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1899 COCHRANE STREET

SAANICH, BC

CONSTRUCTION IMPACT ASSESSMENT

&

TREE MANGEMENT PLAN

PREPARED FOR: Seba Construction
204-2590 Cadboro Bay Road
Victoria, BC
V8R 5J2

PREPARED BY: Talmack Urban Forestry Consultants Ltd.
Craig Charlton – Consulting Arborist
ISA Certified # PN-9812A
Tree Risk Assessment Qualification

DATE OF ISSUANCE: March 18, 2025

CONTENTS

TABLES

APPENDICES

Appendix A Tree Management Plan (T1)

Appendix B Hard Surface Over Root Detail

Appendix C Photographs

Appendix D Exploratory Excavation Photographs

REVISIONS

REVISION	DESCRIPTION	DATE (YYYY-MM-DD)	ISSUED BY
R0	Original TPP report	2024-02-26	CC + TT
R1	Revision based on new plans & City comments	2024-03-08	CC + TT
R2	Revision based on new plans & City comments	2024-06-14	CC + TT
R3	Revision based on new plans, exploratory excavation & City comments	2025-02-04	CC + TT
R4	Revisions based on new plans	2025-03-18	CC + TT

1. INTRODUCTION

Talmack Urban Forestry Consultants Ltd. was engaged to complete a tree inventory, construction impact assessment and tree management plan for the trees at the following proposed project:

Site:	1899 Cochrane Street
Municipality	District of Saanich
Client Name:	Seba Construction – Mike Jones
Dates of Site Visit(s)	February 7th, February 09th, 2024, January 22 & 24, 2025
Site Conditions:	One residential lot with a pre-existing single family-dwelling
Weather During Site Visit:	Cloudy

The purpose of this report is to address requirements of the District of Saanich arborist report terms of reference and Tree Protection Bylaw No. 9272. The construction impact assessment section of this report (section 8) is based on plans reviewed to date, including site survey by Powell & Associates (dated November 6th, 2023), preliminary site plans (dated March 18th, 2025) prepared by Outline Home Design, landscape plans prepared by Ladr landscape Architects (dated March 18th, 2025) and a draft civil plan (dated March 18th, 2025) prepared by McElhanney. This report reflects our current level of project understanding and may be subject to change as new information becomes available.

2. TREE INVENTORY METHODOLOGY

The size, health, and structural condition of onsite and offsite trees within influencing distance of the proposed construction were documented. For ease of identification in the field, metal numerated tags were attached to the trunk of on-site and municipal trees. Each tree was visually examined on a limited visual assessment basis (level 1), in accordance with Tree Risk Assessment Qualification (TRAQ) methods (Dunster et al. 2017) and ISA Best Management Practices.

3. EXECUTIVE SUMMARY

A total of seven (7) trees were documented for this proposed project. Two (2) trees are located onsite, of which both are bylaw protected. Four (4) trees are located on municipal property and one (1) tree is located where it is shared with the municipality.

Two (2) on-site bylaw protected trees #2254 & 2255 are selected for removal based on the proposed plans (see ***section 8.2.1***)

Two (2) municipal protected trees #2250 & 2251 are selected for removal based on the proposed plans (see ***section 8.1.1***)

Two (2) municipal protected trees #2252 & 2253 are located where retention may be possible given the mitigations and recommendations outlined in this report are followed. These trees have been given the retention status of retain* (see ***section 8.1.1***)

One (1) tree #2249 is located where it is shared with the municipality. This tree may be possible for retention given the mitigation measures and recommendations outlined in this report are followed. This tree has been given the retention status of retain* (see ***section 8.3.1***)

The remainder of the trees within the property are not protected by size or species under the current tree protection bylaw. These trees are on the survey but were not documented within our tree inventory and are proposed to be removed.

Based on the District of Saanich tree bylaw No. 9272, four (4) replacement trees are required to be planted for the removal of two (2) on-site bylaw protected trees (2254, & 2255) under section 19h). The District of Saanich is to determine the compensation required for the municipal tree removals and for any of the trees listed as Retain*, if it is determined that they are not possible to retain.

4. TREE INVENTORY DEFINITIONS

Tag: Tree identification number on a metal tag attached to tree with nail or wire, generally at eye level. Trees on municipal or neighboring properties are not tagged.

NT: No tag due to inaccessibility or ownership by municipality or neighbour.

DBH: Diameter at breast height – diameter of trunk, measured in centimetres at 1.4m above ground level. For trees on a slope, it is taken at the average point between the high and low side of the slope.

* Measured over ivy

~ Approximate due to inaccessibility or on neighbouring property

Dripline: Indicates the radius of the crown spread measured in metres to the dripline of the longest limbs.

Relative Tolerance Rating: Relative tolerance of the tree species to construction related impacts such as root pruning, crown pruning, soil compaction, hydrology changes, grade changes, and other soil disturbance. This rating does not consider individual tree characteristics, such as health and vigor. Three ratings are assigned based on our knowledge and experience with the tree species: Poor (P), Moderate (M) or Good (G).

Critical Root Zone: A calculated radial measurement in metres from the trunk of the tree. It is the optimal size of tree protection zone and is calculated by multiplying the DBH of the tree by 10, 12 or 15 depending on the tree's Relative Tolerance Rating. This methodology is based on the methodology used by Nelda Matheny and James R. Clark in their book "Trees and Development: A Technical Guide to Preservation of Trees During Land Development."

- 13 - 15 x DBH = Poor Tolerance of Construction
- 09 - 12 x DBH = Moderate
- 08 - 10 x DBH = Good

To calculate the critical root zone, the DBH of multiple stems is considered the sum of 100% of the diameter of the three largest stems. It should be noted that these measures are solely mathematical calculations that do not consider factors such as restricted root growth, limited soil volumes, age, crown spread, health, or structure (such as a lean).

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 an extended 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 very little pruning.

Suitability ratings are described as follows:

Rating: Suitable.

- A tree with no visible or minor health or structural defects, is tolerant to changes to the growing environment and is a possible candidate for retention provided that the critical root zone can be adequately protected.

Rating: Conditional.

- A tree with good health but is a species with a poor tolerance to changes to its growing environment or has a structural defect(s) that would require that certain measures be implemented, in order to consider it suitable for retention (i.e., retain with other codominant tree(s), structural pruning, mulching, supplementary watering, etc.)

Rating: Unsuitable.

