and are in a spiral of decline. Extreme measures are necessary to save the tree at this point.
    5) Trees that are an imminent hazard due to extremely poor health and/or lack of physical integrity. These trees should be removed by the owner of the property to eliminate risk.

- TPZ (Tree Protection Zone): Considered to be the optimum distance from the tree that tree protection fencing should be erected to help ensure ongoing health. The recommended TPZ distances, as shown on the inventory, are measured from the stem outwards beyond the dripline (i.e. the dimension is a radius). Note the TPZ dimensions in this report are based on the best practices set forth by the ISA, however exceptions to these dimensions are occasionally adopted. The term 'Critical Root Zone' (CRZ) is referenced in this regard and refers to a dimension that is exactly half of the recommended dimension adopted by the ISA. The ISA dimension is based on the formula: TPZ(m)=DBH(cm)x0.12m. For example, a tree with a diameter of 90cm would have a TPZ dimension of 10.8m. Most jurisdictions and municipalities in the region however have adopted tree protection offsets that are in line with the CRZ dimension which is based on CRZ=DBH(cm)x0.06m. Where possible, the full TPZ is recommended however the CRZ dimension or even less may be possible on a case-by-case basis. Caution that decreased protections may pose additional risks to tree health and structural integrity. The implementation of any TPZ or CRZ dimensions that are less than those recommended in this report should be approved by the project arborist.

Results:

More specific attributes of trees and site conditions can be examined in further detail in the Appendices, which includes the *Tree Inventory Table, Tree Location Plan* and *Photo Compilation of Tree / Site Conditions*. The *Tree Inventory Table* provides characteristics such as DBH, Height and Condition.

The study site is located within <100m of the foreshore of Burrard Inlet. The site has a creek extending southeastward across the site. Lawn extends to the edge of the top of bank of most of the creek in the front yard and a handful of trees and ornamentals are located immediately adjacent to the creek edge. A utility line extends along the front of the property and line clearance operations have resulted in topping and shear pruning of most trees near the interface with Bellevue Ave. Other traits that are consistently present include abundant English ivy climbing trees and numerous co-

dominant stems as a result of past topping. The following inventory summary examines groupings of trees that are located in similar areas of the site:

Trees along the driveway:

The trees along the driveway represent Tree #1 - #4. The driveway extends along the east property edge and has open soil volumes on each side. Tree #1 is marginal with poor structure and decay pockets persistent throughout the base of the stem. Tree #2 and #3 are very similar in the sense that they are growing proximate to one and other and working as a cohort with integrated canopies. They are also larger diameter specimens with large canopies. Tree #4 is a smaller ornamental specimen with good form and a healthy canopy. In summary, the condition of these site trees is as follows:

Tree #1 (Laurel) - Condition: **P**oor
Tree #2 (Western Red Cedar) - Condition: **G**ood
Tree #3 (Lawson Cypress) - Condition: **G**ood
Tree #4 (Magnolia) - Condition: **G**ood

Trees at back of property:

There are three trees at the northwest extent of the study site - two of these are off property and include Tree #5 and #7. These trees are exhibiting signs of summer drought stress. Tree #7 has an old rusted anchor chain that was wrapped around the stem years ago and is in the process of girdling the stem unless removed. Tree #6 is on property and exhibiting signs of drought stress with abundant browning in the canopy as well as internal dieback of branches. Tree #6 is also multi-stemmed above 3m height and not appearing vigorous. In summary, the condition of these trees is as follows:

Tree #5 (Western Red Cedar) - Condition: **G**ood
Tree #6 (Lawson Cypress) - Condition: **F**air
Tree #7 (Western Red Cedar) - Condition: **F**air

Trees along creek in front yard:

There are only three trees that were inventoried along the creek. These trees were inventoried as they were located on the survey, however a few smaller ornamental specimens are located proximate to the creek including laurel and magnolia. Tree #8 is a juvenile white pine near the creek and Tree #9 is a robust cherry laurel that is providing abundant fruit for nearby birds. Finally, Tree #41 is a topped cedar located immediately on the bank farther east on the site. In summary, the condition of these trees is as follows:

Tree #8 (Western White Pine) - Condition: **G**ood
Tree #9 (Cherry Laurel) - Condition: **G**ood
Tree #41 (Western Red Cedar) - Condition: **F**air

Trees along west property edge in front yard:

The majority of the trees in the front yard on the west property are western red cedars that have been topped and had a long history of poor management. Additionally, there are two large dogwoods that are located immediately adjacent to these cedars - both dogwoods have major infestations of English ivy, but the southernmost specimen (Tree #23) has major decay in the stem and appears vulnerable to failure. In summary, the condition of these trees is as follows:

Tree #10 (Western Red Cedar) - Condition: **P**oor
Tree #11 (Western Red Cedar) - Condition: **F**air
Tree #12 (Western Red Cedar) - Condition: **P**oor
Tree #13 (Western Red Cedar) - Condition: **F**air
Tree #14 (Western Red Cedar) - Condition: **F**air
Tree #15 (Western Red Cedar) - Condition: **P**oor
Tree #16 (Western Flowering Dogwood) - Condition: **F**air
Tree #17 (Western Red Cedar) - Condition: **P**oor
Tree #18 (Western Red Cedar) - Condition: **F**air
Tree #19 (Western Red Cedar) - Condition: **P**oor
Tree #20 (Western Red Cedar) - Condition: **F**air
Tree #21 (Western Red Cedar) - Condition: **P**oor
Tree #22 (Western Red Cedar) - Condition: **F**air
Tree #23 (Western Flowering Dogwood) - Condition: **V**ery **P**oor
Tree #24 (Western Red Cedar) - Condition: **P**oor
Tree #25 (Western Red Cedar) - Condition: **F**air
Tree #26 (Western Red Cedar) - Condition: **F**air
Tree #27 (Western Red Cedar) - Condition: **F**air
Tree #28 (Western Red Cedar) - Condition: **F**air
Tree #29 (Western Red Cedar) - Condition: **F**air

Trees along south property edge beneath utility lines:

All of the trees in the front yard immediately adjacent to Bellevue Ave are located in a row beneath utility wires. These trees have a long history of aggressive pruning in the form of topping and shearing. These trees are all 5m or less in height and are irreversibly stressed with permanent poor form. In summary, the condition of these trees is as follows:

Tree #30 (Western Red Cedar) - Condition: **V**ery **P**oor
Tree #31 (Western Red Cedar) - Condition: **V**ery **P**oor
Tree #32 (Western Red Cedar) - Condition: **V**ery **P**oor
Tree #33 (Western Red Cedar) - Condition: **V**ery **P**oor
Tree #34 (Western Red Cedar) - Condition: **V**ery **P**oor
Tree #35 (Western Red Cedar) - Condition: **V**ery **P**oor
Tree #36 (Western Red Cedar) - Condition: **V**ery **P**oor
Tree #37 (Western Red Cedar) - Condition: **V**ery **P**oor
Tree #38 (Western Red Cedar) - Condition: **V**ery **P**oor
Tree #39 (Western Red Cedar) - Condition: **V**ery **P**oor
Tree #40 (Western Red Cedar) - Condition: **V**ery **P**oor

Discussion and Recommendations:

Many trees on this site have degraded states of health and structure, however opportunities exist to perform corrective pruning in an attempt to improve the structure of some of the specimens. In addition, some trees should be considered for thinning to improve health of remaining trees.

