DAVEY
Resource Group
#200, 8208 SWENSON WAY
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September 20, 2021

RE: Arborist Report for Rositch Hemphill Architects - For property located at 1511 West 47 Ave., & 6151 - 6261 Granville St., Vancouver, BC

Applicant: Rositch Hemphill Architects
C/o: Sandra Bukowski
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Email: sandra@rharchitects.ca

Due to a re-zoning and development proposal, it was requested that a report be compiled discussing trees located at and adjacent to the addresses named above. This site was inspected on April 6, 2017, September 12, 2019, and again on July 22, 2021. Eighty-one trees, nine shrubs, and nine hedges were assessed, and five City boulevard trees have been identified they have been numbered 24, 25 & 29 – 130 for the purpose of this report. Eighty-five photographs and a copy of the survey, site plan and P1 parking plan have been included as part of this report. Servicing details have not yet been provided and will require consideration if they enter into the Critical Root Zone of any retained tree.

An original large scaled copy of the site plan indicating trees marked for removal, and the locations of Tree Protection Zone fencing has *not* been included with this report; this will be provided by the applicant if required.

GENERAL CONSTRUCTION & LANDSCAPING NOTES:

-Any permitted tree removal(s) must be performed by qualified professional to avoid contravention of Work Safe BC regulations.

- No grade changes are to occur within the Critical Root Zones of any retained trees. Any roots exposed from lines of excavation must be covered with burlap and then poly plastic in an effort to prevent desiccation of exposed roots; this root curtain must be removed prior to backfilling. Trees must be adequately watered during the entire construction process.

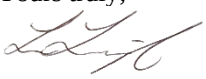
- The removal of existing organics within the Critical Root Zones of retained trees must be performed manually. When installing new plant material within the Critical Root Zones of retained trees, if large roots (1.5" diameter and larger) are encountered, then new plantings and must be shifted to accommodate. No more than 3" of additional soil for new landscaping may be added within any Critical Root Zone.

-Any excavation or work within the Protection Zone of retained trees requires the supervision of a Certified Arborist. This includes, but is not limited to; demolition, the installation or removal of any permeable or impermeable surfaces (concrete, asphalt, pavers, etc.), installation of permanent or temporary services (gas, sewer, storm, sanitary, communications, electrical, irrigation, etc.), during the installation of patios, driveways, or any hardscape, during the installation of footings for fences, walls, decorative walls, retaining walls, decks, and deck footings.

- Construction materials must not to be stored within the Tree Protection Zones (TPZ) of trees to be retained, and TPZ fencing is to remain intact for the entire construction process. Signage must be clearly posted on each side of the barrier indicating 'TREE PROTECTION ZONE – DO NOT ENTER OR MODIFY'. Contact your project Arborist for any TPZ barrier issues.

Limitations: This report is based on a visual assessment, from the ground only. No core or tissue samples were taken; no root crown excavations were performed. This report provides no undertakings regarding the future condition or behaviour of the trees reviewed in it. Tree hazards and conditions do change over time, and the evaluation period for this report is valid for the day on which it was performed only. Recommendations are to serve only as a guideline for the care, retention, and protection of the tree(s), and are made according to commonly accepted arboricultural practises, and do not guarantee the survival and/or safety of the specimen(s). No responsibility is assumed for any legal matters as a result of this report. The consultant shall not be required to give testimony or attend court by any reason of this report unless subsequent contractual arrangements are made, including payment of additional fees for such services. Loss or alteration of any part of this report invalidates the entire report. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without verbal or written consent of the consultant. No part of this report shall be conveyed by anyone to the public by any means without prior written consent of the consultant.

Yours truly,



Laura Leigh – sent electronically
Consulting Arborist
ISA Certified Arborist #PN-7219A
ISA TRAQ Certified Tree Risk Assessor
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TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
24	Cherry (*Prunus sp.*)	99 combined (38+31+30)	7	20.4’	Declining	This tree is in decline. It has three stems commencing at 4ft. The canopy has been mutilated. It has been previously topped at multiple heights and cut back quite hard on all sides to contain; the canopy consists of mostly suckering growth commencing at this point. The topping and pruning sites have not callused over, and decay is present. There is evidence of Tortrix borer, and it has canker. There are multiple surface roots exposed, which have sustained damage due to lawn maintenance equipment. The Critical Root Zone radius is 20.4ft. The footprint of the proposed underground parkade and the final lines of excavation are about 19ft from the southwest side of the stem. **RECOMMENDATIONS:** **REMOVE.** Remove tree since it is in decline and due to poor structure. Its removal will also be necessary when the adjacent property is to be developed.
25	Cypress (*Chamaecyparis sp.*)	79	10	16.3’	Fair	This tree is quite stressed. It has multiple stems commencing at 12ft; slight bark inclusions were observed. The northwest side of the crown has been raised to provide clearance to an adjacent building. The canopy is rather sparse, and it lacks vigor. The foliage is pale and chlorotic. There is also branch and twig dieback throughout the canopy. The Critical Root Zone radius is 16.3ft. The footprint of the proposed underground parkade and the final lines of excavation are 3.5ft from the south side of the stem. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade. The lines of excavation required will result in extensive root loss and soil disturbance causing instability. Also, this species of tree has a sensitive root system; they have a low tolerance to root disturbance or changes in grade and hydrology. The disturbance within the Critical Root Zone during construction will likely cause this tree to decline over time.
29	Apple (*Malus sp.*)	46 combined (21+13+12)	7	9.5’	Declining	A thorough inspection of this tree was impeded due to an existing wood fence. It appears this tree is in decline. It has two stems commencing at 3ft. It has been previously topped at multiple heights and cut back on all sides to contain. There is branch dieback throughout the canopy. It also has canker. The Critical Root Zone radius is 9.5ft. The footprint of the proposed underground parkade and the final lines of excavation are 10ft from the south side of the stem. **RECOMMENDATIONS:** **REMOVE.** Remove tree since it is in decline. Its removal will also be necessary when the adjacent property is to be developed.
30	Hawthorn *(Crataegus sp.)*	31 est. combined (12+11+8)	7	6.4’	Fair	This tree has three stems commencing at the base. There is Ivy growing along the stems, which impeded a through inspection. It has been previously topped at multiple heights and the canopy has been

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						cut back on all sides to contain, and to provide clearance to the existing service drop on the north and south sides of the stem. There is an existing wood fence adjacent to the south side of the stem. The Critical Root Zone radius is 6.4ft. The footprint of the proposed underground parkade and the final lines of excavation are 1.5ft from the south side of the stem. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed underground parkade. The lines of excavation required will result in extensive root loss and soil disturbance causing instability and decline.
31	Boxwood (*Buxus sp.*)	-	1.5	3’	Fair	This hedge may belong to the City; although, it does not appear to be something that would have been planted by them. It has been somewhat maintained. Sections of the hedge have sustained minor snow damage. This hedge is within a dedication. There is an existing walkway through a portion of hedge. The south end of this hedge is within the proposed main access to the proposed building. **RECOMMENDATIONS:** **REMOVE.** Obtain consent from the City and remove hedge to enable the proposed main access and unimpeded site and construction access through the front of the properties.
32	Cedar (*Thuja plicata*)	49 combined (18+18+13)	10	10.1’	Good	These trees were not included on the site plan; therefore, their approximate location has been identified. They form a hedgerow; although, they have not been maintained as a formal hedge. The canopies have never been raised and are in contact with the ground. Trees #37 and #38 are not of a size that requires them to be protected by the City Tree By-Law. Tree #32 has four stems commencing at the base, Trees #33 & #39 have three stems commencing at the base, and Trees #34, #35, & #38 have two stems commencing at the base. Tree #38 is undersize. The north side of the lower canopy of Tree #32 has been trimmed back to provide clearance to an existing concrete walkway. The Critical Root Zone radius of each tree has been indicated in the CRZ radius column. The footprint of the proposed underground parkade is about 14ft from the west side of the stem of each tree, not including the excavation required, which is to extend immediately adjacent to the east property line. **RECOMMENDATIONS:** **REMOVE.** Removal of these trees is necessary to enable the proposed parkade. The excavation required will result in extensive Critical Root loss and soil disturbance causing instability and unimpeded site and construction access. Also, this species of tree has a sensitive root system; they have a low tolerance to root disturbance or changes in grade and hydrology. The disturbance within the Critical Root Zone during construction will likely cause these trees to decline over time.
33	Cedar	37 comb. (13+13+12)	10	7.6’	Good	
34	Cedar	36 est. (19+17)	10	7.4’	Good	
35	Cedar	32 comb. (19+13)	10	6.6’	Good	
36	Cedar	40 comb. (15+15+10)	10	8.3’	Good	
37	Cedar	20	10	4.1’	Good	
38	Cedar	29 comb. (18+11)	10	6’	Good	
39	Cedar	47 est. (22+18+7)	10	9.7’	Good	

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
40	Pine (*Pinus sp.*)	22	10	4.5’	Fair	This tree is not of a size that requires it to be protected by the City Interim Tree By – Law. It is stressed. The crown is somewhat sparse, and it lacks vigor. The needles are pale and have begun to turn brown. There is minor branch and twig dieback and inner needle shed throughout the canopy. The Critical Root Zone radius is 4.5ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree, it is not protected. Also, removal is necessary to enable the proposed underground parkade.
41	Cedar *(Thuja plicata)*	33	12	6.8’	Good	This tree appears typical of the species. There is an existing walkway 3ft from the south side, and an existing wood fence adjacent to the north side of the stem. The Critical Root Zone radius is 6.8ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
42	Hazelnut *(Corylus sp.)*	97 comb. (35+32+30)	11	20’	Declining	This tree is in severe decline. It has multiple over-extended stems commencing at the base; several of these stems are dead. There is extensive decay commencing at the union, which extends into several stems. The crown has been significantly modified. It has been previously topped at multiple heights, and cut back hard on all sides to contain, and to provide clearance to the single-phase Hydro line, reduction lines, and communication cables; the canopy consists of only a few suckering shoots commencing at this point. Most of the pruning sites have not callused over, and decay and sap rot fungus are present. There is large deadwood and branch dieback throughout the canopy. There is also evidence of boring insect activity. The existing garage is within the Critical Root Zone on the north side, and the existing driveway is within the Critical Root Zone on the northwest side of the stem. There is also an existing wood fence adjacent to the northwest side of the stem; a section of the fence has been cut to allow a stem to pass through. The Critical Root Zone radius is 20ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree since it is in decline and due to poor structure. Its removal is also necessary to enable the proposed parkade.
43	Laurel (*Prunus laurocerasus*)	-	4	3’	Good	This hedge may belong to the City; although, it does not appear to be something that would have been planted by them. It has not been maintained and is overgrown. There is an existing driveway adjacent to the north side, and an existing wood fence adjacent to the east side of the stems. The footprint of the proposed underground parkade is 7ft from the east side of the stems, not including the excavation required, which is to extend immediately adjacent to the west property line.

