



## Capital Tree Service Inc.

Arborist Report

633 Belton Ave,

Victoria BC V9A 2Z5

May 17, 2021

Prepared for:

1267767 BC LTD

Prepared by:

Capital Tree Service Inc.

**Capital Tree Service Inc.**

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Liability and Professional E and O, HSM Insurance - \$5 Million

**Summary/Scope of Work**

Capital Tree Service Inc. (CTS) was contacted by Ryan Jabs on behalf 1267767 BC LTD (Client) (Client), a local design and building firm regarding the demolition single family home and construction of a new multifamily development at 633 Belton Avenue (the Site) in City of Victoria. The Client indicated he required an Arborist Report and Tree Protection Plan (TPP) to move forward with the permit application.

The Client has requested that CTS provide a Basic Visual Tree Assessment (BVTA) and TPP for the Site. CTS agreed to the complete the assessment and provide findings in an Arborist Report Form including a TPP.

Under the current proposal one (1) protected tree on the lot and four (4) trees on the boulevard or private property will be retained and protected. Two (2) protected trees are proposed for removal. A tree inventory is included as **Appendix 'A'**. Photographs and a Site Plan are included as **Appendix 'B'** of this report.

**Methodology**

The Site was entered on October 1, 2021, by CTS for the purpose of conducting tree assessments and collecting inventory. Keegan Durovich, a consulting arborist and representative of CTS, provided the BVTA for the site. The weather that day was 11°C, mostly cloudy, 10km/h N.

The Site was assessed from grade. No form of diagnostic tools or invasive techniques were used during the assessment. Tree heights were measured using Forestry Pro II Laser Rangefinder,

crowns were inspected using Ricoh Pentax 10x binoculars and diameters were measured using a Richter Diameter Tape. Diameter at Breast Height (DBH) was measured approximately 1.4m above grade. Measurements and observations were recorded with the intent to provide a static representation of the area. A tree inventory is included as **Appendix 'A'** of this report. Photographs and a Site Plan are included as **Appendix 'B'** of this report.

During the assessment, a (1) hedgerow and a total of seven (7) trees were observed – six (6) of which are protected under the current City of Victoria Protection Bylaw. Trees referenced in **Appendix 'A'** have been tagged, except for trees not on the site property. Tags are located approximately 1.5-2m above grade on tree stems and were visible at the time of assessment. Trees not tagged are labelled No Tag (NT) trees one (1) – four (4).

Protected Root Zone calculations are based on the ISA recommended one foot for each one inch of trunk diameter (0.3m for each 2.5 cm). Matheny and Clark's 'Trees and Development' was used to assess relative tolerance to Development Impacts.

## **Observations/Discussion**

During the assessment, a well-established lot and dwelling in a fully developed urban neighborhood was observed. The Site was observed to be partially treed with a variety of coniferous and deciduous trees present. The Site appears to receive plenty of direct sun.

One (1) tree, Pear #24, and one non-protected hedge will be removed during the demolition phase of the project to allow access to the site. Impact to retained trees will be **'Low'** during demolition.

One (1) protected trees is proposed for removal due to construction impacts. Tree #25, a Yellow cedar, is proposed as the proposed development will require significantly more than 35% of the trees rooting area to be removed.

One (1) protected tree in the Northern corner of the property, three (3) protected private trees, and one (1) boulevard tree are all outside the zone of impact and will be retained and protected. The client has requested access to the backyard (the Northwest side of the property) for storage and staging. This entire area is within the PRZs of Trees #26 and NT2-NT4. If compaction reduction (2 layers of ¾" plywood, woodchips maintained at a depth of at least 20cm, matting, or existing decking) is used in the PRZs, impact from storage and construction will have a **'Low'** impact on the retained trees.

The client has plans to plant numerous small trees around the proposed construction upon completion. Some rock removal may be required to ensure there is enough soil volume for each tree, as specified within the City of Victoria Tree Bylaw.