The following actions should be considered for the subject trees:

Trees along the driveway:

Because future construction activities will most likely use the driveway as an entrance road during construction, trees along the driveway may be impacted during development activities. However, attempts should be made to retain Tree #2 and #3 if possible due to their proximity to the creek and their large stature. The future contractor should be proactive and prune any trees for clearance to prevent any unintended branch breakage from large equipment conflicting with trees - pruning should be completed by an ISA Certified Arborist. Tree #1 should be considered for removal to mitigate risk of failure due to decay as well as ongoing pruning costs associated with utility line clearance. Tree #4 is a healthy and robust specimen and should be retained if possible. In summary, the recommended actions for each of these site trees is as follows:

Tree #1 (Laurel) - Action: **R**emove & **R**eplace with more appropriate specimen
Tree #2 (Western Red Cedar) - Action: **R**etain & **P**rune for structure and deadwood
Tree #3 (Lawson Cypress) - Action: **R**etain & **P**rune for structure and deadwood
Tree #4 (Magnolia) - Action: **R**etain

Trees at back of property:

The tree that is located on the property at the rear of the site will likely need to be removed to accommodate the current footprint of the proposed building. The excavation and grading associated with construction activities will likely result in the loss of at least 50% of the tree roots resulting in a structurally weak tree prone to failure. Tree #5 and #7 off of the site should be retained during and after construction activities. In the short-term, the anchor chain embedded in the stem of Tree #7 should be removed to improve cambium health and prevent death of the northernmost stem(s). Both off-site trees should also be pruned to improve structure and remove deadwood. In summary, the recommended actions for each of these site trees is as follows:

Tree #5 (Western Red Cedar) - Action: **R**etain & **P**rune for structure and deadwood
Tree #6 (Lawson Cypress) - Action: **R**emove & **R**eplace with more appropriate specimen
Tree #7 (Western Red Cedar) - Action: **R**etain & **P**rune for structure and deadwood AND remove anchor chain

Trees along creek in front yard:

The trees along the creek vary in species and in health. It is likely that the western white pine (Tree #8) will eventually be infected with white pine blister rust and die, therefore successional planting should be planned for to ensure no permanent loss of riparian canopy. Tree #9 is providing

abundant mast for birds and several species were witnessed eating the fruit. This tree should be retained due to habitat value and shading capacity. Finally, Tree #41 is a topped cedar that may be a candidate for structural pruning to re-establish a new apically dominant leader. The tree is currently providing bank stabilization and shading to the creek. In summary, the recommended actions for each of these site trees is as follows:

Tree #8 (Western White Pine) - Action: **R**etain & **P**lant other long-lived, native riparian trees
Tree #9 (Cherry Laurel) - Action: **R**etain
Tree #41 (Western Red Cedar) - Action: **R**etain & **P**rune to establish a new leader stem

Trees along west property edge in front yard:

With the exception of the two western flowering dogwoods (Tree #16 & #23), the cedar trees in the front yard on the west property edge are planted too close together considering their size. These trees were planted years ago at a spacing suitable to the establishment of a cedar hedge. The trees were traditionally topped to achieve a hedge form, however the trees have not been managed consistently at the topped, hedge height for over 15-20-years - the trees have now adopted a tree form with many containing co-dominant stems above the original topping height. Many of these cedars are stressed and retained trees will be candidates for thinning to allow remaining dominant stems to release and grow larger root systems and canopies. Currently it appears that Tree #10 - #17 will not be impacted by the proposed building, but some of these trees may be candidates for thinning. If thinning is supported as a management prescription from a tree health and riparian health standpoint, Talus Consulting should be retained to work hand-in-hand with an operations crew to select preferred trees for retention and subordinate trees for thinning removal. Any remaining cedar trees should also be pruned to establish a new leader, where possible, and improve monopodial stem structure. Tree #23 should be removed due to health issues as it is at risk of structural failure. Many of the remaining trees in this former hedge will be impacted by the current footprint of the proposed building and driveway. Some of the remaining trees, including Tree #18 - #22 and Tree #24 - #29, could be retained, thinned and pruned, however they will need to be removed to accommodate the new building and resulting construction footprint. In summary, the recommended actions for each of these site trees is as follows:

Tree #10 (Western Red Cedar) - Action: **R**etain & **P**rune for structure and deadwood
Tree #11 (Western Red Cedar) - Action: **R**etain & **P**rune for structure and deadwood
Tree #12 (Western Red Cedar) - Action: **R**etain & **P**rune for structure and deadwood
Tree #13 (Western Red Cedar) - Action: **R**etain & **P**rune for structure and deadwood
Tree #14 (Western Red Cedar) - Action: **R**etain & **P**rune for structure and deadwood
Tree #15 (Western Red Cedar) - Action: **R**etain & **P**rune for structure and deadwood
Tree #16 (Western Dogwood) - Action: **R**etain & **P**rune for structure and deadwood
Tree #17 (Western Red Cedar) - Action: **R**etain & **P**rune for structure and deadwood
Tree #18 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #19 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #20 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #21 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #22 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #23 (Western Flowering Dogwood) - Action: **R**emove & **R**eplace riparian canopy

Tree #24 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #25 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #26 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #27 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #28 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #29 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy

Trees along south property edge beneath utility lines:

Regardless of any development impacts, the current condition of these topped cedars is irreversibly degraded. All of these trees should be removed and additional native riparian planting should be planted throughout the site and more height appropriate specimens planted beneath utility wires. In summary, the recommended actions for each of these site trees is as follows:

Tree #30 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #31 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #32 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #33 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #34 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #35 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #36 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #37 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #38 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #39 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy
Tree #40 (Western Red Cedar) - Action: **R**emove & **R**eplace riparian canopy

Interventions to ensure retention of the existing urban forest and improve the condition of the urban forest following construction include the following:

Tree Protection Fencing: It is recommended that during all future construction activities, tree protection fencing be erected around any other site trees to be retained. Tree protection fencing around all retained trees is necessary prior to construction and should remain throughout the duration of construction. This fencing should be installed on the perimeter of the recommended TPZ dimension or at minimum to the CRZ where necessary. The construction of Tree Protection Fencing closer to subject trees than recommended dimensions should be approved by the project arborist. The preparation of a tree protection drawing accounting for the recommended TPZ dimensions is the responsibility of the project landscape architect or landscape designer, however Talus Consulting may be retained to complete this work if requested. The tree protection fencing detail shown below (Fig.2) should be erected by the contractor and inspected by the project arborist prior to construction.