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						RECOMMENDATIONS: **REMOVE.** Obtain consent from the City and remove hedge to enable the lines of excavation and the proposed parkade and unimpeded site and construction access.
44	Apple (*Malus sp.*)	47 combined (28+13+9)	5	9.7’	Fair	A thorough inspection of this tree was impeded due to an existing fence. It has four stems commencing at 3.5ft. It has been previously topped at multiple heights and cut back on all sides to contain. The canopy is asymmetrical and is heavily weighted to the north due to the spreading canopy of the adjacent trees. The Critical Root Zone radius is 9.7ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
45	Laurel (*Prunus laurocerasus*)	-	10	6’	Fair	This is a hedge that has not been maintained. It has multiple stems commencing at the base, which are tall and spindly. It has been somewhat suppressed due to the spreading canopy of the adjacent tree. The canopy of this tree has been slightly raised and cut back on all sides to contain and to provide clearance to the existing buildings, which are on the north and south sides of the stems. There is minor twig dieback throughout the canopy. There is also sap rot fungus present on several stems. There is an existing building and lightwell within the Critical Root Zone on the north side, and there is an existing wood fence adjacent to the south side of the stems. This hedge is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this hedge is necessary to enable the proposed parkade.
46	Cedar (*Thuja occidentalis*)	25 comb. (9+8+8)	5	5’	Fair	This tree is not of a size that requires it to be protected by the City Interim Tree By – Law. It has a significant phototropic lean to the east. It has been previously topped at 7ft. The canopy is asymmetrical and is heavily weighted to the east; it lacks canopy spread on the northwest side of the stem. The corner of an existing building is 1ft from the west side of the stem. The Critical Root Zone radius is 5ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree, it is not protected. Also, removal is necessary to enable the proposed parkade.
47	Maple *(Acer sp.)*	104 comb. (42+32+30)	12	21.7’	Good	This tree has two stems commencing at the base. The canopy is somewhat asymmetrical and is heavily weighted to the west; it lacks canopy spread on the east side due to the proximity of the adjacent tree. The corner of an existing building is within the Critical Root Zone on the southeast side, an existing concrete patio is within the Critical Root Zone on the south side, and there is an existing wood fence adjacent to the north side of the stem. The Critical

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						Root Zone radius is 21.7ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
48	Cedar *(Thuja plicata)*	31 comb. (17+14)	12	6.4’	Fair	This tree has two stems commencing at 3ft; the top has failed. It is tall and spindly. It has been suppressed due to the proximity of the adjacent tree. There is an existing concrete patio adjacent to the south side, and an existing wood fence adjacent to the north side of the stem. The Critical Root Zone radius is 6.4ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree since it has already partially failed, and to enable the proposed parkade.
49	Birch *(Betula sp.)*	29	10	6’	Declining	This tree is not of a size that requires it to be protected by the City Interim Tree By – Law. It is in decline. It has a moderate lean to the southeast. The crown has been significantly modified. It has been previously topped at multiple heights and cut back hard on all sides to contain; the pruning wounds have not callused over, and decay is present. The canopy consists of mostly suckering growth commencing at the pruning sites, which is poorly attached. There is extensive large deadwood and branch dieback at the top of the crown and throughout the canopy, which has begun to fail. There is an existing driveway immediately adjacent to the south side, and an existing wood fence adjacent to the north side of the stem. The Critical Root Zone radius is 6ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree, it is not protected and is in decline. Also, removal is necessary to enable the proposed parkade.
50 51 52	Cedar (*Thuja plicata*) Cedar Cedar	56 46 55	16 16 16	11.6’ 9.5’ 11.3’	Good/fair Good Good	These trees form part of a group. The south side of the lower canopies have been trimmed back to provide clearance to the existing driveway, which is 5ft from the stems. Tree #50 has two stems commencing at 4ft; these stems are fused and somewhat intertwined to 20ft. The Critical Root Zone radius for each tree has been indicated in the CRZ radius column. These trees are within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of these trees is necessary to enable the proposed parkade. These trees also form part of a group, which is proposed for removal.
53	Holly (*Ilex sp.*)	31 comb. (17+14)	4	6.4’	Fair	This tree has two stems commencing at 1ft. It is tall and spindly. It has been suppressed due to the spreading canopies of the adjacent trees. This tree has a significant phototropic lean to the north. There is an existing driveway 6ft from the south side, and an existing wood fence adjacent to the north side of the stem. The Critical Root Zone radius is 6.4ft. This

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
54	Birch (*Betula sp.*)	37	16	7.6’	Declining	This tree is in decline. It forms part of a group. It has a significant corrected lean to the southeast. It has been suppressed and lacks canopy spread on all sides of the stem due to the proximity of the adjacent trees. The upper stem of this tree is dead and there is branch and twig dieback and throughout the remaining canopy, which has begun to fail. There is an existing driveway 5ft from the south side, and an existing wood fence adjacent to the north side of the stem. The Critical Root Zone radius is 7.6ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree since it is in decline and has already partially failed and to enable the proposed parkade. It also forms part of a group, which is proposed for removal.
55	Cedar (*Thuja plicata*)	49	16	10.1’	Good	This tree forms part of a group. The upper canopy is somewhat sparse. The south side of the lower crown has been trimmed back to provide clearance to an existing driveway, which is 5ft from the stem. The Critical Root Zone radius is 10.1ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade. It also forms part of a group, which is proposed for removal.
56	Cedar (*Thuja plicata*)	52	18	10.7’	Declining	This tree is in decline. It has two stems commencing at 25ft. The west side of the canopy has been cut back to provide clearance to the guy wire, reduction lines and communication cables. The crown is quite sparse, and it lacks vigor. There is branch and twig dieback throughout the canopy. There is an existing driveway 2ft from the north side of the stem. The Critical Root Zone radius is 10.7ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree since it is in decline and to enable the proposed parkade.
57	Cedar (*Thuja plicata*)	33	16	6.8’	Fair	These trees form a group. The canopies have been partially topped at 20ft, and again 25ft, and cut back hard on the west side to provide clearance to the guy wire, reduction lines, communication cables, and laneway; there are multiple leaders commencing at the topping sites. There is an existing shed within the Critical Root Zone on the southeast side of Tree #58, and within the Critical Root Zone on the east side of Tree #59. There is also an existing wood fence adjacent to the west side of the stem of Trees #57 - #59. The Critical Root Zone radius of each tree has

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
58 59	Hemlock *(Tsuga heterophylla)* Cedar	46 52	16 16	9.5’ 10.7’	Fair Fair	been indicated in the CRZ radius column. The footprint of the proposed underground parkade is 5ft – 6ft from the east side of the stems, not including the excavation required, which will extend immediately adjacent to the west property line; these trees are within the lines of excavation. **RECOMMENDATIONS:** **REMOVE.** Removal of these trees is necessary to enable the lines of excavation and the proposed parkade. These trees also form part of a group, which is proposed for removal.
60	Dogwood *(Cornus sp.)*	35 comb. (20+15)	7	7.2’	Fair	This tree has two stems commencing at 1ft. It has a moderate lean to the southeast. It has been previously topped at multiple heights and cut back on all sides to contain. The canopy has also been raised to provide clearance to the existing service drop. A pole has been installed between the stems. The Critical Root Zone radius is 7.2ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
61	Maple *(Acer sp.)*	58	16	11.9’	Good	This tree appears typical of the species. There is an existing wood fence adjacent to the south side of the stem. The Critical Root Zone radius is 11.9ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
62	Mountain Ash *(Sorbus sp.)*	39 comb. (13+12+11)	8	8’	Declining	A through inspection of this tree was impeded due to an existing wood fence, which is adjacent to the north side of the stem. It is in decline. It has three stems commencing at the base. It has a moderate phototropic lean to the southwest. The canopy is asymmetrical and is heavily weighted to the southwest; it lacks canopy spread on the east side due to the proximity of the adjacent tree. There is also branch dieback throughout the crown of this tree. The Critical Root Zone radius is 8ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree since it is in decline and to enable the proposed parkade.
63	Cypress *(Chamaecyparis sp.)*	80 comb. (48+32)	16	16.5’	Fair	This tree appears stressed. It has two stems commencing at the base; these stems are fused to 3ft. It has a corrected lean to the north. The foliage is pale, and the crown is somewhat sparse, and it lacks vigor. There is also branch and twig dieback and inner foliage shed throughout the canopy. There is an existing concrete patio 1.5ft from the north side, and an existing wood fence adjacent to the south side of the stem. The Critical Root Zone radius is 16.5ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:**

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						REMOVE. Removal of this tree is necessary to enable the proposed parkade.
64	Cypress *(Chamaecyparis sp.)*	42 comb. (17+16+9)	8	8.7’	Fair	This tree is somewhat tall and spindly. It has four stems commencing at 3.5ft; multiple small diameter stems have been removed on all sides. The south stem has partially failed; it has been topped. This tree has a significant corrected lean to the north. There is an existing concrete patio 1ft from the north side of the stem. The Critical Root Zone radius is 8.7ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
65	Hawthorn *(Crataegus sp.)*	31 comb. (16+9+6)	6	6.4’	Fair	A through inspection of this tree was impeded due to an existing fence, which is adjacent to the north and south sides of the stem. It has two stems commencing at the base. It has been previously topped at multiple heights. The canopy is asymmetrical and is heavily weighted to the south. The Critical Root Zone radius is 6.4ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
66	Cypress *(Chamaecyparis sp.)*	73 comb. (33+20+20)	8	15’	Fair	This tree is somewhat tall and spindly. It has two stems commencing at 3ft; the east stem divides again further up. It has a corrected lean to the north. The corner of an existing building is within the Critical Root Zone on the northeast side of the stem. There is also an existing concrete patio 2ft from the north side, and an existing wood fence adjacent to the south side of the stem. The Critical Root Zone radius is 15ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
67	Cedar *(Thuja plicata)*	19 est.	12	3.9’	Fair	This tree may be shared ownership with the City. It forms part of a group. The canopy has been partially topped at 20ft, and again 25ft, and cut back hard on the west side to provide clearance to the guy wire, reduction lines, communication cables, and laneway; there are multiple leaders commencing at the topping sites. The Critical Root Zone radius is 3.9ft. The footprint of the proposed underground parkade is 9.5ft from the east side of the stem, not including the excavation required, which will extend immediately adjacent to the west property line; this tree is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Obtain consent from the City and remove tree to enable the lines of excavation and the proposed parkade. It also forms part of a group, which is proposed for removal.