## Tree Dynamics

A tree inventory is included as **Appendix 'A'** of this report.

### **Observed Tree Impacts**

- Two (2) Bylaw protected trees are proposed for removal.
- One (1) non-protected hedge is proposed for removal.
- Replacement trees will be required to be planted at **1:1** ratio for each protected tree removed.
- Four (4) Bylaw protected trees will be retained and protected
- Construction impact to the retained trees will be '**Low**'.
- This site will require three (3) bylaw protected trees upon completion of the proposed project.
- Assessment of the site may expose further tree issues or conditions. If this occurs the project arborist will contact City staff for further recommendations.

### Common and Latin Names

Red maple – *Acer rubrum*

Himalayan cedar – *Cedrus deodara*

Yellow cedar – *Chameacyparis nootkatensis*

Sitka Spruce – *Picea sitchensis*

Chinese arborvitae – *Platycladus orientalis*

Cherry - *Prunus* spp.

Pear- *Pyrus* ssp.

Western redcedar – *Thuja plicata*

### **Tree Condition Ratings Summary**

#### **Health Condition:**

- Poor - significant signs of visible stress and/or decline that threaten the long-term survival of the specimen.
- Fair - signs of stress
- Good - no visible signs of significant stress and/or only minor aesthetic issues

**Structural Condition:**

- Poor - Structural defects that have been in place for a long period of time to the point that mitigation measures are limited.
- Fair - Structural concerns that are possible to mitigate through pruning
- Good - No visible or only minor structural flaws that require no to little pruning

**Species Relative Tolerance to Construction Impacts<sup>1</sup>:**

Red maple – *Acer rubrum* – “Response probably associated with geographic location. Tolerant of root pruning and saturated soils.”

Himalayan cedar – Good – “Tolerant of Crown and Root Pruning. Intolerant of Excessive Soil Moisture; leads to *Armillaria* and *Phytophthora*.”

Yellow cedar – Good – “Relatively windfirm. Intolerant of changes in water table/soil moisture.”

Spruce – Generally Moderate - Good – “Often Windthrows” “Intermediate Tolerance to root loss.” “Intermediate tolerance to saturated soils.”

Cherry – Generally Poor - Moderate – “Intolerant of mechanical injury (poor compartmentalization)” “Intermediate tolerance to root loss. Intolerant of saturated soils. Select young, vigorous individuals for preservation”.

Pear – Moderate – “Intolerant of root pruning”

Western redcedar – Poor - Moderate – “Response is very site dependent, probably related to moisture. Intolerant of fill.”

**Tree Protection Plan**

Utilize Tree Protection Fencing (TPF) to restrict access to Tree Protection Zones. Provide signage on fencing which states: Tree Protection Area – No Admittance. Signage must be in a visible location attached to the fence. Signage must be attached to the outside of each Tree Protection Fencing area.

**Contact CTS to mark locations for the Tree Protection Fencing. All Tree Protection Fencing must be installed in the locations indicated by CTS. CTS must provide inspection and verification of the fencing detail for District approval.**

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<sup>1</sup> Matheny and Clark, *Trees and Development*.

**Each Tree Protection Zone (TPZ) must be vacated of all construction materials and/or equipment. At no time may the fencing be removed or modified unless the Project Arborist is contacted, and approval given. In such cases the Project Arborist must assist fence removal and assess combined impacts which are required for construction completion. Joel Creese 250-217-8370 – Three business days’ notice required.**

### **Landing/Storage Area**

All construction materials will be stored in areas identified as ‘Landing/Storage’ in site plans. These locations are indicated on the Site Plan.

### **Access**

A single point of access shall be utilized. This shall be in the location marked ‘Access’ on the Site Plan. Contractors and workers shall be made aware of the Tree Protection Zones and Measures in place. **Tree Protection Zones and areas of the Site not under construction or within the Zone of Impact will be strictly off limits.** It is the responsibility of the Client to schedule a pre-job meeting with the Project Arborist to discuss Tree Protection Plans, Zones, and requirements.