- A tree with poor health, a major structural defect (that cannot be mitigated using ANSI A300 standards), or a species with a poor tolerance to construction impacts, and unlikely to survive long term (in the context of the proposed land use changes).

Retention Status:

- Remove (X) – Not possible to retain given proposed construction plans.
- Retain – It is possible to retain this tree in the long-term given the proposed plans and information available. This is assuming our recommended mitigation measures are followed.
- Retain * - See report for more information regarding potential impacts.
- TBD - Retention status “to be determined” at the time of construction.

1899 Cochrane Street Tree Inventory

Table 1. Tree Inventory

Tag #	Surveyed ? (Yes/No)	Location (On, Off, Shared, City)	Bylaw protected ? (Yes/No)	Name		DBH (cm)	crown radius (m)	Critical root zone radius (m)	Condition		Relative tolerance	General field observations/remarks	Tree retention/location comments	Retention status
				Common	Botanical				Health	Structural				
2249	**Yes**	**Shared**	**Yes**	Ponderosa pine	Pinus ponderosa	120.00	8	12	Good	Good	Good		See section 8.3.1	Retain*
2250	**Yes**	**City**	**Yes**	Western Red cedar	Thuja plicata	46.00	6	6.9	Fair	Poor	Poor	Dieback and decline in canopy. Leaders topped for hydro clearance	See section 8.1.1	Remove
2251	**Yes**	**City**	Yes	English hawthorn	Crataegus monogyna	2x20,3x15,3x10	7	4.92	Good	Fair	Moderate	Canopy asymmetry. Side of canopy pruned for hydro line clearance	See section 8.1.1	Remove
2252	**Yes**	**City**	**Yes**	Douglas-fir	Pseudotsuga menziesii	49.00	4	7.35	Good	Fair	Poor	Side pruned for hydro clearance	See section 8.1.1	Retain*
2253	**Yes**	**City**	Yes	Norway maple	Acer platanoides	59.00	7	5.9	Good	Fair	Good	Side pruned for hydro clearance	See section 8.1.1	Retain*
2254	**Yes**	**On**	**Yes**	Western Red cedar	Thuja plicata	43.00	5	6.45	Good	Fair	Poor	Topped historically	See section 8.2.1	Remove
2255	Yes	On	Yes	Western Red cedar	Thuja plicata	64.00	6	9.6	Good	Poor	Poor	Topped historically. Weakness and decay at union	See section 8.2.1	Remove

5. Site Information & Project Understanding

The subject site consists of a single-family lot with an existing dwelling. The tree inventory consists of native and non-native tree species throughout the property. To our understanding the proposed plans include

- Demolishing the existing house
- Constructing townhouses
- Upgrading utility services
- Creating outdoor patios for each proposed townhouse

6. Field Observations

The Site is located in an urban residential area, where the tree resource consists of primarily native tree species with a few non-native ornamentals throughout the site.

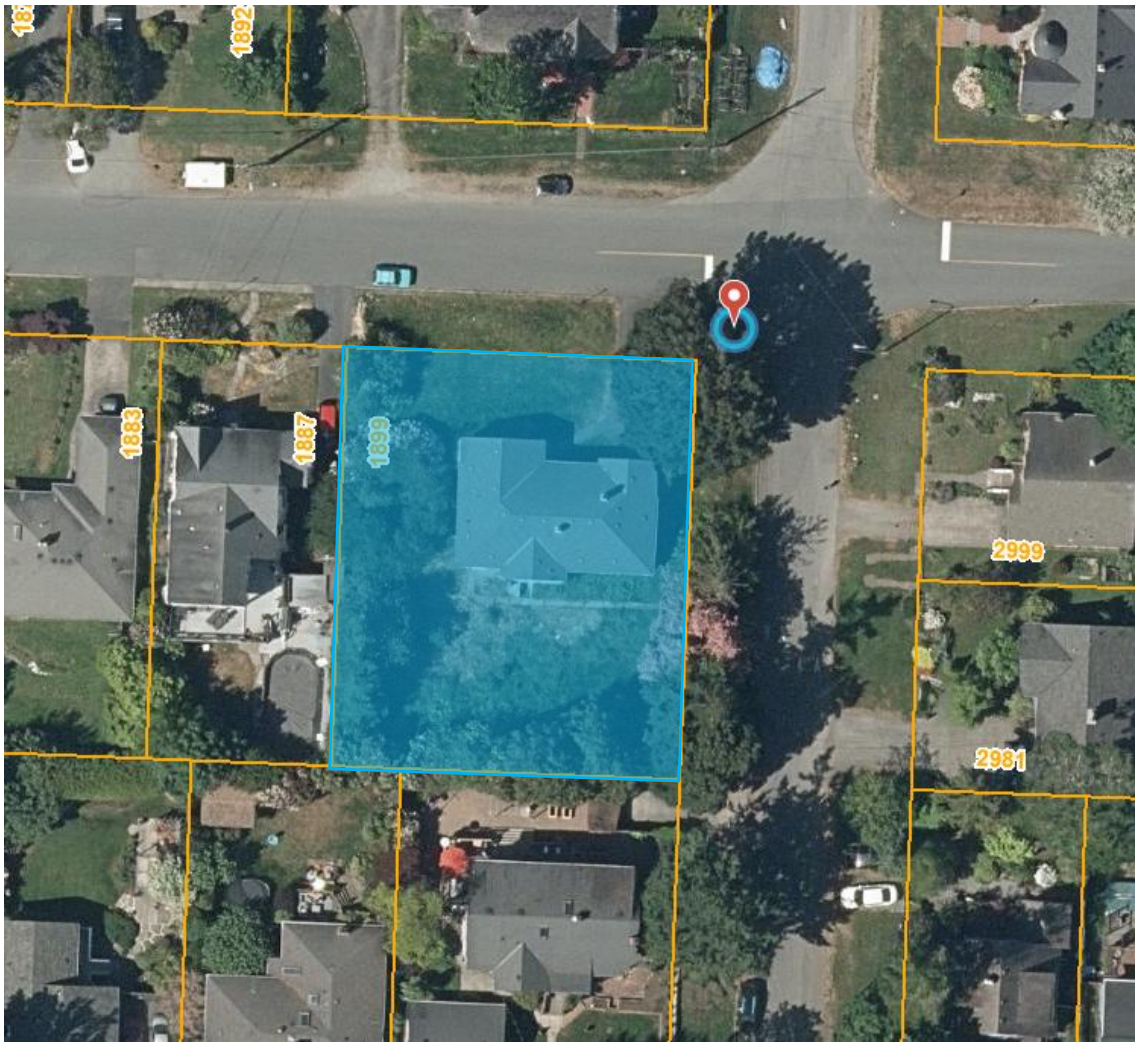


Figure 1: *Site context air photo. The approximate boundary of the subject site is outlined and shaded in blue.*

7. TREE RISK ASSESSMENT

During our January 24th, 2025, site visit and in conjunction with the tree inventory, on-site trees were assessed for risk on a limited visual basis (level 1), in the context of the existing land uses. The time frame used for the purpose of our assessment is one year (from the date of this report). Unless otherwise noted herein, we did not conduct a detailed (level 2) or advanced (level 3) risk assessment, such as resistograph testing, increment core sampling, aerial examinations, or subsurface root/root collar examinations.