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
68	Maple *(Acer sp.)*	43	8	8.7’	Good	This tree may be shared ownership with the City. It appears typical of the species. It is on a slight berm; the grade slopes downward on the north, south and east sides of the stem. This tree is within a dedication. There is an existing shed within the Critical Root Zone on the west side of the stem. The Critical Root Zone radius is 8.7ft. The proposed main access is 3ft from the south side of the stem; this will most likely require grading. **RECOMMENDATIONS:** **REMOVE.** Obtain consent from the City and remove tree to enable site grading and the proposed main access.
69	Cedar *(Thuja occidentalis)*	-	2	3’	Poor/dead	This hedge belongs to the City; although, it does not appear to be something that would have been planted and maintained by them. The north section of hedge has been removed and there are several plants within the remaining portion of the hedge that are dead. It is within a dedication. There is an existing wood fence adjacent to the west side of the hedge. There is also an existing walkway and gate entry adjacent to the north end of the remaining section of hedge. The proposed main access is 1.5ft from the north end of the hedge. **RECOMMENDATIONS:** **REMOVE.** Obtain consent from the City and remove hedge since sections of the hedge are dead and its removal is necessary to enable the proposed main access and unimpeded side and construction access.
70	Rhododendron *(Rhododendron sp.)*	15 per survey	3	3’	Fair	These shrubs are not of a size that requires them to be protected by the City Interim Tree By – Law. They were viewed from the City boulevard only. They have multiple stems commencing at 2ft. The canopies have been cut back to provide clearance to an existing walkway, which passes in between these shrubs. The Critical Root Zone radius for each shrub is 3ft. Both shrubs are within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove move shrubs, they are not protected. Also, removal is necessary to enable the proposed parkade.
71	Rhododendron	15/survey	3	3’	Fair	
72	Magnolia *(Magnolia sp.)*	57/survey combined (24+18+15)	7	11.8’	Fair	This tree was viewed from the City boulevard only. It has two stems commencing at the base; these stems divide again further up. It has been previously topped at multiple heights and cut back on all sides to contain. There is an existing wood fence within the Critical Root Zone on the south side of the stem. The Critical Root Zone radius is 11.8ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
73	Cedar *(Thuja plicata)*	-	6	3’	Good	This hedge belongs to the City; although, it does not appear to be something that would be planted and maintained by them. The east side has been trimmed back to provide clearance to the City sidewalk, and to the existing walkway, which is adjacent to the south end of the hedge. It is within a dedication. **RECOMMENDATIONS:** **REMOVE.** Obtain consent from the City and remove hedge to enable unimpeded site and construction access. Also, the adjacent trees are proposed for removal to enable the proposed plans; this hedge will sustain unavoidable damage during the removal process of these trees.
74	Photinia *(Photinia sp.)*	-	3	3’	Fair	This hedge belongs to the City; although, it does not appear to be something that would be planted by them. It has not been maintained. It is rather sparse and spindly. The east side has been trimmed back to provide clearance to the City sidewalk and to the existing walkway, which is adjacent to the north side of the hedge. It is within a dedication. **RECOMMENDATIONS:** **REMOVE.** Obtain consent from the City and remove hedge to enable unimpeded site and construction access. Also, the adjacent trees are proposed for removal to enable the proposed plans; this hedge will sustain unavoidable damage during the removal process of these trees.
75	Mountain Ash *(Sorbus sp.)*	26 comb. (9+9+8)	5	5.4’	Good/fair	This tree is not of a size that requires it to be protected by the City Interim Tree By – Law. It has three stems commencing at the base. There is minor branch and twig dieback throughout the lower canopy; otherwise, it appears typical of the species. There is an existing wood fence adjacent to the north side of the stem. This tree is within a dedication. The Critical Root Zone radius is 5.4ft. The footprint of the proposed underground parkade is 10ft from the west side of the stem, not including the excavation required, which will extend immediately adjacent to the east property line; this tree is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Remove tree, it is not protected. Also, removal is necessary to enable the lines of excavation and the proposed parkade.
76	Sequoia *(Sequoiadendron giganteum)*	102	14	21.3’	Fair	This tree is somewhat stressed. It has a slight corrected lean to the southwest. There is some branch dieback and inner foliage shed throughout the lower canopy. It is on top of a slightly raised landscape berm; the grade slopes downward on all sides of the stem. There are existing large boulders and rocks within the Critical Root Zone on all sides of the stem, and against the base on the east side. There is also an existing walkway 8ft from the south side of the stem. The Critical Root Zone radius is 21.3ft. The footprint of the proposed underground parkade is 6ft from the west side of the stem, not including the excavation required, which will extend

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						immediately adjacent to the east property line; this tree is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the lines of excavation and the proposed parkade.
77	Japanese Maple *(Acer palmatum)*	40 comb. (22+18)	5	8.2’	Good	This tree has two stems commencing at 2ft. It has a slight corrected lean to the southwest. It has been somewhat suppressed due to the spreading canopies of the adjacent trees. This tree is at the bottom of a slight landscape berm; the grade slopes upward northeast of the stem. There is an existing walkway 1.5ft from the south side and existing large boulders and rocks within the Critical Root Zone on all sides of the stem. The Critical Root Zone radius is 8.2ft. The footprint of the proposed underground parkade is 3ft from the west side of the stem, not including the excavation required, which will extend immediately adjacent to the east property line; this tree is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the lines of excavation and the proposed parkade.
78	Pine *(Pinus sp.)*	42	12	8.7’	Fair	This tree forms part of a group. It has two stems commencing at 12ft. It has a significant corrected lean to the west. The canopy is asymmetrical and is heavily weighted to the west due to the spreading canopies of the adjacent trees. This tree is on top of a slight landscape berm; the grade slopes downward north, east and west of the stem. This tree is within a dedication. There is an existing walkway 5ft from the north side of the stem at lower grade and existing large boulders within the Critical Root Zone on the north and west sides of the stem. The Critical Root Zone radius is 8.7ft. The footprint of the proposed underground parkade is 10ft from the west side of the stem, not including the excavation required, which will extend immediately adjacent to the east property line; this tree is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the lines of excavation and the proposed parkade. This tree also forms part of a group, which is proposed for removal.
79	Pine *(Pinus sp.)*	31	11	6.4’	Fair	This tree forms part of a group. It has a moderate corrected lean to the west. It has been somewhat suppressed due to the proximity of the adjacent trees. This tree is on a landscape berm; the grade slopes downward east of the stem. This tree is within a dedication. The Critical Root Zone radius is 6.4ft. The footprint of the proposed underground parkade is 13.5ft from the west side of the stem, not including the excavation required, which will extend immediately adjacent to the east property line. **RECOMMENDATIONS:**

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						REMOVE. Removal of this tree is necessary to enable the lines of excavation and the proposed parkade. This tree also forms part of a group, which is proposed for removal.
80	Pine *(Pinus sp.)*	27	8	5.6’	Fair	This tree is not of a size that requires it to be protected by the City Interim Tree By – Law. It forms part of a group. It has a phototropic lean to the southeast. The stem appears somewhat contorted. It has been somewhat suppressed due to the proximity of the adjacent trees. This tree is on a landscape berm; the grade slopes downward east and west of the stem. It is within a dedication. There are existing large boulders within the Critical Root Zone on the northwest side of the stem. The Critical Root Zone radius is 5.6ft. The footprint of the proposed underground parkade is 8.5ft from the west side of the stem, not including the excavation required, which will extend immediately adjacent to the east property line; this tree is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Remove tree, it is not protected. Also, removal is necessary to enable the lines of excavation and the proposed parkade. This tree also forms part of a group, which is proposed for removal.
81	Pine *(Pinus sp.)*	24	9	4.9’	Fair	This tree is not of a size that requires it to be protected by the City Interim Tree By – Law. It forms part of a group. It is tall and spindly, and it has been suppressed due to the proximity of the adjacent trees. The stem of this tree appears somewhat contorted. It is on a landscape berm; the grade slopes downward east and west of the stem. It is within a dedication. The Critical Root Zone radius is 4.9ft. The footprint of the proposed underground parkade is 11.5ft from the west side of the stem, not including the excavation required, which will extend immediately adjacent to the east property line. **RECOMMENDATIONS:** **REMOVE.** Remove tree, it is not protected. Also, removal is necessary to enable the lines of excavation and the proposed parkade. This tree also forms part of a group, which is proposed for removal.
82	Pine *(Pinus sp.)*	26	9	5.4’	Fair/poor	This tree is not of a size that requires it to be protected by the City Interim Tree By – Law. It forms part of a group. The top has failed at 20ft; the failure site has not callused over. The crown is somewhat sparse. There is minor branch and twig dieback throughout the canopy. There are also several limbs within the east side of the canopy, which have sustained damage and are still partially attached. It is a landscape berm; the grade slopes downward south and east of the stem. It is within a dedication. The Critical Root Zone radius is 5.4ft. The footprint of the proposed underground parkade is 14ft from the west side of the stem, not including