**\*Three business days’ notice required. CTS, Project Arborist. 250-217-8370\***

### **Root Assessment and Observation**

The Project Arborist must be on site for observation and assessment when working within the Protected Root Zone of any Protected Trees. This shall include trees:

- #26
- #NT2
- #NT3
- #NT4

### **Tree Pruning**

Tree pruning required for access and egress, tree health and safety shall be performed by an International Society of Arboriculture (ISA) Certified Arborist without the use of climbing spurs. All tree pruning shall be performed in accordance with ANSI A-300 Standards for Tree Care Operations. No pruning is currently expected to be required.

### **Blasting**

The use of blasting for removal of rock may cause serious damage or death to nearby trees if not managed appropriately. CTS recommends the use of low nitrogen and low velocity explosives. Furthermore, we recommend the use of explosives to strategically fracture the rock before using an excavator to breakup (using a hoe ram) and remove the rock. It is critical that heavy matting is used to dampen shockwaves and ¾” plywood is used to protect (armour)

retained trees wherever possible. A removal plan for the rock will be developed with the blasting contractor and the Project Arborist. It is recommended that this plan is created prior to the blasting contractor providing a cost estimate.

### **Tree Protection Plan Summary**

- i. Provide a detailed sign specifying that tree protection measures are in place and will be followed during the project. Fines will be posted for malicious acts and can be placed on individuals who disregard the tree protection plan and its guidelines. Signs will be placed at each entrance of the project detailing what is expected when working in potentially high impact tree protection zones.
- ii. Provide tree protection fencing for all trees identified with protection requirement in this report. This fencing shall be four (4ft) feet in height and made of orange plastic. If required, header and footer boards will be used to secure the protective fencing.
- iii. Tree protection and root protection signs will be placed on the fencing. No entry will be allowed, unless specified by the Project Arborist and in their presence while on site.
- iv. Restrict vehicle traffic to designated access routes and travel lanes to avoid soil compaction and vegetation disturbances.
- v. Make all necessary precautions to prevent the storage of material, equipment, stockpiling of aggregate or excavated soils within tree protection areas. No dumping of fuels, oils or washing of concrete fluids will be allowed in tree protection zones.
- vi. Provide an onsite arborist when a risk of root damage, root cutting, or limb removal is required within the tree protection zone.
- vii. Avoid alterations to existing hydrological patterns to minimize vegetation impacts to the site.
- viii. The use of a Project Arborist is required to provide layout of tree protection zones. The Project Arborist(s) will provide pre-construction information to all parties involved with the project. The Project Arborist must be notified 72hrs prior to construction activities in sensitive areas. The Project Arborist should be used to provide root and branch pruning when diameters are greater than 6cm.
- ix. At no time will tree protection zones be removed from the project unless approved by the Project Arborist

### **Excavation Process Plan**

1. Provide and schedule Project Arborist to assess site prior to construction.
2. Inventory and identify trees and hazards which could complicate excavation process.
3. Utilize hand tools and cutting equipment when large tree roots are anticipated.
4. Provide small, rubberized track excavation equipment which will reduce soil compaction.
5. Excavator operator must be well informed about dig site and goal to complete project.
6. Use shallow excavation sweeps across the site to establish a depth which roots can be easily identified. (3cm to 5cm in depth of soil for each sweep across the soil face)
7. Roots greater than 6cm in diameter shall be preserved and inspected by the Project Arborist. The project arborist will determine if roots should be pruned or cut.
8. All roots greater than 6cm in diameter should be identified and documented for project records.
9. Photos are highly recommended for documentation purposes.

Assessment of the site may expose further tree issues or conditions. If this occurs the project arborist will contact City Staff for further recommendations.

### **Role of the Project Arborist**

As well as creating the Tree Preservation Plan, the Project Arborist must be on site to supervise work within or immediately adjacent to the tree protection areas identified on the attached tree plan. **This will include sidewalk, driveway and any improvements proposed for the municipal boulevard.**

The Project Arborist will be present to supervise landscaping operations and activity within the tree protection areas.