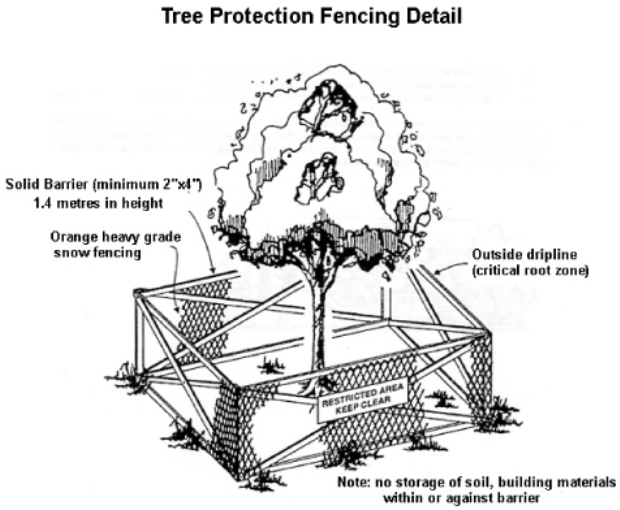


Figure 2: Tree Protection

Pruning: During any future development activities, retained trees should be pruned before and after construction to ensure any dead or damaged branches are removed to ensure worker safety and future homeowner safety. Also, retained trees may need to be pruned up to a height of 2.5m to accommodate updated pedestrian traffic patterns. Any pruning or arboricultural work taking place before, during or after construction should be conducted by an arborist certified by the International Society of Arboriculture. No more than 25% of the living crown of the tree should be pruned at any given time. Also, some trees may be candidates for structural pruning after construction to enhance their form and prevent future maintenance issues. It is recommended that Talus Consulting liaise with the tree pruning/removal professional to walk them through the goals of the property.

Landscaping: Future landscaping on the property should be mindful of the current tree conditions and the successional change that is desired to be achieved over time. Ideally, all future species selections should aim to be managed into the future without topping. The future landscape designs for the property should attempt to select native species that suit the scale of the site while enhancing aesthetics and increasing the canopy cover of the District of West Vancouver. Areas may need to be cleared of competing and undesirable vegetation to create an environment more conducive tree planting establishment. Species that shade the creek should include native low growing groundcovers, mid-storey shrubs and upper canopy native trees. If topping is a potential threat in the future, smaller height native tree specimens should be considered where possible.

Invasive Species: English ivy is prevalent on the site. Where it is observed growing on stems of trees it should be removed immediately. This will typically require that the ivy be cut with a handsaw at the base of the tree. Where it is possible to remove the vines from the canopy entirely, it should be considered to renew the photosynthetic capacity of the remaining tree.

Root Pruning: As a general rule, all excavation activities proximate to the trees should be mindful of utilizing root pruning strategies. This translates into all roots that are greater than 5cm (2") diameter should be pruned with a sharp and clean pruning saw during excavations. This will assist in limiting the impacts from large back-hoe buckets exerting structural stresses onto the root-plate. No more than 25% of the roots should be jeopardised during construction.

Wildlife: Prior to commencing any removals of trees, trees should be inspected to ensure no wildlife are nesting or hibernating in trees. Should tree removals proceed on this site, all removals should take place outside of seasons during which birds or small mammals may be nesting or hibernating. If removals do need to take place during this period, the trees should be inspected by a registered professional biologist prior to work commencing.

Stewardship efforts can be made through this development parcel that will improve the condition of the urban forest. During the planning and design of the future amenities for this site, removed trees should be replaced in a configuration that adds value to the District of West Vancouver's urban forest. Future species should be selected that provide an optimum balance of ecological, economic and social benefit to the site and contextual forest. Selecting trees that provide environmental services can result in increased energy efficiency, increased real estate values, and improved mental/physical health. Selections should be mindful of climate change and increasingly droughty summer conditions. Landscape architects and arborists should collaborate during the design process to ensure that all future tree planting efforts aim to create tree environments that are suited to the site and allow specimens to achieve their genetic potential. Major contributing factors that will ensure future tree planting is successful is the provision of adequate soil volumes, healthy nursery stock, good site selection, and scheduled maintenance.

It is recommended that the project arborist be on site at critical points in the construction process to ensure that tree health be maintained during development. Queries that arise in relation to this report can be directed to Talus Consulting (talusbc@gmail.com - 604-354-7799).

APPENDIX:

- Tree Inventory Table
- Tree Location Plan
- Photo-Compilation of Tree / Site Conditions
- Limitations

APPENDIX:

Arborist Report
Inventory for 2859 Bellevue Ave, District of West Vancouver, BC
Talus Consulting
Joe McLeod - ISA Certified Arborist #SO-4337A and TRAQ
Site visit inventory conducted on October 19, 2018