Existing Land Uses

We did not observe any trees that were deemed to be moderate, high, or extreme risk (in the context of the existing land uses, which would require hazard abatement to eliminate present and/or future risks) within a 1-year timeframe.

Targets considered during this TRAQ assessment include occupants of the existing residences on-site and neighbour's (constant use), occupants of vehicles travelling on Cochrane Street, and Dean Avenue (frequent use), pedestrians travelling along the roadside of Cochrane Street and Dean Avenue (frequent use), occupants of rear, and side yards on-site and neighbor's (occasional use), hydro lines (constant use).

Matrix 1. Likelihood matrix.

Likelihood of Failure	Likelihood of Impact			
	Very low	Low	Medium	High
Imminent	Unlikely	Somewhat likely	Likely	Very likely
Probable	Unlikely	Unlikely	Somewhat likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

Matrix 2. Risk rating matrix.

Likelihood of Failure & Impact	Consequences of Failure			
	Negligible	Minor	Significant	Severe
Very likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

Figure 2: Likelihood and Risk Rating Matrices used to evaluate tree risk in the ISA Tree Risk Assessment Manual, Second Edition (Dunster et al. 2017).

8. CONSTRUCTION IMPACT ASSESSMENT

8.1. RETENTION AND REMOVAL OF MUNICIPAL TREES

The following municipal trees (indicated by ID#) are located where they may be possible for retention, however their retention is dictated by the ability to accurately follow the mitigation measures and recommendations outlined in this report. The following trees are listed as Retain* (shown on the tree management plan, ***Appendix A, T1***):

Two (2) municipal trees listed as Retain*:

- 2252, 2253

The following municipal trees (indicated by tag #) are located where they are likely to be severely impacted by construction and are proposed for removal (shown on the tree management plan, ***Appendix A, T1***):

Remove (2) municipal trees:

- 2250, 2251

8.1.1. Mitigation Measures and Additional Information for Municipal Trees

Tree ID's: 2252, 2253 - Are located on the municipal boulevard along Dean Avenue. These trees are likely to be significantly impacted by the proposed storm and sewer utility lines, and the sidewalk/boulevard municipal frontage upgrades.

The sanitary service line is ~2.4m south of tree 2253 with the storm service line being approximately 2m south of the sanitary line. We anticipate roots to be encountered during the excavation required for these service connections. During our-site on-site review in this area with Saanich's parks department on January 22nd, 2025, it was noticed that the existing service lines were ~1-1.5m deep. It is to our understanding that these new services will have to be tied into the existing mains at this depth. Because of this depth required, we believe it may be possible to preserve critical rooting structures if encountered during excavation. These services are to be excavated using a hydro-vac and under arborist supervision. See **Appendix A, T1**.

Clearance pruning is likely to be necessary to accommodate working room for the above-mentioned service utility lines. All pruning is to be done by an ISA certified arborist and done to the industry's best current management practices.

It is our understanding that the construction of a separated-sidewalk will be required along Dean Avenue. Careful alignment of the sidewalk footprint and constructing the sidewalk at a grade that is elevated above the root structures will be required to accomplish the retention of the trees along this frontage.

There is an existing fence along the eastern property line at 1899 Cochrane Street. This fencing is to remain in place and be maintained throughout the demolition and construction phase of this project.

Tree barrier fencing is to be installed according to **Appendix A, T1**.

Tree ID's: **2250, 2251** – Are located on the municipal boulevard along Dean Avenue. These trees are located where they are likely to be impacted by the proposed construction. These trees are selected for removal based on a combination of impacts and pre-existing condition.

General Notes:

The Retention status of trees listed as Retain* is primarily influenced by the ability to follow the mitigation measures outlined in this report, along with the feasibility of using alternative construction methods to preserve critical rooting structures.

8.2. RETENTION AND REMOVAL OF ON-SITE TREES

The following on-site bylaw protected trees (indicated by tag #) are located where they are likely to be severely impacted by construction and are proposed for removal (shown on the tree management plan, ***Appendix A, T1***):

Remove two (2) on-site bylaw protected trees:

- 2254, 2255

8.2.2. Mitigation Measures and Additional Information for On-site Trees

Tree ID's: 2254, 2255 – Are located within the building footprint and are proposed for removal under District of Saanich's tree bylaw 9272, section 19 h).

8.3. RETENTION AND REMOVAL OF SHARED TREES

The following shared bylaw-protected tree (indicated by tag #2249) is located where it may be possible for retention, however its retention is dictated by the ability to accurately follow the mitigation measures and recommendations outlined in this report. The following tree is listed as Retain* (shown on the tree management plan, ***Appendix A, T1***):

One (1) bylaw-protected shared tree listed as Retain*:

- 2249

8.3.1. Mitigation Measures and Additional Information for Shared Trees

Tree ID: 2249 – Is a large Ponderosa pine tree located at the corner of the Cochrane Street and Dean Avenue. This tree is likely to be impacted by the foundation, patio area and building clearance required for unit 1, along with the municipal frontage upgrades (sidewalk, curb and gutter) at the corner of Cochrane Street and Dean Avenue.

On the day of January 22nd, and January 24th, 2025, an exploratory excavation was conducted within the CRZ of this pine tree to better assess the impacts from the proposed construction. During this exploratory excavation, we supervised and monitored hydro-vac excavation to expose roots along the proposed edge of the sidewalk along the Cochrane Street and Dean Avenue frontages. Excavation in this area was ~6.5m east and north from the root collar of this tree and to a depth of ~18 inches by ~8-12 inches wide.