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						the excavation required, which will extend immediately adjacent to the east property line. **RECOMMENDATIONS:** **REMOVE.** Remove tree, it is not protected and has partially failed. Also, removal is necessary to enable the lines of excavation and the proposed parkade. This tree also forms part of a group, which is proposed for removal.
83	Maple *(Acer sp.)*	33 comb. (18+15)	7	6.8’	Fair	This tree has two stems commencing at the base. It has a basal sweep southeast. It is within a dedication. The Critical Root Zone radius is 6.8ft. It is at the bottom of a slope; the grade slopes upward west of the stem. The grade within the Critical Root Zone will most likely be altered to enable the proposed plans. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable site grading.
84	Pine *(Pinus sp.)*	34/survey	10	7’	Good	This tree forms part of a group. It has two stems commencing at 15ft; a slight bark inclusion was observed. It has a slight corrected lean to the south. It is on a landscape berm; the grade slopes downward south, east and west of the stem. The Critical Root Zone radius is 7ft. The footprint of the proposed underground parkade is 5.5ft from the west side of the stem, not including the excavation required, which will extend immediately adjacent to the east property line; this tree is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the lines of excavation and the proposed parkade. This tree also forms part of a group, which is proposed for removal.
85	Cedar (*Thuja plicata*)	33 comb. (19+14)	8	6.8’	Good	This tree has two stems commencing at the base. The canopy has never been raised, and it is contact with the ground. The Critical Root Zone radius is 6.8ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
86	Rhododendron *(Rhododendron sp.)*	24 comb. (13+7+4)	3	4.9’	Fair/poor	This shrub is not of a size that requires it to be protected by the City Interim Tree By – Law. It is tall and spindly. It has three stems commencing at the base. It as a slight phototropic lean to the north. The canopy is asymmetrical and is heavily weighted to the north. The north and south sides of the canopy have been cut back to provide clearance to existing buildings. The canopy has also been raised to provide clearance to the existing walkway, which is 1.5ft from the south side, and the existing wood fence, which is adjacent to the north side of the stem. There is existing gravel within the Critical Root Zone on all sides of the stem. The Critical Root Zone radius is 4.9ft. This shrub is within the footprint of the proposed underground parkade.

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						RECOMMENDATIONS: **REMOVE.** Remove shrub, it is not protected. Also, removal is necessary to enable the proposed parkade.
87	Mountain Ash (*Sorbus sp.*)	45/survey combined (24+21)	7	9.2’	Poor	A through inspection of this tree was impeded due to an existing wood fence, which is adjacent to the south side of the stem. It has two stems commencing at the base. It has been previously topped at multiple heights; the topping sites have not callused over, and decay is present. The canopy mostly consists of suckering growth, which is poorly attached. The crown has been raised to provide clearance to the existing buildings. There are multiple pruning wounds, which have not fully callused over, and decay is present. The Critical Root Zone radius is 9.2ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree as it is not a good candidate for long-term retention due to poor condition. Its removal is also necessary to enable the proposed parkade.
88	Holly (*Ilex sp.*)	61/survey combined (37+24)	11	12.6’	Fair	A through inspection of this tree was impeded due to an existing wood fence, which is adjacent to the south side of the stem. It has multiple stems. It is tall and spindly. It lacks canopy spread due to the proximity of the adjacent trees. The Critical Root Zone radius is 12.6ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
89	Cedar *(Thuja plicata)*	20 est.	11	4.1’	Fair	Tree #89 is not of a size that requires it to be protected by the City Interim Tree By – Law. A through inspection of Trees #89 - #91 was impeded due to an existing wood fence, which is adjacent to the south side of the stems. These trees form part of a hedgerow; although, they have not been maintained as a formal hedge. They may have been previously topped. The south side of the lower canopies have been trimmed back provide clearance to the existing building and walkway. There is existing gravel within the Critical Root Zone on the south side of the stems. The Critical Root Zone of each tree has been indicated in the CRZ radius column. These trees are within the footprint of the proposed underground parkade. Tree #89 is undersize. **RECOMMENDATIONS:**
90	Cedar	32 est.	11	6.6’	Fair	
91	Cedar	32 est.	11	6.6’	Fair	**REMOVE.** Removal of these trees is necessary to enable the proposed parkade. These trees also form part of a hedgerow, which is proposed for removal. Also, tree #89 is not protected.
92	Mountain Ash *(Sorbus sp.)*	24 est. combined (16+8)	6	4.9’	Fair.	This tree is not of a size that requires it to be protected by the City Interim Tree By – Law. A through inspection was impeded due to an existing wood fence, which is adjacent to the south side of the stem. This tree was not included on the site plan; therefore, its approximate location has been

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						identified. It has two stems commencing at the base. It has been suppressed due to the spreading canopies of the adjacent trees. The Critical Root Zone radius is 4.9ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree, it is not protected. Also, removal is necessary to enable the proposed parkade.
93	Cedar *(Thuja plicata)*	35 est.	11	7.2’	Fair	Tree #94 is not of a size that requires it to be protected by the City Interim Tree By – Law. A through inspection of Trees #93 - #95 was impeded due an existing wood fence, which is adjacent to the south side of the stems. They were not included on the site plan; therefore, their approximate location has been identified. They form part of a hedgerow; although, they have not been maintained as a formal hedge. They may have been previously topped. The south side of the lower canopies have been trimmed back on to provide clearance to the existing driveway. Tree #93 has two stems commencing at 8ft, and Tree #95 has two stems commencing at 3ft; a slight bark inclusion was observed. There is existing gravel within the Critical Root Zone of each tree on the south side. The Critical Root Zone radius of each tree has been indicated in the CRZ radius column. These trees are within the footprint of the proposed underground parkade. Tree #94 is undersize. **RECOMMENDATIONS:** **REMOVE.** Removal of these trees is necessary to enable the proposed parkade. These trees also form part of a hedgerow, which is proposed for removal. Also, Tree # 94 is not protected.
94	Cedar	20 est.	11	4.1’	Fair	
95	Cedar	56 est. combined (30+26)	11	11.6’	Fair	
96	Cherry *(Prunus sp.)*	50/survey combined (29+21)	10	10.3’	Fair	A through inspection of this tree was impeded due to an existing wood fence, which is adjacent to the south side of the stem. It has been suppressed due to the spreading canopy of the adjacent tree. This tree has two stems commencing at 3ft. It has a moderate phototropic lean and an asymmetrical and heavily weighted canopy to the east. It has been previously topped at 15ft and cut back on all sides to contain. The Critical Root Zone radius is 10.3ft. There is a storage bin 3ft from the east side, and an existing shed 6.5ft away, and an existing fence 4.5ft from the south side of the stem. The Critical Root Zone radius is 10.3ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
97	Deodar *(Cedrus deodora)*	85 per survey	16	17.5’	Fair	A through inspection of this tree was impeded due to an existing wood fence, which is adjacent to the south side of the stem. The canopy is asymmetrical and is heavily weighted to the east. It has been previously topped at 25ft, and cut back on the west side to provide clearance to the single-phase Hydro line, reduction lines, communication cables, and laneway and on the north side to provide clearance to

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						the existing service drop; there are multiple leaders commencing at the topping site. There is an existing shed 7ft from the south side of the stem. The Critical Root Zone radius is 17.5ft. The Critical Root Zone radius is 17.5ft. The footprint of the proposed underground parkade is 3.5ft from the east side of the stem, not including the excavation required, which will extend immediately adjacent to the west property line; this tree is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the lines of excavation and the proposed parkade.
98	Cherry *(Prunus sp.)*	72 per combined (24+24+24)	7	14.9’	Declining	A through inspection of this tree was impeded due to several existing fences, which are adjacent to the north, south and west sides of the stem. This tree is in decline. The canopy has been mutilated. It has been previously topped at multiple heights and cut back quite hard on all sides to contain; the canopy consists of only a few suckering shoots commencing at the topping sites. The pruning sites have not callused over, and some decay and sap rot fungus is present. The entire crown has also been raised to provide clearance to the existing fences, and an existing shed, which is 3ft from the north side of the stem. There is also large deadwood throughout the canopy. The Critical Root Zone radius is 14.9ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree since it is in decline and to enable the proposed parkade.
99	Dogwood *(Cornus sp.)*	30	4	6.2’	Poor	A through inspection of this tree was impeded due to several existing fences, which are adjacent to the north and south sides of the stem. The canopy has been mutilated. It has been previously topped at multiple heights and cut back quite hard on all sides to contain; the pruning sites have not callused over, and some decay is present. The Critical Root Zone radius is 6.2ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree due to poor structure. It is not a good candidate for long-term retention as the canopy has been mutilated to the extent that it is beyond restorative pruning. Its removal is also necessary to enable the proposed parkade.
100	Cedar *(Thuja occidentalis)*	-	1.5	2’	Poor/dead	This hedge belongs to the City; although, it does not appear to be something that would have been planted by them. It has not been maintained. Sections of the hedge are dead, and the remaining portion of the hedge is rather sparse. It is within a dedication. There is an existing concrete walkway adjacent to the south portion of hedge. **RECOMMENDATIONS:** **REMOVE.** Obtain consent from the City and remove hedge since a portion of the hedge is dead