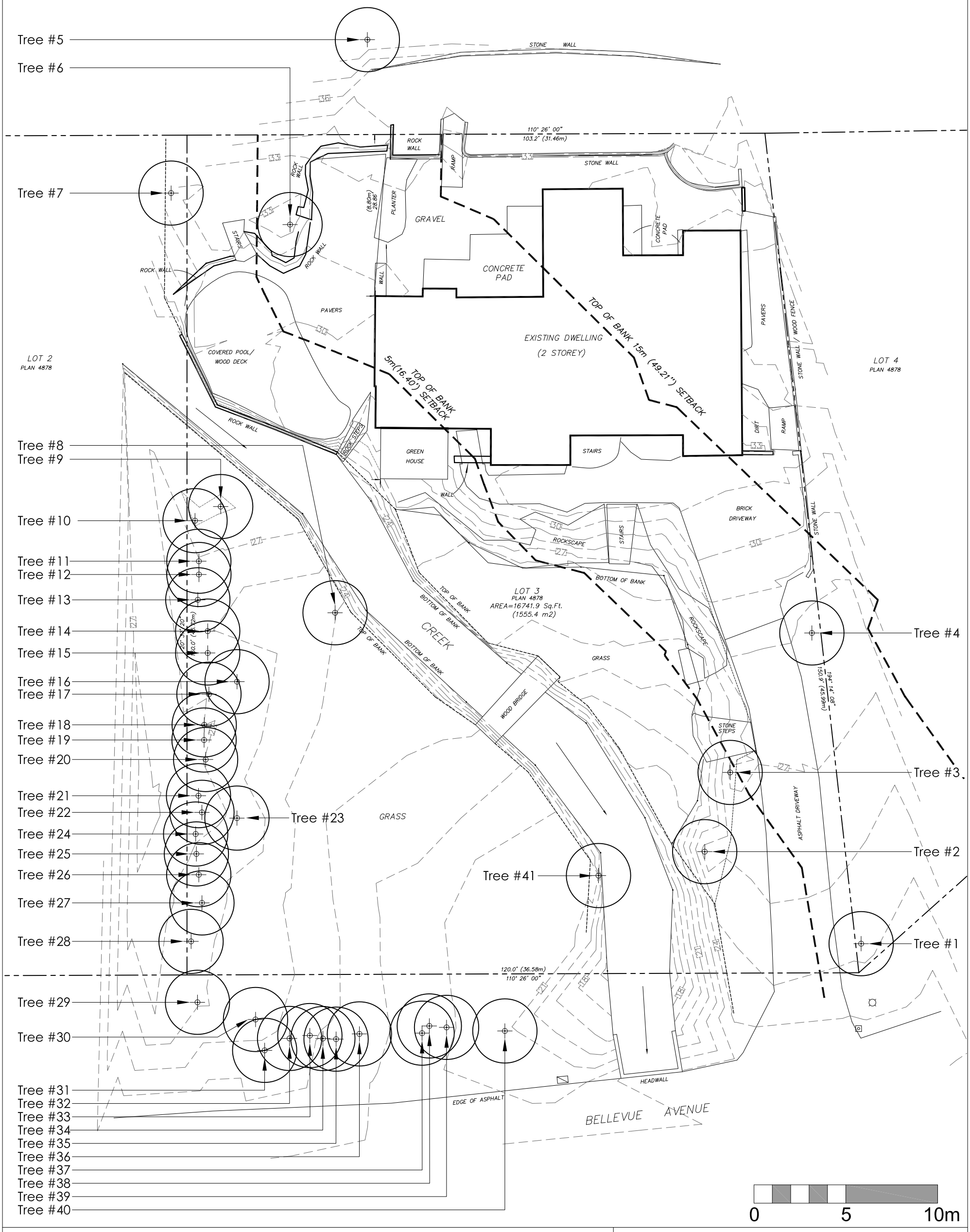
						Health Ranking Spectrum						
						(1 = great) (5 = very poor)						
Tree #	Common	Latin	DBH (cm)	Height (m)	Condition	1	2	3	4	5	Comments	TPZ (m)
1	Laurel	*Prunus spp.*	multistem: 35/31/24	8	Poor				X		Tree is located <1m from driveway; twisted co-dominant stems; abundant crossing branches; utility line runs through edge of canopy and canopy has been pruned back aggressively; abundant decay in base of stems; splits in crotch of codominant stems.	3.6
2	Western Red Cedar	*Thuja plicata*	88	22	Good		X				Tree is located 3m from driveway; stem divides into two co-dominant stems at 16m height; evidence of sapsucker damage; abundant English ivy growing up stem; softscape at base.	10.6
3	Lawson Cypress	*Chamaecyparis lawsoniana*	108	22	Good		X				Tree is located <2m from driveway; five co-dominant stems emerge at 3m height; tufts of browning in foliage suggesting drought stress from past summer; abundant English ivy; softscape at base.	13.0
4	Magnolia	*Magnolia spp.*	multistem: 19/25/23	6	Good		X				Tree is located <1m from driveway; co-dominant stems typical of the species; canopy is healthy.	2.4
5	Western Red Cedar	*Thuja plicata*	81	18	Good		X				Tree is located above stone wall in landscaped area outside of backyard; canopy is well developed with some browning from summer drought stress; stem has well developed English ivy growing into canopy; stem appears monopodial.	9.7
6	Lawson Cypress	*Chamaecyparis lawsoniana*	77	22	Fair			X			Tree is located on edge of concrete paver patio within landscaped area; abundant dieback of internal branches; base of stem is lifting pavers; English ivy growing up stem; stem divides into at least three co-dominant stems at 5m height.	6.0
7	Western Red Cedar	*Thuja plicata*	multistem: 47/56/42/85	18	Fair			X			Tree is located just off the northwest corner of the property and is multi-stemmed growing off of an old decayed stump; the northernmost stem has been wrapped with a large metal chain (rusted) and the stem is being girdled; upper canopy above girdling chain is showing signs of stress.	6.0
8	Western White Pine	*Pinus monticola*	29	10	Good		X				Tree is located immediately adjacent to the creek; utility wire is running through canopy; tree is young and healthy at this time.	3.5
9	Cherry Laurel	*Prunus laurocerasus*	49	5	Good		X				Tree is located adjacent to creek; abundant fruit and associated bird activity in canopy; abundant stem suckering from base and from ground adjacent to stem.	5.9
10	Western Red Cedar	*Thuja plicata*	46	18	Poor				X		Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has codominant stems and an inclusion at stem junction; tree was previously topped; abundant deadwood.	5.5

11	Western Red Cedar	*Thuja plicata*	38	18	Fair			X			Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	4.6
12	Western Red Cedar	*Thuja plicata*	42	18	Poor				X		Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	5.0
13	Western Red Cedar	*Thuja plicata*	47	18	Fair			X			Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	5.6
14	Western Red Cedar	*Thuja plicata*	46	18	Fair			X			Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	5.5
15	Western Red Cedar	*Thuja plicata*	20	18	Poor				X		Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	7.2
16	Western Flowering Dogwood	*Cornus nuttallii*	51	18	Fair			X			Tree is located near west property line adjacent to western red cedars along the property edge; tree has aggressive English ivy climbing stem and appears stressed.	6.1
17	Western Red Cedar	*Thuja plicata*	45	18	Poor				X		Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	5.4
18	Western Red Cedar	*Thuja plicata*	39	18	Fair			X			Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	4.7
19	Western Red Cedar	*Thuja plicata*	45	18	Poor				X		Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	5.4
20	Western Red Cedar	*Thuja plicata*	52	18	Fair			X			Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	2.4