At completion of the project, the Project Arborist will confirm that any tree protection or remediation related deficiencies have been addressed by the owner and building contractor. Once all deficiencies (if any) have been remedied, the Project Arborist shall prepare a letter to the City of Victoria confirming completion of the project.

**The following is a summary of key roles of the Project Arborist.**

- Participation in a site meeting prior to the commencement of works adjacent to Tree Protection Zones to discuss the preservation plan and tree protection measures in place. **It is the responsibility of the Client to schedule a pre-work site meeting. \*72 hrs Notice Required. CTS 250-217-8370\***
- The meeting will review the Tree Protection Plan, Tree Protection Zones and the specific measures required to protect the trees during the site preparation, construction, and landscape phases of construction.
- The Project Arborist will inspect the Tree Protection Fencing and any other tree protection measures prior to a tree permit being issued by the City and prior to work commencing on site.
- The Project Arborist will be on site during the following work within or immediately adjacent to the Tree Protection Areas as indicated on the attached Site Plan:
  - ❖ demolition
  - ❖ grading
  - ❖ excavation
  - ❖ rock removal or blasting
  - ❖ site inspections to insure adherence to Tree Protection Measures

*Although this site has been assessed trees in the landscape are dynamic and changes could occur. This report is a static representation of the site during our assessment.*



**Keegan Durovich 05/17/2022**

**Capital Tree Service Inc.**

**ISA Certified Arborist and TRAQ PN-9272A**

**B.A.Sc.**

**Capital Tree Service Inc. (CTS)**

**CONDITIONS OF ASSESSMENT AGREEMENT**

This Conditions of Assessment Agreement is made pursuant to and as a provision of CTS, providing tree assessment services as agreed to between the parties, the terms and substance of which are incorporated in and made a part of this Agreement (collectively the "Services").

Trees are living organisms that are subject to stress and conditions and which inherently impose some degree or level of risk. Unless a tree is removed, the risk cannot be eliminated entirely. Tree conditions may also change over time even if there is no external evidence or manifestation. In that CTS provides the Services at a point in time utilizing applicable standard industry practices, any conclusions and recommendations provided are relevant only to the facts and conditions at the time the Services are performed. Given that CTS cannot predict or otherwise determine subsequent developments, CTS will not be liable for any such developments, acts, or conditions that occur including, but not limited to, decay, deterioration, or damage from any cause, insect infestation, acts of god or nature or otherwise. Unless otherwise stated in writing, assessments are performed visually from the ground on the above-ground portions of the tree(s). However, the outward appearance of trees may conceal defects. Therefore, to the extent permitted by law, CTS does not make and expressly disclaims any warranties or representations of any kind, express or implied, with respect to completeness or accuracy of the information contained in the reports or findings resulting from the Services beyond that expressly contracted for by CTS in writing, including, but not limited to, performing diagnosis or identifying hazards or conditions not within the scope of the Services or not readily discoverable using the methods applied pursuant to applicable standard industry practices. Further, CTS' liability for any claim, damage or loss caused by or related to the Services shall be limited to the work expressly contracted for.

In performing the Services, CTS may have reviewed publicly available or other third- party records or conducted interviews and has assumed the genuineness of such documents and statements. CTS disclaims any liability for errors, omissions, or inaccuracies resulting from or contained in any information obtained from any third- party or publicly available source.

Except as agreed to between the parties prior to the Services being performed, the reports and recommendations resulting from the Services may not be used by any other party or for any other purpose. The undersigned also agrees, to the extent permitted by law, to protect, indemnify, defend and hold CTS harmless from and against any and all claims, demands, actions, rights and causes of action of every kind and nature, including actions for contribution or indemnity, that may hereafter at any time be asserted against CTS or another party, including, but not limited to, bodily injury or death or property damage arising in any manner from or in any way related to any disclaimers or limitations in this Agreement.