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						and the remaining section is in poor condition. Its removal is also necessary to enable unimpeded site and construction access.
101	Japanese Maple (*Acer palmatum)*	38 comb. (13+13+12)	7	7.8’	Fair	This tree has four stems commencing at base. There is minor branch dieback throughout the canopy, which is most likely as a result of Verticillium wilt; this will continue to cause dieback and the tree will decline over time. This tree is within a dedication. The Critical Root Zone radius is 7.8ft. The footprint of the proposed underground parkade is 12ft from the west side of the stem, not including the excavation required, which will extend immediately adjacent to the east property line. **RECOMMENDATIONS:** **REMOVE.** Remove tree as it is not a good candidate for long-term retention due to disease, which will cause the tree to decline over time. Removal is also necessary to enable the lines of excavation and the proposed parkade.
102	Deodar *(Cedrus deodara)*	139 comb. (87+52)	18	29’	Good	This tree has multiple leaders commencing at 30ft. It has a slight basal sweep to the east. There are large diameter limbs forming multiple candelabras commencing at 1ft to 20ft on all sides of the stem. The lower canopy has been raised and the east side has been cut back to provide clearance to the transit cables, roadway, and City sidewalk. This tree is within a dedication. The Critical Root Zone radius is 29ft. The footprint of the proposed underground parkade is 15ft from the west side of the stem, not including the excavation required, which will extend immediately adjacent to the east property line. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade. The excavation required will result in extensive Critical Root loss and soil disturbance causing instability and decline.
103	Birch *(Betula sp.)*	61 comb. (34+27)	12	12.6’	Declining	This tree is in severe decline. It has two stems commencing at 1ft; the top and mid-section of both stems is dead and has begun to fail. There is branch and twig dieback throughout the remaining lower crown. There is an old wound on the north side of the stem at 3ft. The Critical Root Zone radius is 12.6ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree since it is in decline and has partially failed. Its removal is also necessary to enable the proposed parkade.
104	Plum *(Prunus sp.)*	21 combined (8+8+5)	6	4.3’	Fair	This tree is not of a size that requires it to be protected by the City Interim Tree By – Law. It has seven stems commencing at the base. The canopy is asymmetrical and is heavily weighted to the east. It has been somewhat suppressed and lacks canopy spread due to the proximity of the adjacent hedge. The Critical Root Zone radius is 4.3ft. This tree is

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree, it is not protected. Also, removal is necessary to enable the proposed parkade.
105	Dogwood *(Cornus sp.)*	37 combined (15+12+10)	8	7.6’	Fair	This tree has three stems commencing at 1ft. The canopy is asymmetrical and is heavily weighted to the south due to the spreading canopy of the adjacent tree. The crown of this tree is somewhat sparse. There is also branch and twig dieback throughout the canopy. The Critical Root Zone radius is 7.6ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the proposed parkade.
106	Cherry *(Prunus sp.)*	44 combined (20+16+8)	9	9.1’	Fair	This tree appears to be mature suckering growth from an adjacent dead stem. This tree has several stems commencing at the base. The west stem has been cut back, raised and previously topped at 20ft to provide clearance to the single-phase Hydro line, reduction lines and communication cables. It has a phototropic lean to the south. There is evidence of Tortrix borer, and it has canker. There is existing rock within the Critical Root Zone on all sides of the stem. The Critical Root Zone radius is 9.1ft. The footprint of the proposed underground parkade is 3ft from the east side of the stem, not including the excavation required, which will extend immediately adjacent to the west property line; this tree is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the lines of excavation and the proposed parkade.
107	Cedar *(Thuja plicata)*	-	8	3’	Fair	This hedge may be shared ownership with the City. It has not been maintained. A portion of hedge has been previously topped at 5ft. The west side of an upper section of hedge has been cut back to provide clearance to the single-phase Hydro line, reduction lines and communication cables, and the lower portion of hedge has been trimmed back to provide clearance to the laneway. Sections of the hedge have also been cut back quite hard exposing the stems. The footprint of the proposed underground parkade is about 7ft – 9.5ft from the east side of the stems, not including the excavation required, which will extend immediately adjacent to the west property line; this hedge is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Removal of this hedge is necessary to enable the lines of excavation and the proposed parkade.
108	Cedar *(Thuja occidentalis)*	35 combined (22+13)	6	7.2’	Good/fair	This tree has two stems commencing at the base. It has been previously topped at 12ft to provide clearance to the communication cables. There is an existing driveway adjacent to the north side, an

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						existing gate adjacent to the east side, and an existing wood fence adjacent to the west side of the stem. The Critical Root Zone radius is 7.2ft. The footprint of the proposed underground parkade is about 8ft from the east side of the stem, not including the excavation required, which will extend immediately adjacent to the west property line; this tree is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the lines of excavation and the proposed parkade.
109	Japanese Maple *(Acer palmatum)*	20 combined (7+7+6)	5	4.1’	Good/fair	This tree is not of a size that requires it to be protected by the City Interim Tree By – Law. It has multiple stems commencing at 1ft. The canopy is somewhat asymmetrical and is heavily weighted to the west due to the proximity of the adjacent hedge. There is also branch dieback throughout the lower canopy of this tree. It is on a slight landscape berm; the grade slopes downward north, south and west of the stem. There is an existing large boulder 1.5ft from the east side of the stem. The Critical Root Zone radius is 4.1ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree, it is not protected. Also, removal is necessary to enable the proposed parkade.
110	Maple *(Acer sp.)*	70/survey	11	14.4’	Poor	A thorough inspection of this tree was impeded to an existing fence, which is about 10ft from the north side of the stem. This tree has three stems commencing at 10ft. There is a large column with extensive decay commencing at the base, which extends upwards into the union and into the canopy; fungal activity is present. There is also some dead wood throughout the canopy. It is within a raised garden bed, which has been contained by wood tie retaining walls, which are within the Critical Root Zone on the south, southwest and southeast sides of the stem; there is an approximate 2ft grade difference. The Critical Root Zone radius is 14.4ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree due to poor structure and condition. The structural integrity of this tree is compromised due to the defects noted and the presence of decay and fungal activity, which puts this tree at risk of failure. Also, removal of this tree is necessary to enable the proposed parkade.
111	Laurel *(Prunus laurocerasus)*	-	6	4’	Good/fair	This hedge may be shared ownership with the City. It has been somewhat maintained. It has been partially topped and trimmed back on all sides to contain, and to provide clearance to the City sidewalk, which is adjacent to the east end of the hedge. It is within a dedication. The footprint of the proposed underground parkade is about 4ft from the west side of the hedge, not including the excavation required, which will extend immediately adjacent to the east

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						property line; this hedge is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Obtain consent from the City and remove hedge to enable the lines of excavation and the proposed parkade.
112	Japanese Maple *(Acer palmatum)*	33 combined (17+8+8)	7	6.8’	Fair	This tree has two stems commencing at the base; these stems are fused to 1ft. The east side of the canopy has been cut back to provide clearance to the City sidewalk. There is minor branch dieback throughout the canopy, which is most likely as a result of Verticillium wilt; this will continue to cause dieback and the tree will decline over time. This tree is within a dedication. The Critical Root Zone radius is 6.8ft. The footprint of the proposed underground parkade is 16.5ft from the west side of the stem, not including the excavation required, which will extend immediately adjacent to the east property line. **RECOMMENDATIONS:** **REMOVE.** Remove tree as it is not a good candidate for long-term retention due to disease, which will cause the tree to decline over time. Removal is also necessary to enable the lines of excavation and the proposed parkade.
113	Dogwood *(Cornus sp.)*	35 combined (18+17)	8	7.2’	Poor	This tree has three stems commencing at 3.5ft; decay within the union was observed. The south stem is dead and has failed at 5ft. This tree has a corrected lean to the north. There is cavity of decay on the south side of the stem at 2ft, which extends upward into each stem. The Critical Root Zone radius is 7.2ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree due to poor structure and condition. The structural integrity of this tree is compromised due to the defects noted and the presence of decay, which puts this tree at risk of failure. Also, removal of this tree is necessary to enable the proposed parkade.
114	Cherry *(Prunus sp.)*	48	7	9.9’	Declining	This tree is in decline. It has been previously topped at multiple heights and cut back on all sides to contain; the pruning sites have not callused over, and decay is present. The canopy is sparse, and it lacks vigor. There is branch dieback throughout the canopy, which has begun to fail. The trunk appears somewhat abnormal and swollen; there are multiple burls along the stem. There is evidence of Tortirx borer, and it has extensive canker. The Critical Root Zone radius is 9.9ft. This tree is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree since it is in decline and to enable the proposed parkade.
115	Plum *(Prunus sp.)*	23 combined (11+7+5)	4	4.5’	Fair	This tree was not included on the site plan; therefore, its approximate location has been identified. It is not of a size that requires it to be protected by the City Interim Tree By – Law. It has two stems

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						commencing at 4ft. It has a moderate phototropic lean to the east. It has been suppressed due to the spreading canopy of the adjacent tree. The east side of the lower canopy of this tree has been cut back to the stem to provide clearance to the existing adjacent fence. There is minor branch dieback throughout the canopy. The Critical Root Zone radius is 4.5ft. The footprint of the proposed underground parkade is 5ft from the west side of the stem, not including the excavation required, which will extend immediately adjacent to the east property line; this tree is within the line of excavation. **RECOMMENDATIONS:** **REMOVE.** Remove tree, it is not protected. Also, removal is necessary to enable the lines of excavation and the proposed parkade.
116	Japanese Maple *(Acer palmatum)*	37 combined (14+13+10)	5	7.6’	Good	This tree was not included on the site plan; therefore, its approximate location has been identified. There is minor twig dieback throughout the canopy; otherwise, it appears typical of the species. This tree is within a dedication. The Critical Root Zone radius is 7.6ft. The footprint of the proposed underground parkade is 15ft from the northwest side of the stem, not including the excavation required, which will extend immediately adjacent to the south and east property lines. **RECOMMENDATIONS:** **REMOVE.** Removal of this tree is necessary to enable the lines of excavation and the proposed parkade.
117	Boxwood *(Buxus sp.)*	-	1	3’	Good	These shrubs may be shared ownership with the City. They were not included on the site plan; therefore, their approximate location has been identified. They have been somewhat maintained as shaped specimens. The Critical Root Zone radius for each shrub is 3ft. The footprint of the proposed underground parkade is about 8ft from the north side of the stems, not including the excavation required, which will extend immediately adjacent to the south property line; these shrubs are within the lines of excavation. **RECOMMENDATIONS:** **REMOVE.** Obtain consent from the City and remove shrubs to enable the lines of excavation and the proposed parkade.
118	Boxwood	-	1	3’	Good	
119	Boxwood	-	1	3’	Good	
120	Dogwood *(Cornus sp.)*	25 combined (13+6+6)	5	5’	Good	This tree may be shared ownership with the City. It has a slight phototropic lean to the north. The lower crown has been cut back on all sides to contain. There is minor twig dieback throughout the canopy. The Critical Root Zone radius is 5ft. The footprint of the proposed underground parkade is about 10ft from the north side of the stem, not including the excavation required, which will extend immediately adjacent to the south property line. **RECOMMENDATIONS:** **REMOVE.** Obtain consent from the City and remove tree to enable the proposed parkade. The