21	Western Red Cedar	*Thuja plicata*	31	18	Poor				X		Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	3.7
22	Western Red Cedar	*Thuja plicata*	33	18	Fair			X			Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	4.0
23	Western Flowering Dogwood	*Cornus nuttallii*	49	18	Very Poor					X	Tree is located near west property line adjacent to western red cedars along the property edge; tree has aggressive English ivy climbing stem and appears stressed; large decay pockets in base of tree suggest this tree is a hazard.	2.4
24	Western Red Cedar	*Thuja plicata*	24	18	Poor				X		Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	2.4
25	Western Red Cedar	*Thuja plicata*	32	18	Fair			X			Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree has been previously topped; tree is planted too close to adjacent stems and competition-induced stress is evident; abundant deadwood.	2.4
26	Western Red Cedar	*Thuja plicata*	57	18	Fair			X			Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree may have been previously topped, but is larger in diameter than cedars to the north; spacing is also wider than cedars to the north suggesting less competition and larger diameter; competition-induced stress is evident; abundant deadwood; fence attached to base.	2.4
27	Western Red Cedar	*Thuja plicata*	54	18	Fair			X			Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree may have been previously topped, but is larger in diameter than cedars to the north - except Tree #26; spacing is also wider than cedars to the north suggesting less competition and larger diameter; competition-induced stress is evident; abundant deadwood; fence attached to base.	2.4
28	Western Red Cedar	*Thuja plicata*	61	18	Fair			X			Tree is located along the west property line and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree may have been previously topped, but is larger in diameter than cedars to the north - except Tree #26 & #27; spacing is also wider than cedars to the north suggesting less competition and larger diameter; competition-induced stress is evident; abundant deadwood; fence attached to base.	7.3

29	Western Red Cedar	*Thuja plicata*	69	18	Fair			X			Tree is located just south of the property near the southwest corner and associated with seventeen other western red cedars along the property edge; tree has aggressive English ivy climbing stem; tree may have been previously topped, but is larger in diameter than cedars to the north - except Tree #26, #27 & #28; spacing is also wider than cedars to the north suggesting less competition and larger diameter; competition-induced stress is evident; abundant deadwood; fence attached to base.	8.3
30	Western Red Cedar	*Thuja plicata*	37	5	Very Poor					X	Tree is located south of the property line under power lines along the front of the property and Bellevue Ave; tree is associated with ten additional western red cedars along the front of the property; tree has been topped and is approximately 5m in height; tree has little live crown remaining and appears irreversibly stressed; tree has English ivy climbing stem.	4.4
31	Western Red Cedar	*Thuja plicata*	65	5	Very Poor					X	Tree is located south of the property line under power lines along the front of the property and Bellevue Ave; tree is associated with ten additional western red cedars along the front of the property; tree has been topped and is approximately 5m in height; tree has little live crown remaining and appears irreversibly stressed; tree has English ivy climbing stem.	7.8
32	Western Red Cedar	*Thuja plicata*	30	5	Very Poor					X	Tree is located south of the property line under power lines along the front of the property and Bellevue Ave; tree is associated with ten additional western red cedars along the front of the property; tree has been topped and is approximately 5m in height; tree is dead.	3.6
33	Western Red Cedar	*Thuja plicata*	16	5	Very Poor					X	Tree is located south of the property line under power lines along the front of the property and Bellevue Ave; tree is associated with ten additional western red cedars along the front of the property; tree has been topped and is approximately 5m in height; tree has little live crown remaining and appears irreversibly stressed; tree has English ivy climbing stem.	1.9
34	Western Red Cedar	*Thuja plicata*	29	5	Very Poor					X	Tree is located south of the property line under power lines along the front of the property and Bellevue Ave; tree is associated with ten additional western red cedars along the front of the property; tree has been topped and is approximately 5m in height; tree has little live crown remaining and appears irreversibly stressed; tree has English ivy climbing stem.	3.5
35	Western Red Cedar	*Thuja plicata*	20	5	Very Poor					X	Tree is located south of the property line under power lines along the front of the property and Bellevue Ave; tree is associated with ten additional western red cedars along the front of the property; tree has been topped and is approximately 5m in height; tree has little live crown remaining and appears irreversibly stressed; tree has English ivy climbing stem.	2.4
36	Western Red Cedar	*Thuja plicata*	24	5	Very Poor					X	Tree is located south of the property line under power lines along the front of the property and Bellevue Ave; tree is associated with ten additional western red cedars along the front of the property; tree has been topped and is approximately 5m in height; tree has little live crown remaining and appears irreversibly stressed; tree has English ivy climbing stem.	2.9

37	Western Red Cedar	*Thuja plicata*	35	5	Very Poor					X	Tree is located south of the property line under power lines along the front of the property and Bellevue Ave; tree is associated with ten additional western red cedars along the front of the property; tree has been topped and is approximately 5m in height; tree has little live crown remaining and appears irreversibly stressed; tree has English ivy climbing stem.	4.2
38	Western Red Cedar	*Thuja plicata*	31	5	Very Poor					X	Tree is located south of the property line under power lines along the front of the property and Bellevue Ave; tree is associated with ten additional western red cedars along the front of the property; tree has been topped and is approximately 5m in height; tree has little live crown remaining and appears irreversibly stressed; tree has English ivy climbing stem.	3.7
39	Western Red Cedar	*Thuja plicata*	29	5	Very Poor					X	Tree is located south of the property line under power lines along the front of the property and Bellevue Ave; tree is associated with ten additional western red cedars along the front of the property; tree has been topped and is approximately 5m in height; tree has little live crown remaining and appears irreversibly stressed; tree has English ivy climbing stem.	3.5
40	Western Red Cedar	*Thuja plicata*	53	5	Very Poor					X	Tree is located south of the property line under power lines along the front of the property and Bellevue Ave; tree is associated with ten additional western red cedars along the front of the property; tree has been topped and is approximately 5m in height; tree has little live crown remaining and appears irreversibly stressed; tree has English ivy climbing stem.	6.4
41	Western Red Cedar	*Thuja plicata*	multistem: 34/30	5	Fair			X			Tree is located along the creek edge and grasping onto the bank; tree has been previously topped; multiple codominant stems emerge at 3m height; although topped, it is bushy and has a robust canopy.	4.2



legend

Property Line

Existing Tree - Inventoried

adapted from base survey by:

BUTLER SUNDVICK
4 – 19089 94th Ave
Surrey, BC V4N 3S4
www.butlersundvick.ca
Tel. 604–513–9611

title

Tree Location Plan
2859 Bellevue Ave
West Vancouver, BC

drawn by

Talus Consulting

scale (metric)

1:200

date

October 24, 2018

azimuth

plan

ARB-1

Photo-Compilation of Tree / Site Conditions

View toward front of property looking north from Bellevue Ave. Trees numbered as shown in red.