The following roots were encountered:

- High density of roots 1cm and under
- 3x ~5cm in diameter were exposed and preserved
- 6x ~2cm in diameter were exposed and preserved
- 4x ~3.5cm in diameter were exposed and preserved
- 1x ~16-20cm in diameter were exposed and preserved
- 1x ~14cm in diameter were exposed and preserved
- 7x ~8-10cm in diameter were exposed and preserved

We also supervised the hydro-vac excavation of a trench across the existing driveway, where the foundation of Unit 1 is proposed. Excavation was approximately 3.5m southeast from the root collar of this tree and was to a depth of 35 inches by ~8-12 inches wide. It is to be noted that this area of exploratory excavation factored in roughly 1m of over-excavation for working room.

The following roots were encountered:

- Moderate density of roots 1cm and under
- 2x 8cm in diameter were exposed and preserved
- 3x 3.5cm in diameter were exposed and preserved
- 6x 2cm in diameter were exposed and preserved
- 3x 4.5-6cm in diameter were exposed and preserved

Sidewalk and curb – Along the proposed sidewalk edge, numerous rooting structures (ranging from ~3-20cm in diameter) were observed to be extending from tree 2249 approximately 6.5 metres east from the base of the tree. Larger rooting structures (1x~16-20cm, 1x~14cm & 3x~8-10cm in diameter) were mainly concentrated in the location of the existing catch basin. In discussions with the municipal parks department, it was decided that if the street grade at this corner of the intersection could be elevated it would permit the sidewalk and possibly the curb to be installed above the root structures in this location. The parks representatives expressed an opinion that if the catch basin could be located further to the south along Dean Avenue that they would be comfortable in pruning any roots encountered at the curb edge if the street grade could not be elevated sufficiently above all of the deeper root structures. Alternatively using an asphalt curb installed on top of the asphalt street surface in this location instead of a concrete curb is likely to eliminate the requirement for pruning any roots. The project arborist is to supervise the excavation required for the sidewalk & curb and gutter locations within the CRZ of this tree. See **Appendix A, T1**.

Building footprint – Smaller rooting structures were encountered during the southeastern exploratory excavation for the proposed building foundation of unit 1 then the ones there were exposed during the curb and gutter excavation. Roots encountered ranged from the size of 2-8cm in diameter. In our opinion pruning the roots in this location is unlikely to have a detrimental impact on the future health and survival of this tree long term. The option of relocating the building foundation 1-2m further west from this tree was discussed, however we believe this is unlikely to change the impacts significantly. Pruning of the tree canopy in this location will be required for adequate clearance from the roof and gutters. It is anticipated that the pruning will require the removal of 1x 25cm scaffold limb, 1x 40cm scaffold limb and 2x ~18-20cm scaffold limbs in order to provide building clearance for unit 1. Pruning to remove the above-mentioned limbs and any additional pruning for sidewalk & the proposed patio clearance is likely to be less that 20% of the live canopy growth. Although it may not be feasible, relocating the building corner 1-2 metres to the south may reduce the requirement to remove the larger 40cm scaffold limb along that would require pruning in the current location. The project arborist is to supervise the excavation for the proposed building foundation of unit 1 within the CRZ of this tree and all pruning is to be done by an ISA certified Arborist and done to the industries best current management practices. See **Appendix A, T1**.

Patio – The proposed patio is less than ~3m from the root collar of this tree. To our understanding the proposed building foundations will be slab on grade. The final floor grade for the unit in this location must be designed so that the proposed patio can be elevated above the existing grade in the location or an alternative construction such as an elevated deck might be required. The project arborist is to supervise and aid in exploring alternative construction methods to limit the excavation within the CRZ of this tree.

Landscaping – Landscape plans reviewed to date indicate a cedar panel fencing around the patio of unit 1. The project arborist is to supervise the fence post locations for this fencing within the critical root zone of tree 2249.

There is also a garden bed proposed just west of tree 2249. We highly suggest reducing the size of this garden bed and limiting the plant materials to ones that require a maximum excavation past 10 cm or less. All excavation for this garden bed should be done by hand and under arborist supervision.

Tree barrier fencing is to be installed according to **Appendix A, T1**.

General Notes:

An existing asphalt driveway currently resides less than 2m west from tree 2249. It is recommended that this driveway remain in place for the duration of the demolition phase and for as long as possible during the construction phase of this project.

Tree 2249 is currently in good health. We anticipate that the root and canopy pruning related to the proposed construction may result in short term indicators of health stress, however based on the trees current condition we anticipate that there will not be a significant long-term impact on its health or stability. As a pro-active measure, we highly recommend mulching as much as the root zone as possible using organic material primarily consisting of pine needles or a high-quality compost. In addition to the mulch, supplemental watering during the hot summer months for the first year or two following construction is recommended, as the removal of the existing catch basin is likely to result in a change of water uptake for this tree.

The Retention status of trees listed as Retain* is primarily influenced by the ability to follow the mitigation measures outlined in this report, along with the feasibility of using alternative construction methods to reduce impacts to an acceptable level in which the tree or trees can be retained.

8.4. TREE IMPACT SUMMARY

Quantity of Existing Trees	# of Trees Retained	# of Trees Removed	Relevant Bylaw Section (if applicable)	Replacement Tree Ratio	Replacement Trees Required
On-site (Bylaw Protected)					
2	0	2	Section 19. h)	2:1	4
Municipal Trees					
4	+2 Retain*	2	DoS to Determine	DoS to Determine	Dos to Determine
Shared with Municipality (Bylaw Protected)					
1	+1 Retain*	0	DoS to Determine	DoS to Determine	DoS to Determine
				Total:	4

Based on the District of Saanich tree bylaw No. 9272, four (4) replacement trees are required to be planted for the removal of two (2) on-site bylaw protected trees (2254, & 2255) under section 19h). The District of Saanich is to determine the compensation required for municipal trees and any of the trees listed as Retain*, if it is determined that they are unsuitable for retention.

9. IMPACT MITIGATION

Tree Protection Barrier: The areas surrounding the trees to be retained should be isolated from the construction activity by erecting protective barrier fencing. Where possible, fencing should be erected at the perimeter of the critical root zone. The barrier fencing to be erected must be a minimum of 4 feet in height, of solid frame construction that is attached to wooden or metal posts. A solid board or rail must run between the posts at the top and the bottom of the fencing. This solid frame can then be covered with flexible snow fencing. The fencing must be erected prior to the start of any construction activity on site (i.e., demolition, excavation, construction), and remain in place through completion of the project. Signs should be posted around the protection zone to declare it off limits to all construction related activity. The project arborist must be consulted before this fencing is removed or moved for any purpose.