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						excavation required will result in extensive root loss and soil disturbance causing instability and decline.
121	Rhododendron *(Rhododendron sp.)*	27 combined (10+9+8)	2.5	5.6’	Fair	These shrubs are not of a size that requires them to be protected by the City Interim Tree By – Law. They have three stems commencing at the base. The canopies are somewhat sparse and lack vigor. The canopies have been raised rather high exposing the stems. The foliage is pale and chlorotic. There is also some twig dieback throughout the canopy. There is an existing walkway 4ft from Shrub #121 on the northwest side, and 3ft from the northeast and east sides of Shrub #122. The Critical Root Zone radius of each shrub has been indicated in the CRZ radius column. The footprint of the proposed underground parkade is 7ft from the north side of the stems, not including the excavation required, which will extend immediately adjacent to the south property line. **RECOMMENDATIONS:** **REMOVE.** Remove both shrubs, they are not protected. Also, removal is necessary to enable the lines of excavation and the proposed parkade. These trees are undersized.
122	Rhododendron	25 combined (9+8+8)	2.5	5’	Fair	
123	Maple *(Acer sp.)*	70	16	14.4’	Good	This tree belongs to the City. It appears typical of the species. The Critical Root Zone radius is 14.4ft. It is 13.5ft from the south property line; the Critical Roots do not encroach into the subject site. **RECOMMENDATIONS:** Install Tree Protection Zone fencing as directed by City staff.
124	Maple *(Acer sp.)*	60	16	12.4’	Declining	This tree has been removed. **RECOMMENDATIONS:** No further action required.
125	Maple *(Acer sp.)*	52	14	10.7’	Declining	This tree belongs to the City. It is in decline. It lacks basal flare, which is indicative of a grade change. The crown has been reduced at multiple heights and cut back on all sides to contain; the pruning sites have not callused over, and decay is present. The crown is sparse, and it lacks vigor. There is extensive large dead wood and branch dieback throughout the canopy, which has begun to fail. The base of the stem is swollen; it appears there is a root girdled and embedded around the stem. There is an existing driveway 6ft from the west side of the stem. The Critical Root Zone radius is 10.7ft. This tree is 13.5ft from the south property line; the Critical Roots do not encroach into the subject site. **RECOMMENDATIONS:** Request inspection by the City Parks Board. This tree is in decline; therefore, its removal should be considered.
126	Maple *(Acer sp.)*	55	16	11.3’	Fair	This tree belongs to the City. It has a corrected lean to the south. There is a large girdling root around the base of the stem on the west side. There is also a large old callusing wound on the southeast side of the stem commencing at the base to 2ft; the exposed

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS
						wood is desiccated. There is an existing driveway 6ft from the east side of the stem. The Critical Root Zone radius is 11.3ft. This tree is 14.5ft from the south property line; the Critical Roots do not encroach into the subject site. **RECOMMENDATIONS:** Install Tree Protection Zone fencing as directed by City staff.
127	Maple *(Acer sp.)*	79	16	16.3’	Good	This tree belongs to the City. The west side of the canopy has been cut back to provide clearance to the single-phase Hydro line, reduction lines, and communication cables. There are several surface roots exposed, which have sustained minor damage due to lawn maintenance equipment. The Critical Root Zone radius is 16.3ft. This tree is 14ft from an existing wood fence and the south property line; the Critical Roots pose a 2.3ft encroachment into the subject site. **RECOMMENDATIONS:** Install Tree Protection Zone fencing as directed by City staff.
128	Rhododendron *(Rhododendron sp.)*	26 combined (9+9+8)	3	5.4’	Fair	This shrub is not of a size that requires it to be protected by the City Interim Tree By – Law. It has five stems commencing at the base. The south side of the lower canopy has been pruned back to provide clearance to the existing driveway, which is 3ft from the stem. There is Blackberry growing throughout the canopy. There is an existing wood fence adjacent to the north side of the stem. The Critical Root Zone radius is 5.4ft. This shrub is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove shrub, it is not protected. Also, removal is necessary to enable the proposed parkade.
129	Holly *(Ilex sp.)*	20	8	4.1’	Declining	This tree was not included on the site plan; therefore, its approximate location has been identified. It is not of a size that requires it to be protected by the City Interim Tree By – Law. It is in decline. It is tall and spindly. The canopy is asymmetrical and is heavily weighted to the west; it lacks canopy spread on the east side due to the proximity of the adjacent tree. The crown of this tree is sparse, and it lacks vigor. There is also branch dieback throughout the canopy. The Critical Root Zone radius is 4.1ft. It is within the footprint of the proposed underground parkade. **RECOMMENDATIONS:** **REMOVE.** Remove tree, it is not protected, and it is in decline. Also, removal is necessary to enable the proposed underground parkade.
130	Douglas fir *(Pseudotsuga menziesii)*	22	9	4.5’	Fair	This tree is not of a size that requires it to be protected by the City Interim Tree By – Law. It has been somewhat suppressed due to the spreading canopies of the adjacent trees. This tree has a moderate corrected lean to the northwest. The south side of the canopy is in contact with an existing building. The Critical Root Zone radius is 4.5ft. It is

TREE #	SPECIES	DBH (cm)	HEIGHT (m) est.	CRZ (ft.) radius	Condition	OBSERVATIONS & RECOMMENDATIONS

within the footprint of the proposed underground parkade.

RECOMMENDATIONS:

REMOVE. Remove tree, it is not protected. Also, removal is necessary to enable the proposed underground parkade.



April 6/17 - Trees #24 & #25



Sept 12/19 – Tree #24



Sept 12/19 – Trees #25, #41 & #130



April 6/17 – Tree #29



April 6/17 - Tree #30



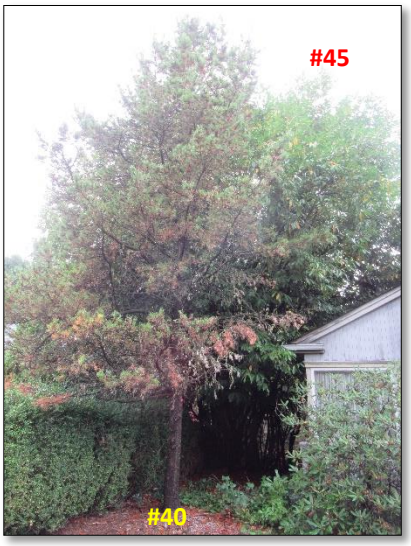
April 6/19 - Hedge #31 & Trees #32 - #31