View toward front of property with creek headwall and guardrail in foreground. Note, small diameter shrubs (foreground) were not included in the inventory, but they have creek shading capacity.

View eastward to Tree #1.

Tree #1 adjacent to power lines on Bellevue Ave.

View southeast to Tree #2 & #3 from front yard.

Canopy of Tree #2.

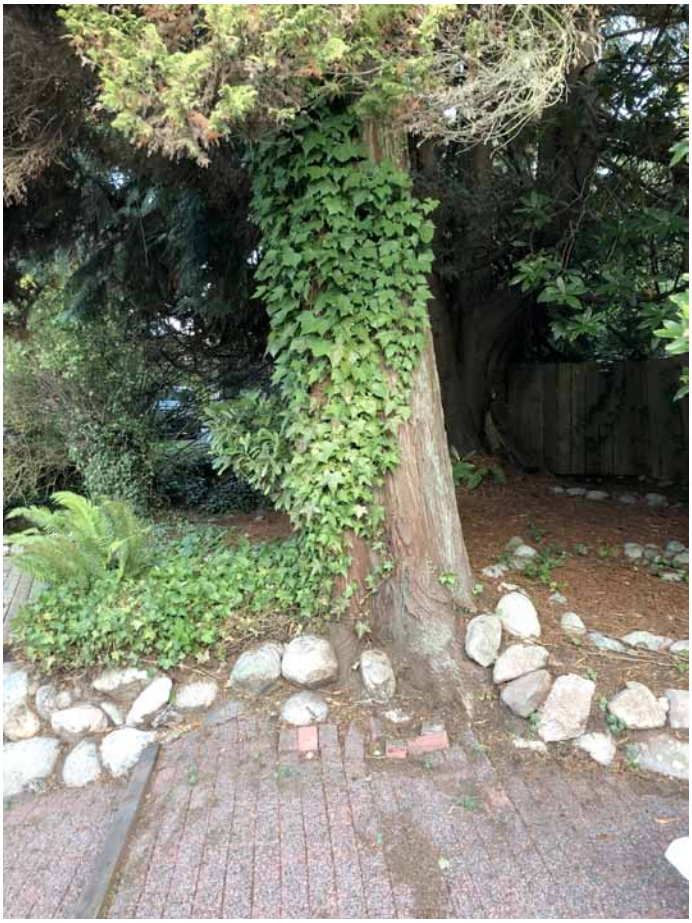
Canopy of Tree #3.

View east to Tree #4.

View north to Tree #4.

View northwest to Tree #5.

View west to Tree #5 & #6.


Base of Tree #6.


Canopy of Tree #6.

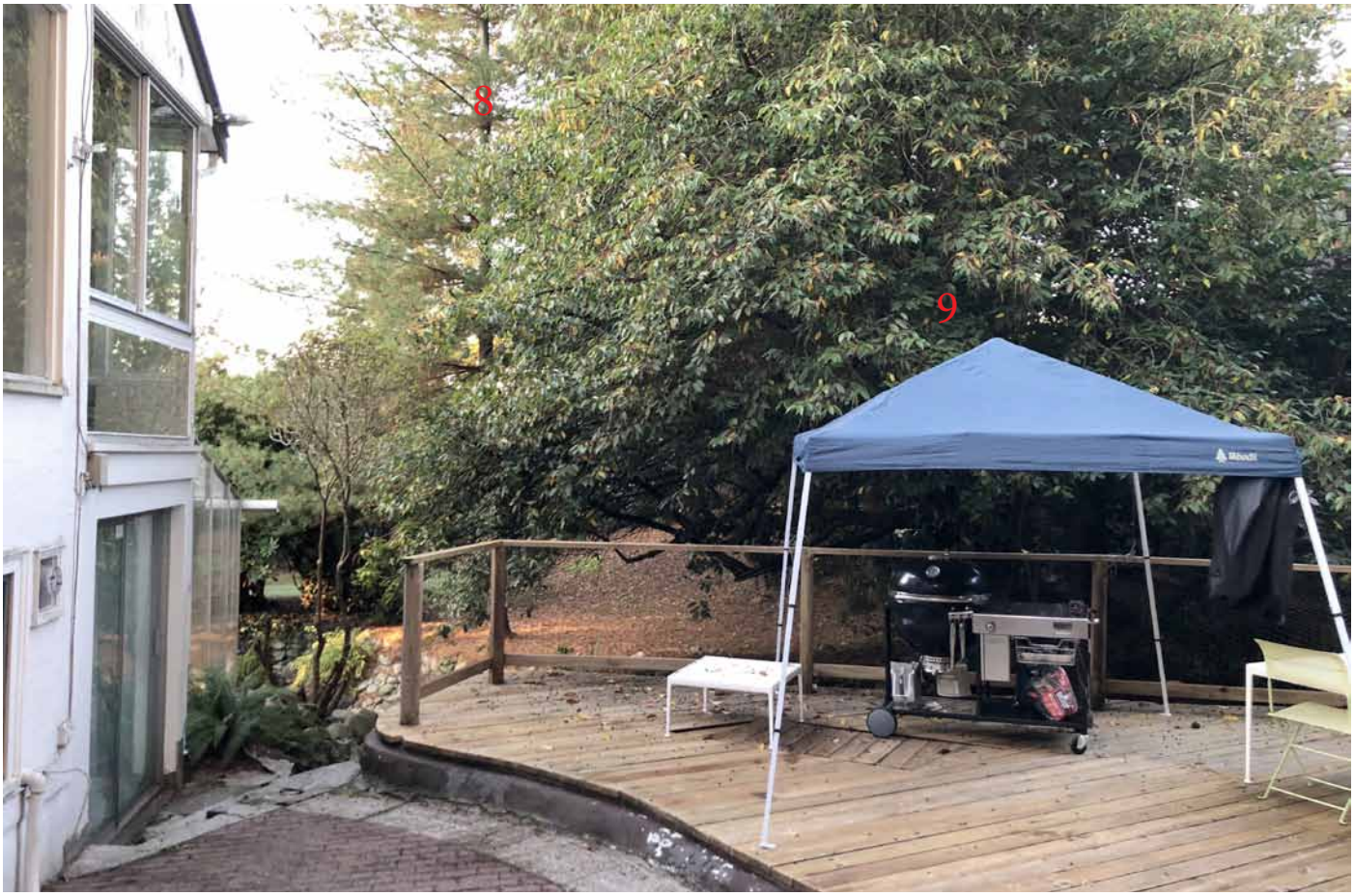

Internal canopy of Tree #6.