Arborist Supervision: All excavation occurring within the critical root zones of protected trees should be completed under supervision by the project arborist. Any severed or severely damaged roots must be pruned back to sound tissue to reduce wound surface area and encourage rapid compartmentalization of the wound. In particular, the following activities should be completed under the direction of the project arborist:

- Any excavation or fill required for the building footprints and municipal curb and sidewalk installation within the critical root zone of trees 2249, 2252 and 2253.

Methods to Avoid Soil Compaction: In areas where construction traffic must encroach into the critical root zones of trees to be retained, efforts must be made to reduce soil compaction where possible by displacing the weight of machinery and foot traffic. This can be achieved by one of the following methods:

- Installing a layer of hog fuel or coarse wood chips at least 20 cm in depth and maintaining it in good condition until construction is complete.
- Placing medium weight geotextile cloth over the area to be used and installing a layer of crushed rock to a depth of 15-20 cm over top.
- Placing two layers of 19mm plywood.
- Placing steel plates.

Mulching: Mulching can be an important proactive step in maintaining the health of trees and mitigating construction related impacts and overall stress. Mulch should be made from a natural material such as wood chips or bark pieces and be 5-8cm deep. No mulch should be touching the trunk of the tree. See “methods to avoid soil compaction” if the area is to have heavy traffic.

Scaffolding: This assessment has not included impacts from potential scaffolding including canopy clearance pruning requirements. If scaffolding is necessary and this will require clearance pruning of retained trees, the project arborist should be consulted. Depending on the extent of pruning required, the project arborist may recommend that alternatives to full scaffolding be considered such as hydraulic lifts, ladders, or platforms. Methods to avoid soil compaction may also be recommended (see “Minimizing Soil Compaction” section)

Landscaping and Irrigation Systems: The planting of new trees and shrubs should not damage the roots of retained trees. The installation of any in-ground irrigation system must consider the critical root zones of the trees to be retained. Prior to installation, we recommend the irrigation technician consult with the project arborist about the most suitable locations for the irrigation lines and how best to mitigate the impacts on the trees to be retained. This may require the project arborist supervise the excavations associated with installing the irrigation system. Excessive frequent irrigation and irrigation which wets the trunks of trees can have a detrimental impact on tree health and can lead to root and trunk decay.

Arborist Role: It is the responsibility of the client or his/her representative to contact the project arborist for the purpose of:

- Locating the barrier fencing
- Reviewing the report with the project foreman or site supervisor
- Locating work zones, where required
- Supervising any excavation within the critical root zones of trees to be retained
- Reviewing and advising of any pruning requirements for machine clearances

Review and site meeting: Once the project receives approval, it is important that the project arborist meet with the principals involved in the project to review the information contained herein. It is also important that the arborist meet with the site foreman or supervisor before any site clearing, tree removal, demolition, or other construction activity occurs and to confirm the locations of the tree protection barrier fencing.

10. DISCLOSURE STATEMENT

This arboricultural field review report was prepared by Talmack Urban Forestry Consultants Ltd. for the exclusive use of the Client and may not be reproduced, used, or relied upon, in whole or in part, by a party other than the Client without the prior written consent of Talmack Urban Forestry Consultants Ltd. Any unauthorized use of this report, or any part hereof, by a third party, or any reliance on or decisions to be made based on it, are at the sole risk of such third parties. Talmack Urban Forestry Consultants Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report, in whole or in part.

Arborists are professionals who examine trees and use their training, knowledge, and experience to recommend techniques and procedures that will improve a tree's health and structure or to mitigate associated risks. Trees are living organisms whose health and structure change and are influenced by age, continued growth, climate, weather conditions, and insect and disease pathogens. Indicators of structural weakness and disease are often hidden within the tree structure or beneath the ground. The arborist's review is limited to a visual examination of tree health and structural condition, without excavation, probing, resistance drilling, increment coring, or aerial examination. There are inherent limitations to this type of investigation, including, without limitation, that some tree conditions will inadvertently go undetected. The arborist's review followed the standard of care expected of arborists undertaking similar work in British Columbia under similar conditions. No warranties, either express or implied, are made as to the services provided and included in this report.

The findings and opinions expressed in this report are based on the conditions that were observed on the noted date of the field review only. The Client recognizes that passage of time, natural occurrences, and direct or indirect human intervention at or near the trees may substantially alter discovered conditions and that Talmack Urban Forestry Consultants Ltd. cannot report on, or accurately predict, events that may change the condition of trees after the described investigation was completed.

It is not possible for an Arborist to identify every flaw or condition that could result in failure, nor can he/she guarantee that the tree will remain healthy and free of risk. The only way to eliminate tree risk entirely is to remove the entire tree. All trees retained should be monitored on a regular basis. Remedial care and mitigation measures recommended are based on the visible and detectable indicators present at the time of the examination and cannot be guaranteed to alleviate all symptoms or to mitigate all risk posed.

Immediately following land clearing, grade changes or severe weather events, all trees retained should be reviewed for any evidence of soil heaving, cracking, lifting or other indicators of root plate instability. If added information is discovered in the future during such events or other activities, Talmack Urban Forestry Consultants Ltd. should be requested to re-evaluate the conclusions of this report and to provide amendments as required prior to any reliance upon the information presented herein.

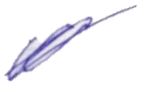
11. In Closing

We trust that this report meets your needs. Should there be any questions regarding the information within this report, please do not hesitate to contact the undersigned.

Yours truly,

Talmack Urban Forestry Consultants Ltd.