By accepting or using the Services, the customer will be deemed to have agreed to the terms of this Agreement, even if it is not signed.

Acknowledged by:

Name of Customer: Ryan Jabs of Lapis Homes, 633 Belton Ave, Victoria, BC

Authorized Signature:  \_\_\_\_\_

Date: 2022-05-17

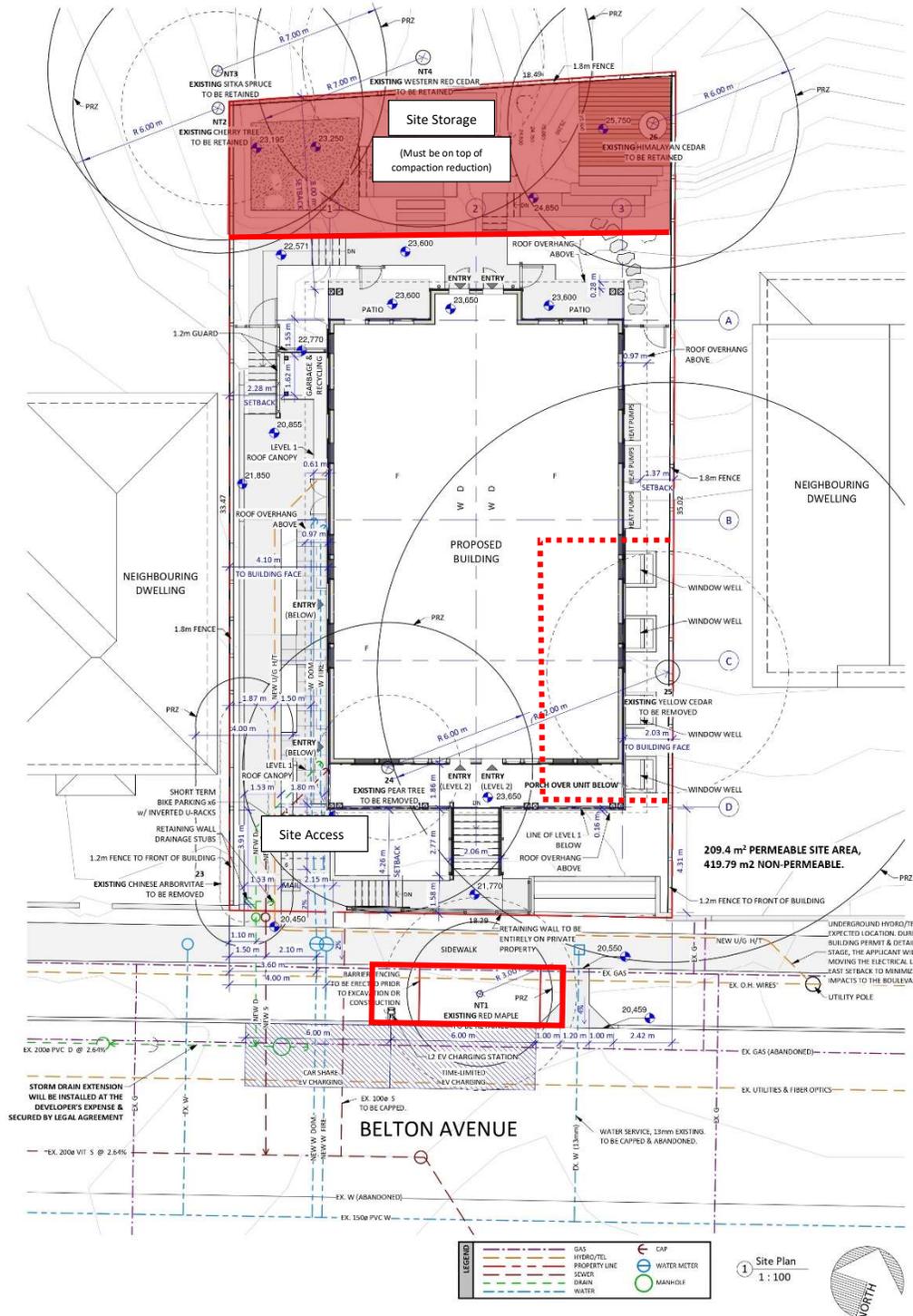
### Appendix 'A' Tree Inventory

**Table 1. Tree Inventory for 633 Belton Ave.** Diameter at breast height (DBH) is measured in centimeters. Protected root zones (PRZ) are calculated using a 0.12 multiplier and represent the protected radius area around the tree in meters. Canopy spread is the diameter of the dripline measured in meters.

Capital Tree Service Inc.										
Appendix A - Tree Inventory/Hazard Ratings Summary										
Location: 633 Belton Ave, Victoria, BC V9A 2Z5										
Conditions: Mostly Cloudy, 11°C, N 10 km/h										
Date: October 1, 2021										
Tag #	Species	DBH (cm)	PRZ (m)	Height (m)	Health/Structure	Canopy Spread (m) (r)	Bylaw Protected	Action	Comments/Recommendations	
NT1	Red maple	26	3	9	F-P	4	No	Retain	Heavily Utility Pruned. Seams and included bark at unions. Epicormic growth. Viable rooting area minimized by hardscapes. <b>Retain and Protect</b>	
23	Chinese arbutus	13	2	5	F-P	1	No	Remove	Hedge-row. Multiple stems splitting between grade and 0.5m above grade. Seams and included bark at unions. Poor CODIT. Rooting area minimized by retaining wall.	
24	Pear	51	6	4	F-P	3	Yes	Remove	Overly mature pear. Heavily pruned for fruiting potential. Moss on branches and one side of trunk. One branch supported. Cavity on basal stem. 3 time stem 1 meter above grade. Small deadwood.	