Base of Tree #7.

Stem being girdled by rusty chain on Tree #7.

Creek west of Tree #7.

View southward along creek from back patio. Tree #9 (cherry laurel) located in middle of photo on opposite bank.



View southward from back patio to Tree #8 and Tree #9.

View northward to Tree #8 with smaller shrubs along the southside top of bank.

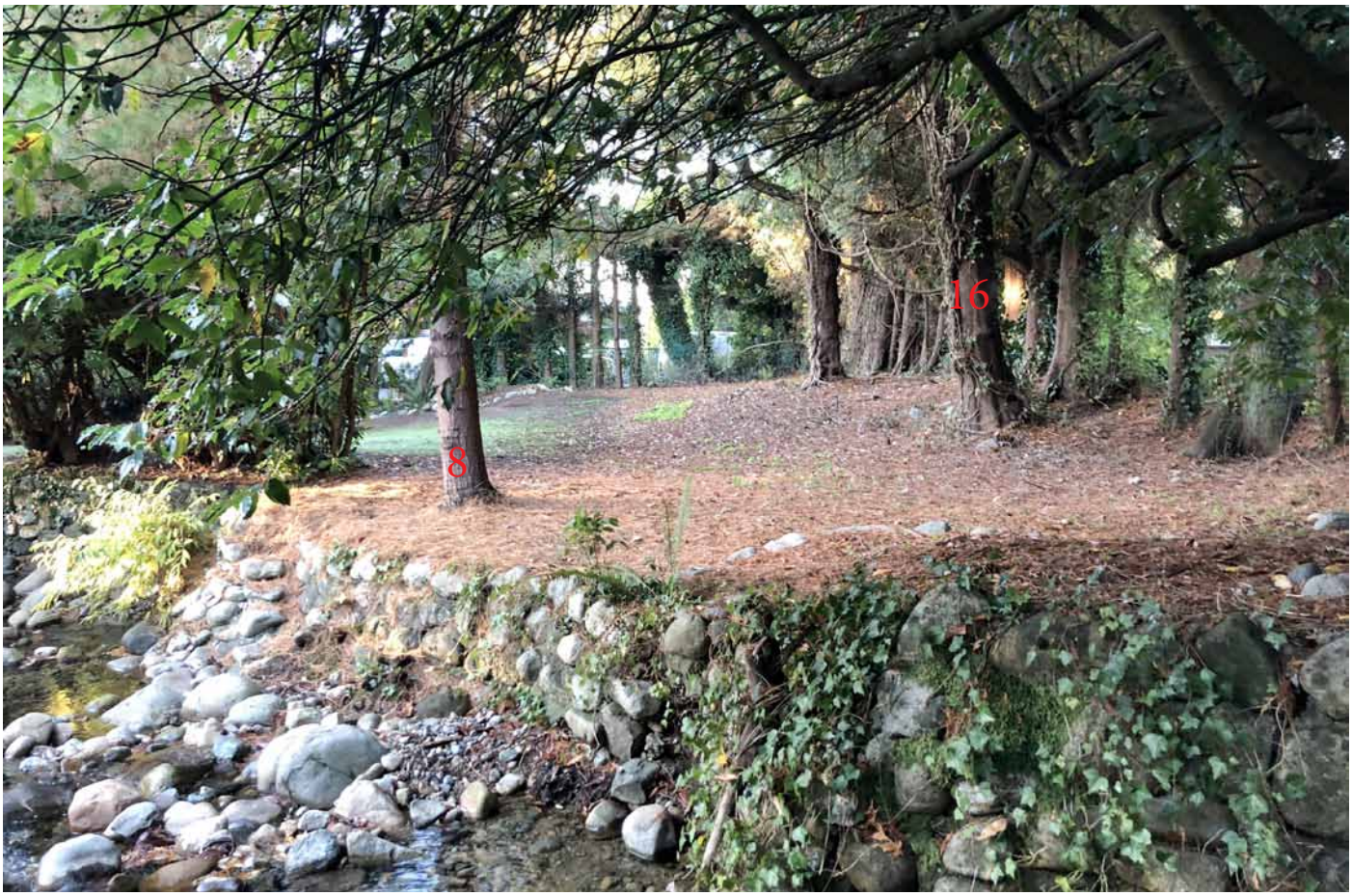

View northeast from yard across creek. *Prunus* and *Magnolia* shrubs along top of bank.

View northwest from front yard toward trees along western property edge.

Base of Tree #8.

Base of Tree #9.

Base of Tree #9 in foreground with cedars in background.



View south toward front yard with creek in foreground.

View southeast along creek.