Prepared by:



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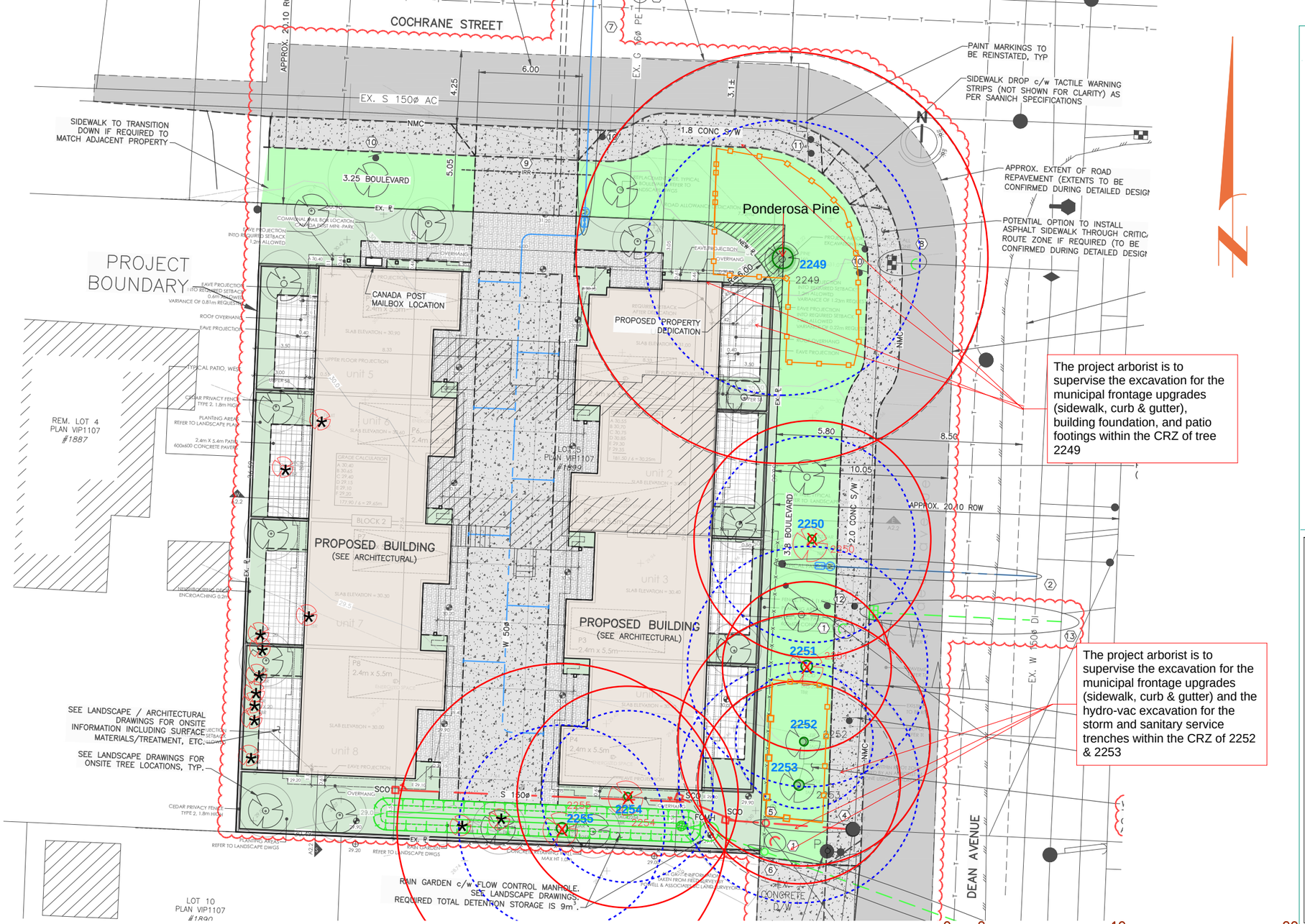
12. References

Dunster, J.A., E.T. Smiley, N. Matheny, and S. Lily. 2017. Tree Risk Assessment Manual, International Society of Arboriculture (ISA).
The District of Saanich Tree Protection Bylaw No. 9272
District of Saanich Maps GIS software

13. Company Information

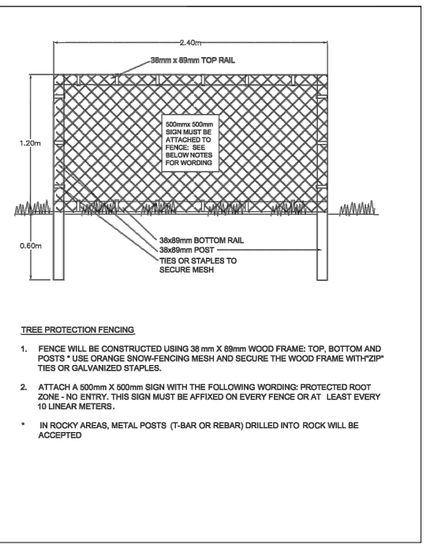
General Liability: Intact Insurance, Policy No. 5V2147122: $5,000,000

APPENDIX A – TREE MANAGEMENT PLAN (T1)



LEGEND

- DRIPLINE OF TREE
- CRITICAL ROOT ZONE
- X — TREE TO BE REMOVED
- TREE
- * — NON-BYLAW PROTECTED TREE TO BE REMOVED
- TREE BARRIER FENCING



TREE PROTECTION FENCING

1. FENCE WILL BE CONSTRUCTED USING 38 mm X 89mm WOOD FRAME: TOP, BOTTOM AND POSTS * USE ORANGE SNOW-FENCING MESH AND SECURE THE WOOD FRAME WITH "ZIP" TIES OR GALVANIZED STAPLES.
2. ATTACH A 500mm X 500mm SIGN WITH THE FOLLOWING WORDING: PROTECTED ROOT ZONE - NO ENTRY. THIS SIGN MUST BE AFFIXED ON EVERY FENCE OR AT LEAST EVERY 10 LINEAR METERS.

* IN ROCKY AREAS, METAL POSTS (T-BAR OR REBAR) DRILLED INTO ROCK WILL BE ACCEPTED

TREE PROTECTION NOTES

Tree protection barrier: The areas, surrounding the trees to be retained, should be isolated from the construction activity by erecting protective barrier fencing. Where possible, the fencing should be erected at the perimeter of the critical root zone. The barrier fencing to be erected must be a minimum of 1200mm in height, of solid frame construction that is attached to wooden or metal posts. A solid board or rail must run between the posts at the top and the bottom of the fencing. This solid frame can then be covered with flexible snow fencing. The fencing must be erected prior to the start of any construction activity on site (i.e. demolition, excavation, construction), and remain in place through completion of the project. Signs should be posted around the protection zone to declare it off limits to all construction related activity. The project arborist must be consulted before this fencing is removed or moved for any purpose.