April 6/17 - Hedge #31



April 6/17 - Trees #32 - #39



Sept 12/19 - Trees #40 & #45



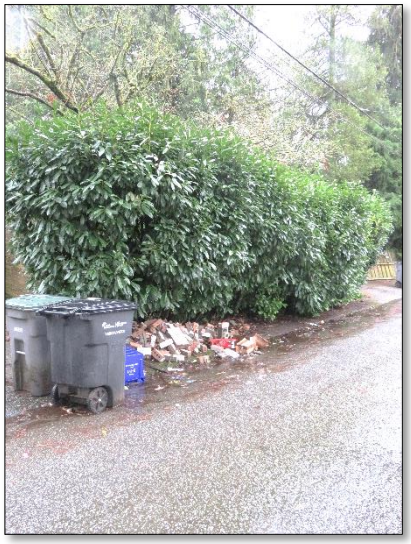
April 6/17 - Tree #41



April 6/17 - Tree #42 & Hedge #43



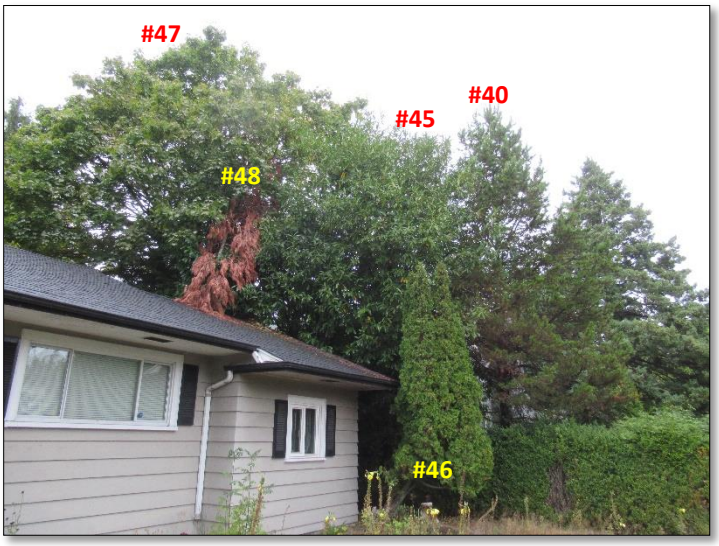
Sept 12/19 – Tree #42



April 6/17 - Hedge #43



April 6/17 - Tree #46



Sept 12/19 – Trees #40 & #45 - #48



April 6/17 – Trees #47 & #49



April 6/17 - Trees #129 & #55 - #50



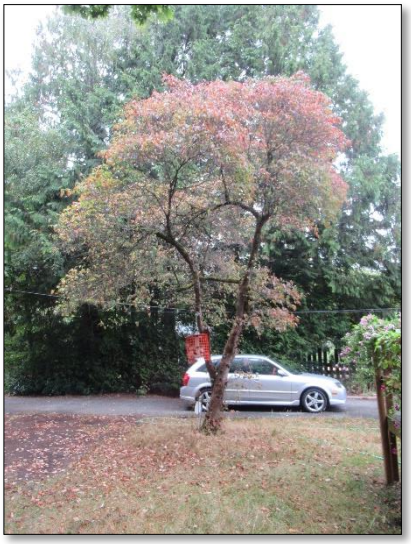
April 6/17 - Trees #56 - #59 & #67



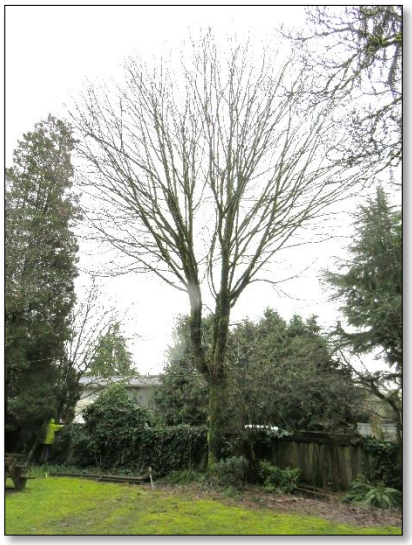
April 6/17 – Tree #60



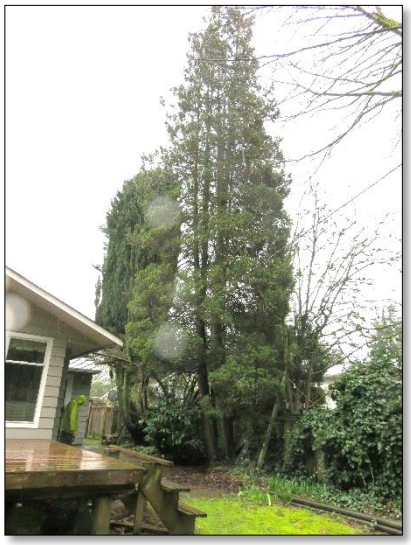
April 6/17 - Trees #59 - #56



Sept 12/19 - Tree #60



April 6 /17 - Tree #61



April 6/17 - Trees #66 - #62



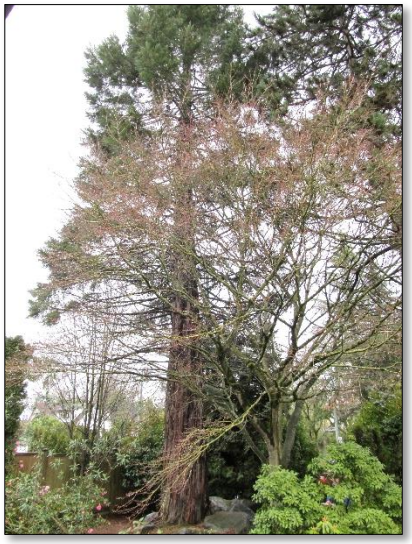
Sept 12/19 – Shrubs #71 & #70



Sept 12/19 – Tree #72 in behind shrubs



April 6/17 – Tree #75



April 6/17 - Trees #76 & #77



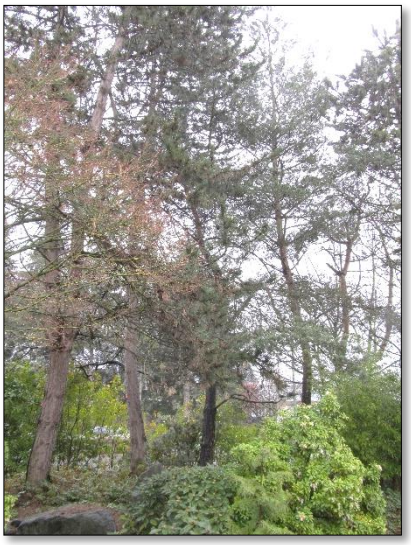
Sept 12/19 - Trees #76 & #77



Sept 12/19 – Tree #77



April 6/17 – Trees #77 & #76



April 6/17 – Trees #78 - #81



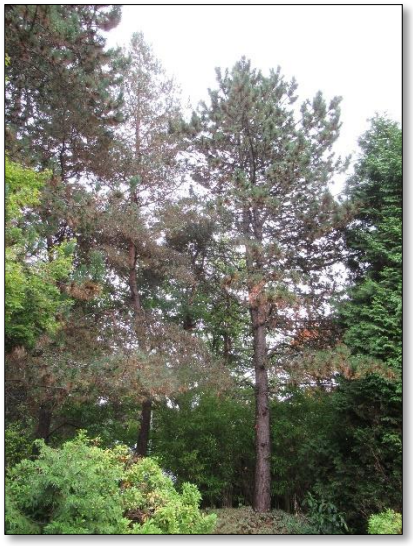
April 6/17 - Trees #78 - #81



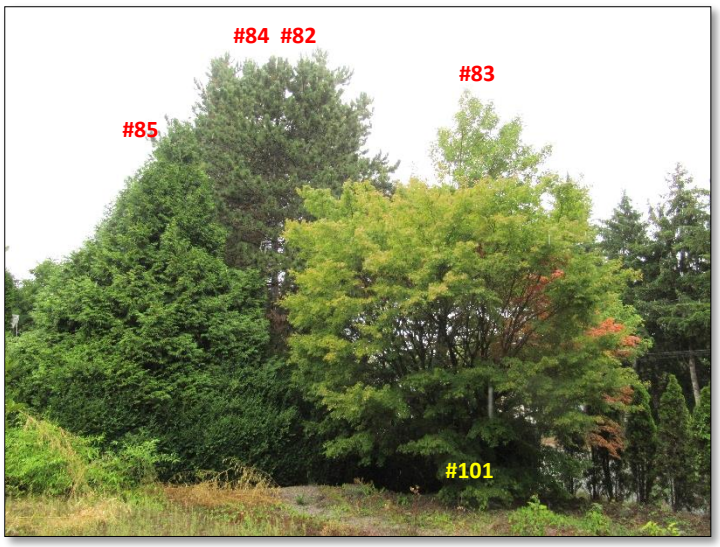
April 6/17 - Trees #83 - #81



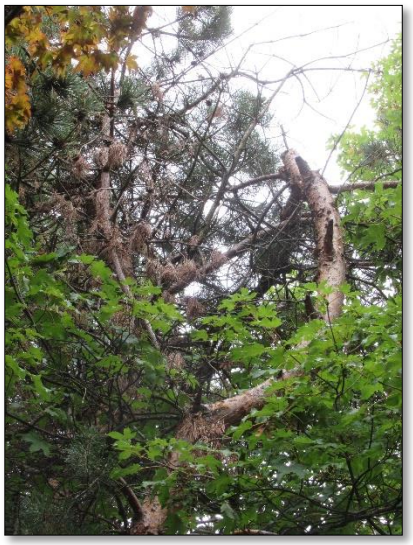
April 6/17 – Trees #84 & #85



Sept 12/19 – Trees #81 & #84



Sept 12/19 - Trees #82 - #85 & #101



Sept 12/19 – Tree #82



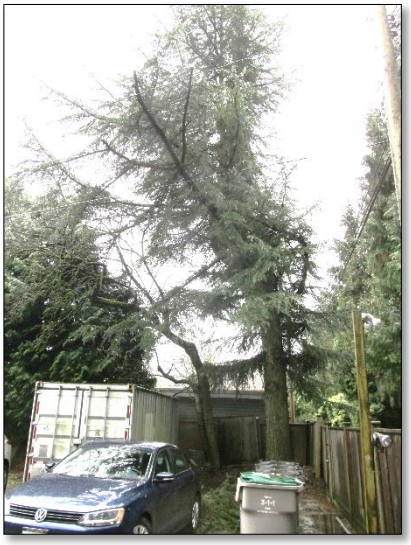
April 6/17 - Shrub #86



April 6/17 - Trees #88 & #87



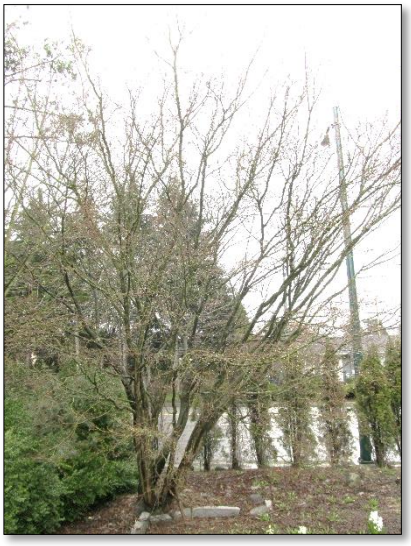
April 6/17 - Trees #95 - #88



April 6/17 - Trees #96 & #97



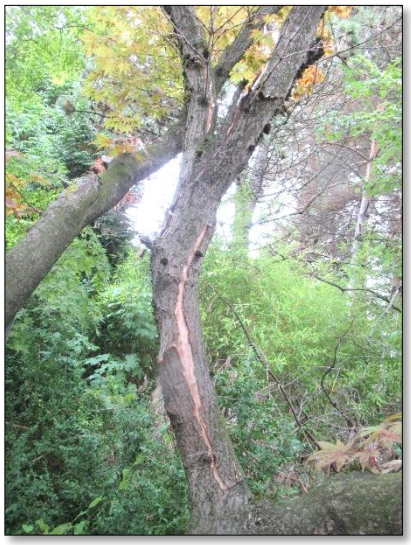
April 6/17 - Trees #98 & #99



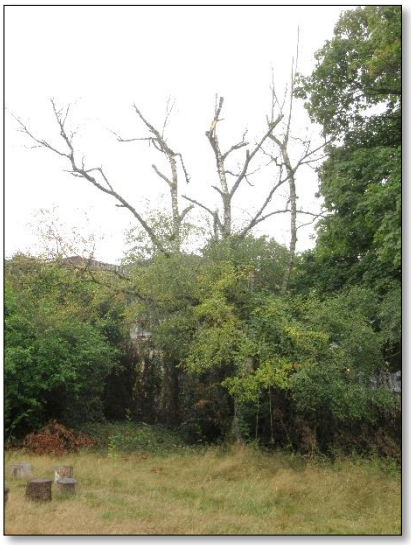
April 6/17 - Tree #101 & Hedge #100