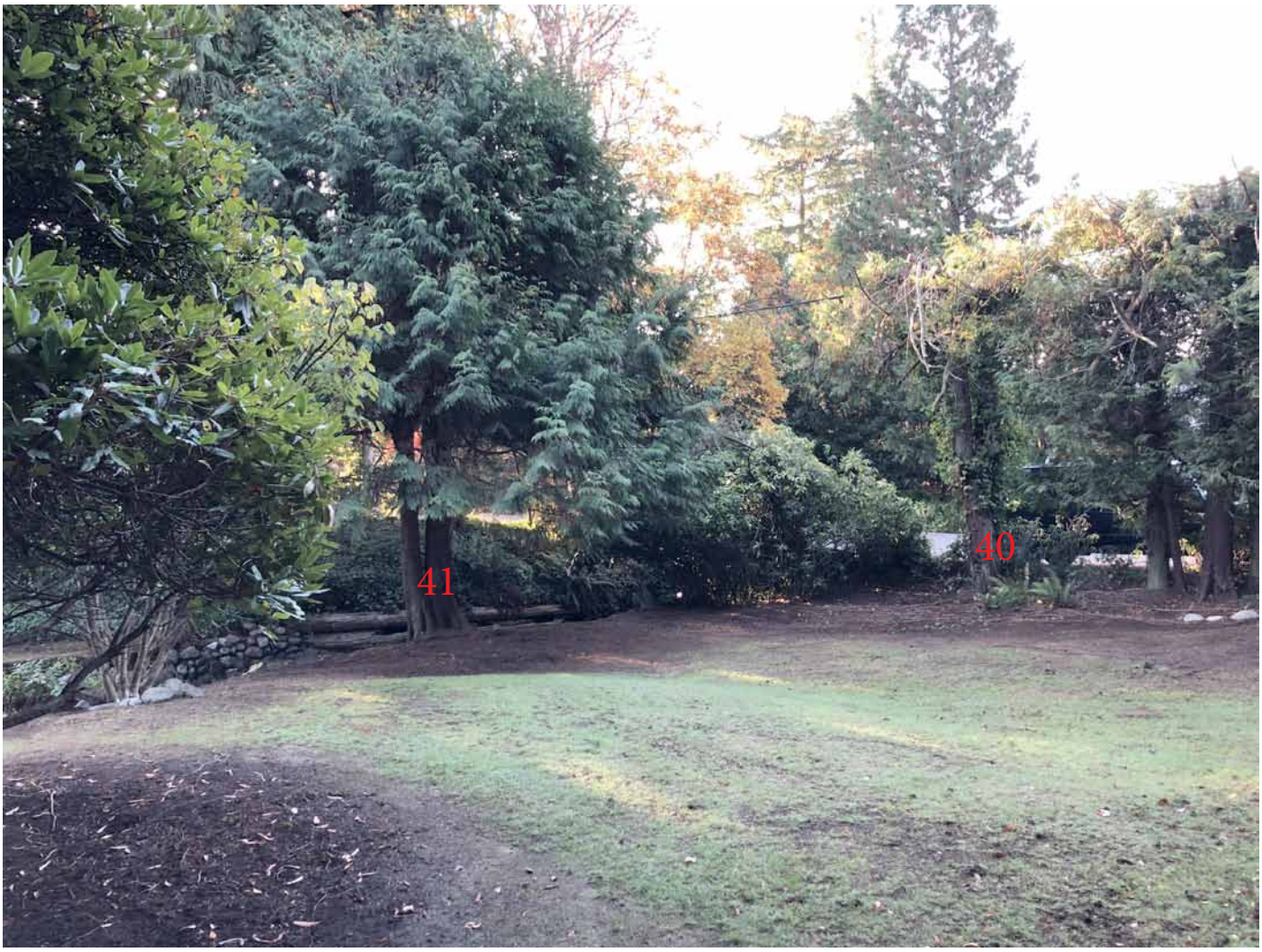
Cedars along western property edge.

Tree #16.

View southwest to Tree #23.

Note extensive decay in base of Tree #23.

View southward to Tree #30-#40. These trees are all topped in the foreground beneath utility lines.



View southeast to Tree #41. Topped trees to the right.


View east to Tree #41.


Base of Tree #41 along top-of-bank.

Canopy of Tree #41.

Abrupt edge formed at utility line clearance corridor along Bellevue Ave R.O.W.

View northwest along front of property including topped cedars beneath overhead utility.

LIMITATIONS:

1. Talus Consulting makes no guarantee, representation or warranty (express or implied) with regard to: this report; the findings, conclusions and recommendations contained herein; or the work referred to herein.

2. Talus Consulting conducts all levels of service in adherence to the standards of the International Society of Arboriculture (ISA). That said, to state with 100% accuracy the exact health status and the inherent risk associated with every tree is impossible. Trees are dynamic organisms, not defined by physical stasis, but constantly changing from the actions of time, weather, gravity and countless abiotic and biotic forces. To add to the challenge, the absolute health of a tree can't be determined through visual inspection alone, while more complex tools of investigation also have their inherent limitations and will never reveal the full story of a tree's physical condition or life history. Even the most healthy trees may break apart spontaneously, while trees appearing stressed and on the verge of failure may remain intact presenting no hazard.

3. Arborist Reports prepared by Talus Consulting prepare a snapshot of the site tree(s) at a moment in time and describe their physical characteristics and site conditions affecting the trees. Arborist reports are visual inspections and do not examine each tree in the level of detail that may be required to determine with increased accuracy if a tree presents an increased risk of failure - this is the role of a Tree Risk Assessment. Tree Risk Assessments, which examine trees in much greater detail and postulate a likelihood of failure, may be prepared by Talus Consulting. It is entirely the responsibility of the client to pursue a Tree Risk Assessment, whether it is recommended in an Arborist Report or not. If Talus Consulting do not recommend a tree for a Tree Risk Assessment, it is no guarantee that the tree will not fail and cause harm. It is also the client's sole responsibility to remove any trees and/or portions of trees that present a risk to society whether or not Talus Consulting have identified the risk.

4. Except as expressly stated in this report, the findings, conclusions and recommendations set out in this report are valid for the exact time period during which the assessment leading to all findings, conclusions and recommendations was conducted. Talus expressly excludes any duty to provide any such modification if generally accepted assessment techniques and prevailing professional standards and best practices change.

5. It is intended for the sole and exclusive use by the Client for the purpose(s) set out in this report. Any use of, reliance on or decisions made based on this report by any person other than the Client, or by the Client for any purpose other than the purpose(s) set out in this report, is the sole responsibility of, and at the sole risk of, such other person or the Client, as the case may be. Talus accepts no liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties or other harm (including without limitation financial or consequential effects on transactions or property values, and economic loss) that may be suffered or incurred by any person as a result of the use of or reliance on this report or the work referred to herein. The copying, distribution or publication of this report (except for the internal use of the Client) without the express written permission of Talus (which consent may

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4. The Client acknowledges that it is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree, or groups of trees, in all given circumstances. Inevitably, a standing tree will always pose some risk. Most trees have the potential for failure and this risk can only be eliminated if the risk is removed (e.g. a tree or branch).

5. Nothing in this report is intended to constitute or provide a legal opinion, and Talus expressly disclaims any responsibility for matters legal in nature (including, without limitation, matters relating to title and ownership of real or personal property and matters relating to cultural and heritage values). Talus makes no guarantee, representation or warranty (express or implied) as to the requirements of or the compliance of applicable laws, rules, regulations, or policies established by federal, provincial, local government or First Nations bodies (collectively, "Government Bodies") or as to the availability of licenses, permits or authorizations of any Government Body. Revisions to any regulatory standards (including by-laws, policies, guidelines an any similar directions of a Government Bodies in effect from time to time) referred to in this report may be expected over time. As a result, modifications to the findings, conclusions and recommendations in this report may be necessary. Talus expressly excludes any duty to provide any such modification if any such regulatory standard is revised.

6. Talus shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.

7. In preparing this report, Talus has relied in good faith on information provided by certain persons, Government Bodies, government registries and agents and representatives of each of the foregoing, and Talus assumes that such information is true, correct and accurate in all material respects. Talus accepts no responsibility for any deficiency, misinterpretations or fraudulent acts of or information provided by such persons, bodies, registries, agents and representatives.

8. Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.

9. Loss or alteration of any part of this report invalidates the entire report.