Arborist supervision: All excavation occurring within the critical root zones of protected trees must be completed under the supervision of the project arborist. Any severed or severely damaged roots must be pruned back to sound tissue to reduce wound surface area and encourage rapid compartmentalization of the wound.

Demolition: The demolition of the existing houses, driveways, and any services that must be removed or abandoned must take the critical root zone of the trees to be retained into account. If any excavation or machine access is required within the critical root zones of trees to be retained, it must be completed under the supervision of the project arborist. If temporarily removed for demolition, barrier fencing must be erected immediately after the supervised demolition.

Methods to avoid soil compation: In areas where construction traffic must encroach into the critical root zones of trees to be retained, efforts must be made to reduce soil compaction where possible by displacing the weight of machinery and foot traffic. This can be achieved by one of the following methods:

- Installing a layer of hog fuel or coarse wood chips at least 20cm in depth and maintaining it in good condition until construction is complete.
- Placing medium weight geotextile cloth over the area to be used and installing a layer of crushed rock to a depth of 15cm over top.
- Placing two layers of 19mm plywood.
- Placing steel plates.

Mulching: Mulching can be an important proactive step in maintaining the health or trees and mitigating construction related impacts and overall stress. Mulch should be made from a natural material such as wood chips or bark pieces and be 5-8cm deep. No mulch should be touching the trunk of the tree. See "methods to avoid soil compaction" if the area is to have heavy traffic.

Pruning: We recommend that any pruning of bylaw-protected trees be performed to ANSI A300 standards and Best Management Practices.

Paved surfaces above tree roots: Where paved areas cannot avoid encroachment within critical root zones of trees to be retained, construction techniques, such as floating permeable paving, may be required. The "paved surfaces above tree roots" detail above offers a compromise to full depth excavation (which could impact the health or structural stability of the tree). The objective is to avoid root loss and to instead raise the paved surface above the existing grade (the amount depending on how close roots are to the surface and the depth of the paving material and base layers). Final grading plans should take this potential change into account. This may also result in soils which are high in organic content being left intact below the paved area. To allow water to drain into the root systems below, we also recommend that the surface be made of a permeable material (instead of conventional asphalt or concrete) such as permeable asphalt, paving stones, or other porous paving materials and designs such as those utilitzed by Grasspave, Gravelpave, Grasscrete and open-grid systems.

Blasting and rock removal:Care must be taken to ensure that the area of blasting does not extend beyond the necessary footprints and into the critical root zones of surrounding trees. The use of small low-concussion charges and multiple small charges designed to pre-shear the rock face will reduce fracturing, ground vibrations and overall impact to the surrounding environment. Only explosives of low phytotoxicity and techniques that minimize tree damage should be used. Provisions must be made to ensure that blasted rock and debris are stored away from the critical root zones of trees.

Scaffolding:This assessment has not included impacts from potential scaffolding including canopy clearance pruning requirements. If scaffolding is necessary and this will require clearance pruning of retained trees, the project arborist should be consulted. Depending on the extent of pruning required, the project arborist may recommend that alternatives to full scaffolding be considered such as hydraulic lifts, ladders or platforms. Methods to avoid soil compaction may also be recommended (see "Minimizing Soil Compaction" section).

Landscaping and irrigation systems: The planting of new trees and shrubs should not damage the roots of retained trees. The installation of any in-ground irrigation system must take into account the critical root zones of the trees to be retained. Prior to installation, we recommend the irrigation technical consult with the project arborist about the most suitable locations for the irrigation lines and how best to mitigate the impacts on the trees to be retained. This may require the project arborist supervise the excavations associated with installing the irrigation system. Excessive frequent irrigation and irrigation which wets the trunks of trees can have a detrimental impact on the tree health and can lead to root and trunk decay.

Arborists role: It is the responsibility of the client or his/her representative to contact the project arborist for the purpose of:

- Locating the barrier fencing.
- Reviewing the report with the project foreman or site supervisor.
- Locating work zones and machine access corridors where required.
- Supervising excavation for any areas within the critical root zones of trees to be retained including any proposed retaining wall footings and review any proposed fill areas near trees to be retained.

TREE MANAGEMENT PLAN

1899 Cochrane Street
Saanich, BC
March 18th, 2025
Prepared for: Seba Construction
Scale: 1:250 @11" X 17"
Drawn By: CC
Reference Drawings: Civil Plans(McElhanney Ltd; March 18th, 2025, Site plan (Outline Home Design; March 18th, 2025)

TALMACK URBAN FORESTRY Consultants Limited
Victoria, BC V8Z 7H6
TEL: 250-479-8733
EMAIL: trees@talmack.ca
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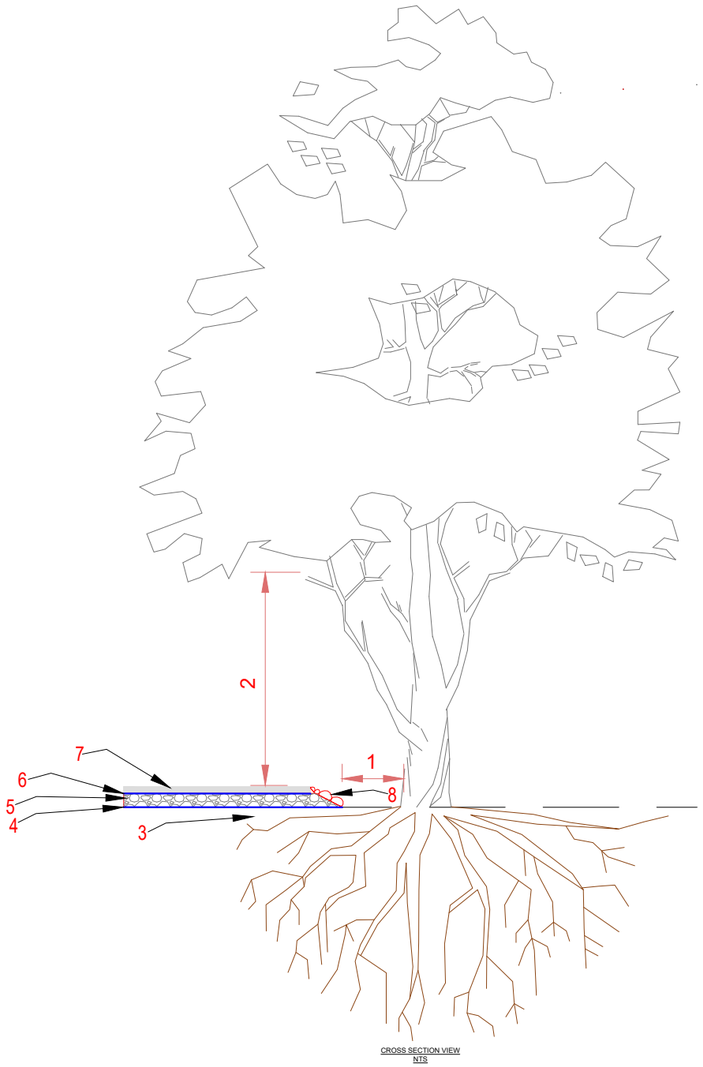
APPENDIX B – HARD SURFACE OVER ROOT DETAIL