25	Yellow cedar	100	12	13	F/P	5	Yes	Remove	23 time stem between grade and 1.4m above grade. Sweeping J shaped stems. Seams and included bark at many unions. Previously topped. Stems and branches growing into each other. Leaves showing good colour.	
NT2	Cherry	Est 50	6	10	F-P	4	Yes	Retain	Private Tree. Previously Topped. Some poor pruning cuts. Narrow angles of attachment. Included bark in unions. Fungal ooze. Poor CODIT. Many large watersprouts. <b>Retain and Protect</b>	
NT3	Sitka spruce	Est 55	7	20	F/F	7	Yes	Retain	Private Tree. Vigorous growth. Fence obscuring view of basal stem. Healthy Tree. <b>Retain and Protect</b>	
NT4	Western red cedar	Est 60	7	20	F/F	5	Yes	Retain	Private Tree. Drought stressed. Fence obscuring view of basal stem. <b>Retain and Protect</b>	
26	Himalayan cedar	50	6	8.6	F-P	6	Yes	Retain	Growing through deck. Large J shaped branches. Branches pruned at property line on 2 sides. Healthy CODIT. <b>Retain and Protect</b>	



Appendix 'B' Photos and Site Plan



**Figure 1. Site Plan.** Red lines indicate Tree Protection Fencing. Solid red lines indicate fencing that will be up for the duration of the project, while dotted red lines indicate tree protection fencing for the demolition phase of the project. Site storage will be within the PRZ of several trees and therefore must be on top of compaction reduction. If a section of the storage area is not used, it must be protected by Tree Protection Fencing. Tree #24 will be removed for demolition access.