HARD SURFACE ABOVE TREE ROOTS DETAIL



CROSS SECTION VIEW
NTS

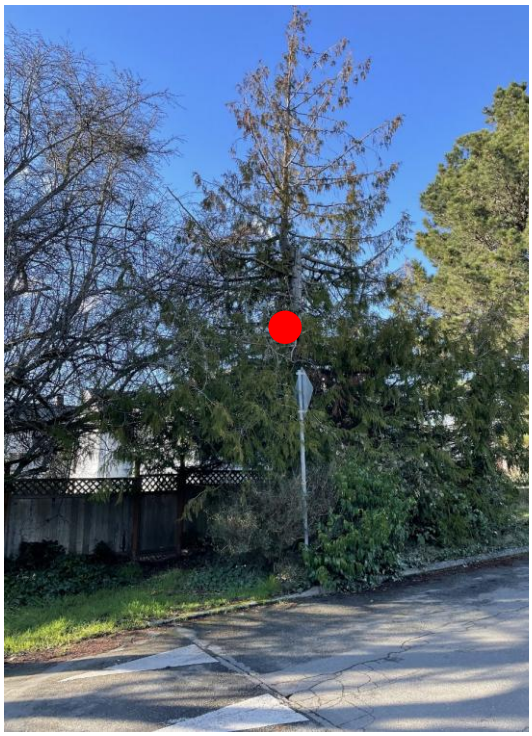
HARD SURFACE ABOVE TREE ROOTS NOTES

1. Maintain as large a setback between the fill encroachment and the root collar of the tree as possible.
2. Review any canopy clearance pruning requirements to accommodate vehicle or pedestrian clearances (Pruning to be performed to ANSI A300 standards).
3. Excavate the new footprint of the driveway or sidewalk under the supervision of the project arborist. Excavation will be limited to the removal of the existing sod layer. Excavation around root structures must be performed by hand, airspade, or hydroexcavation.
4. Install a two-dimensional (such as Combigrid $\frac{30}{30}$) or Three-dimensional geogrid reinforcement.
5. Install a 150mm depth layer of clear crushed gravel (no fines) using 20mm and/or 75mm diameter material or approved equivalent. *Note - the depth may be less than 150mm in some situations (dependant on grading constraints).
6. Install 4 oz non woven geotextile over the clear crushed gravel layer to prevent fine particles of sand from infiltrating this layer.
7. The bedding or base layer and new driveway or sidewalk surface can be installed directly on top of the felted filter fabric.
8. Fill slopes - where possible install loose stacked boulders to reduce the footprint of the fill slopes that encroach within the critical root zone. Fill slope materials must be permeable to air and water. Do not pile fill material directly against the trunk of a tree.

TALMACK
URBAN FORESTRY
Consultants Limited

APPENDIX C – PHOTOGRAPHS

Tree 2249 (red dot). Proposed as Retain*

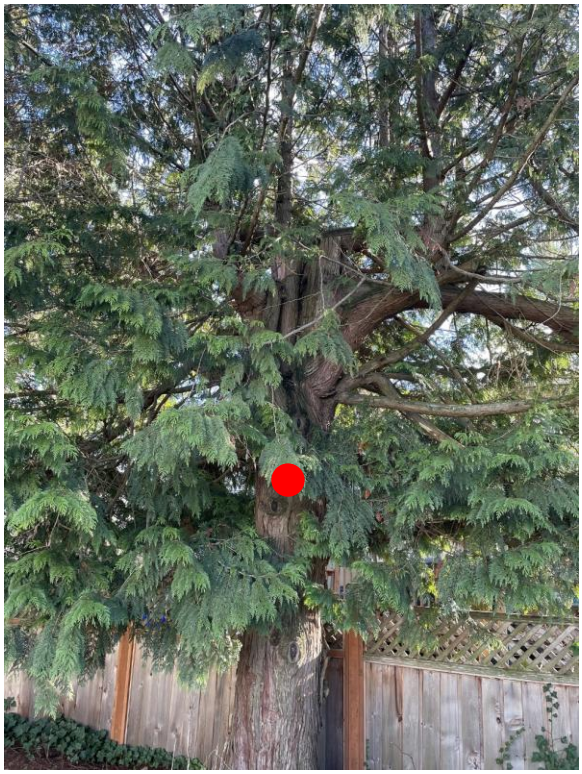


Tree 2250 (red dot). Selected for removal.

Tree 2251 (red dot). Selected for removal.

Trees 2252 (red dot) & 2253 (blue dot). Both proposed as Retain*

Tree 2254 (red dot). Proposed for removal.



Tree 2255 (red dot). Proposed for removal.

APPENDIX D – EXPLORATORY EXCAVATION PHOTOGRAPHS

Photographs 1 & 2: Larger rooting structures (~10-20cm in diameter) were exposed approximately 6.5 east of tree 2249 near the existing catch basin on Dean Avenue (**left photo**). More larger rooting structures encountered ~6m northeast from the root collar of tree 2249 (**right photo**).

Photographs 3 & 4: Area on the southwest side of the tree was marked out for the exploratory excavation (**left photo**). Rooting structures encountered during the southwest hydro-vac excavation (**right photo**).


Photographs 5 & 6: Continuation of rooting structures encountered during southwest exploratory excavation (**left photo**). Anticipated large scaffold limbs (25cm in diameter, orange dot, and 40cm in diameter, blue dot) that will likely require removal to accommodate proposed building unit #1 (**right photo**).

Photograph 7: 25cm scaffold limb (orange dot), 40cm scaffold limb (blue dot), and ~18-20cm limb (red dot), are likely to require removal to accommodate proposed building unit #1.