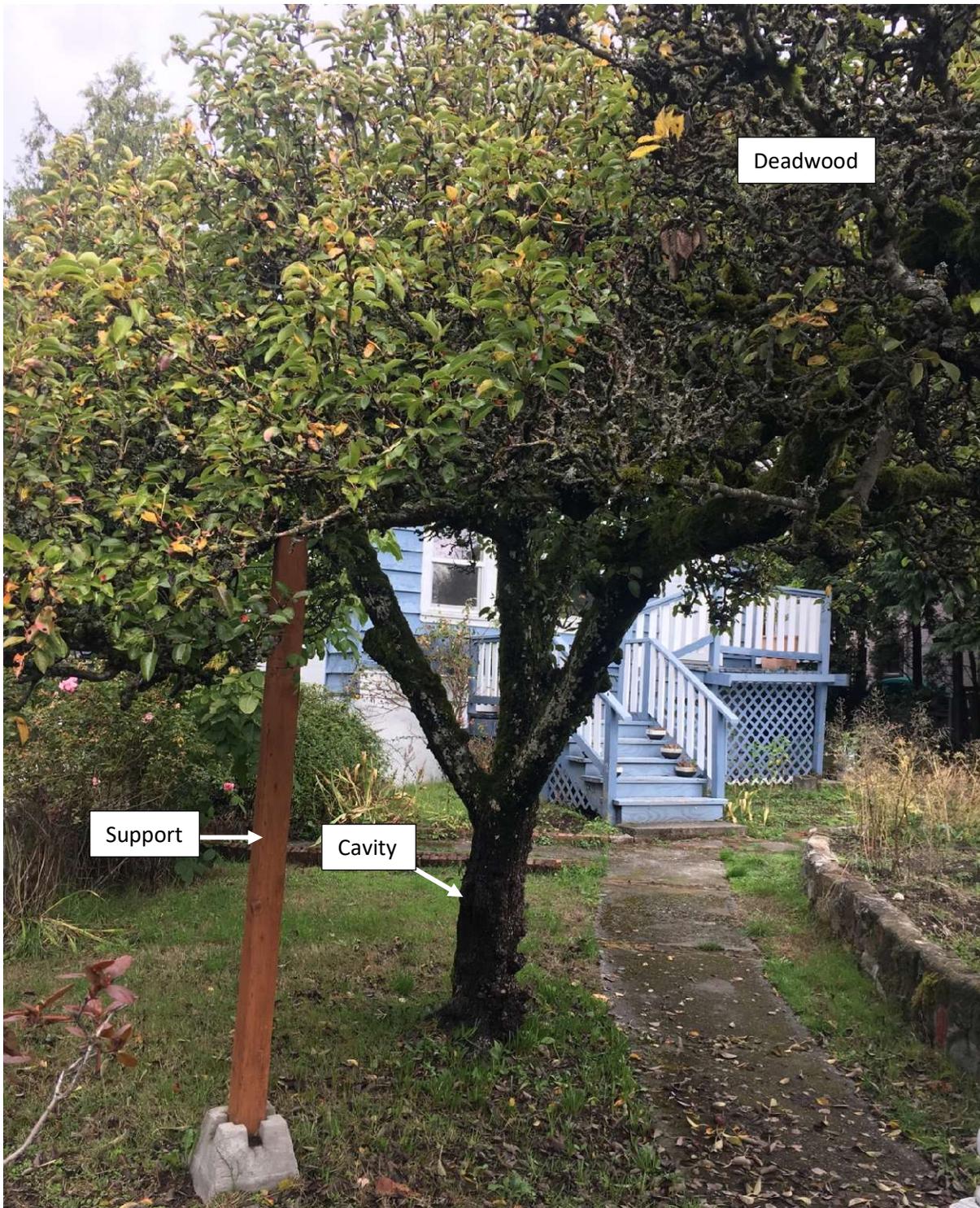
**Figure 2. 633 Belton Ave property frontage.**



**Figure 3. Hedgerow and Site Access.**



**Figure 4. Yellow Cypress (Tree #25).**



**Figure 5. Pear Tree.** Pear tree in front yard. Cavity on lower stem. Large branch supported. Moss growing on branches and stem.



Figure 6. Private Trees on Neighbouring Properties.



**Figure 7. Himalayan cedar in Northeast corner of lot.** Himalayan cedar growing through a deck in the Northeast corner of the lot. Pruned at two property lines.