Sept 12/19 – Hedge #100 & Tree #101



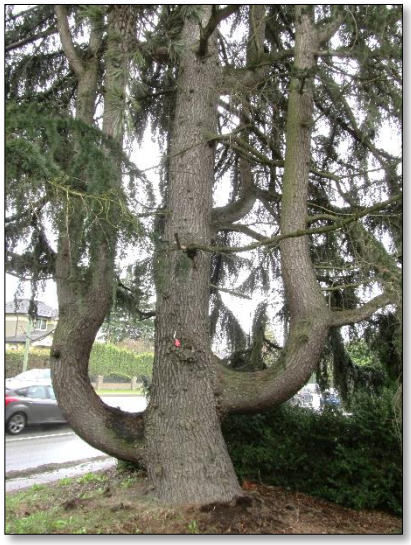
Sept 12/19 – Tree #101



Sept 12/19 – Tree #103



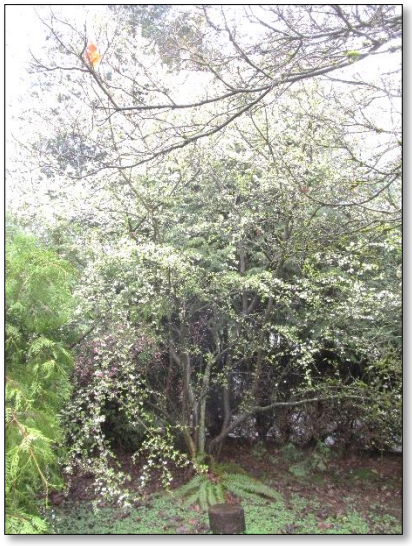
April 6/17 - Tree #102



April 6/17 - Tree #102



April 6/17 - Tree #103



April 6/17 - Tree #104



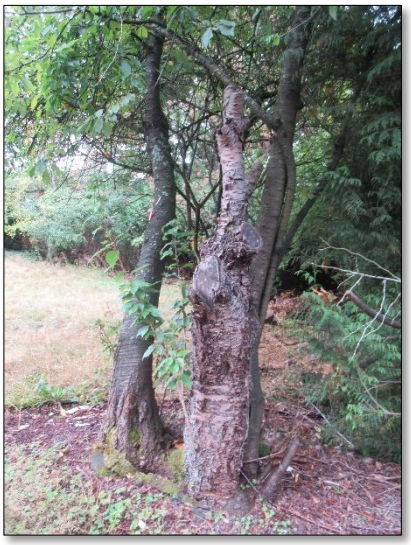
April 6/17 - Tree #105



April 6/17 - Tree #106



Sept 12/19 – Trees # 104 - #106



Sept 12/19 – Tree #106



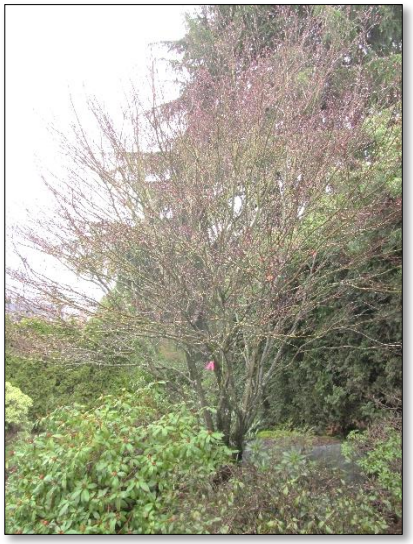
April 6/17 - Hedge #107



April 6/17 - Tree #108



Sept 12/19 – Tree #108



April 6/17 – Tree #109



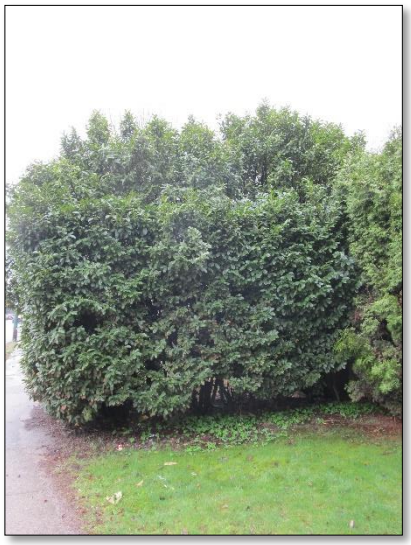
April 6/17 – Tree #110



April 6/17 – Tree #110



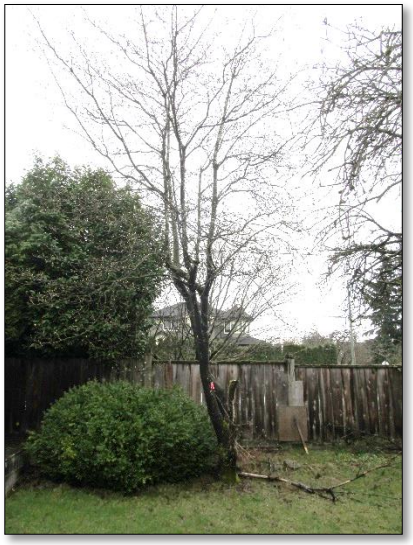
April 6/17 - Tree #110



April 6/17 – Hedge #111



April 6/17 - Tree #112



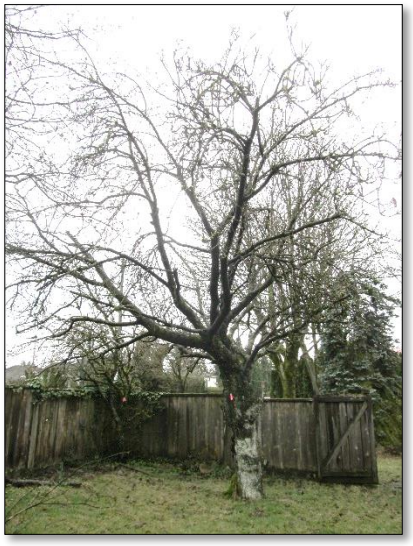
April 6/17 – Tree #113



April 6/17 - Tree #113



April 6/17 - Tree #114



April 6/17 - Tree #114



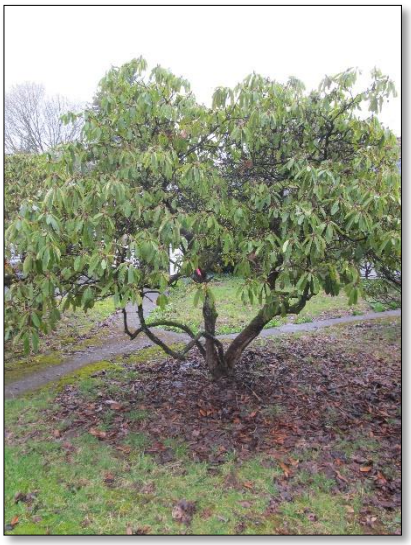
Sept 12/19 – Trees #114 & #115



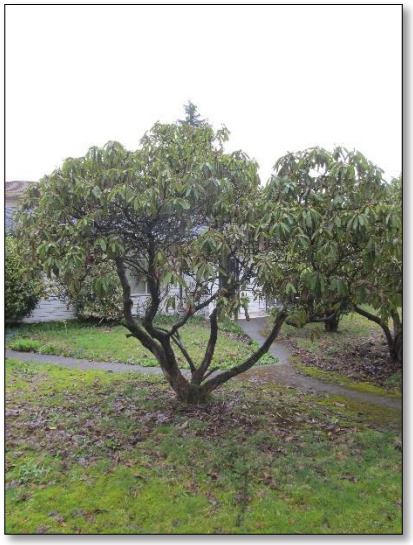
April 6/17 - Shrub #117 & Tree #116



April 6/17 - Tree #120



April 6/17 - Shrub #121



April 6/17 - Shrub #122



April 6/17 - Tree #123 & Shrubs #119 - #117



Sept 12/19-Trees #116, #120, #123 & Shrubs #117 - #119



Sept 12/19-Trees #120, #124 & Shrubs #122, #121, #119



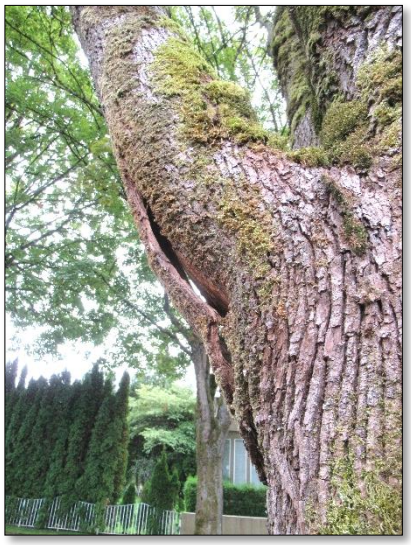
April 6/17 – Trees #126 - #124



April 6/17 – Tree #124 – Fungal activity (REMOVED)



Sept 12/19 – Tree #124
Fungal conks removed (REMOVED)



Sept 12/19 – Tree #124 (REMOVED)



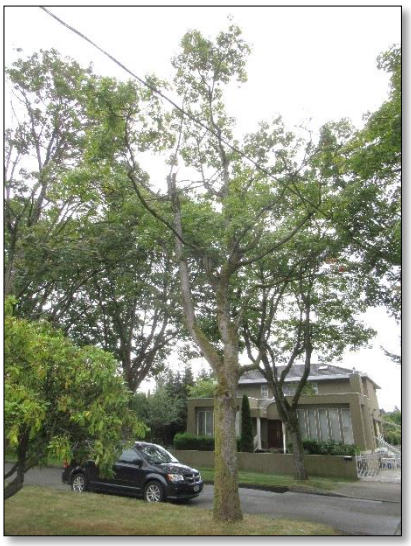
Sept 12/19 – Tree #124 (REMOVED)



Sept 12/19 – Tree #124 (REMOVED)



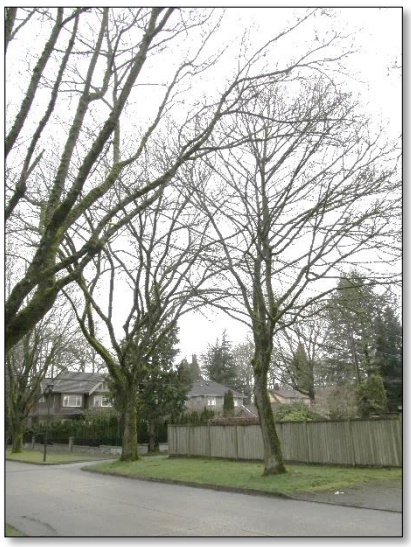
April 6/17 – Tree #125



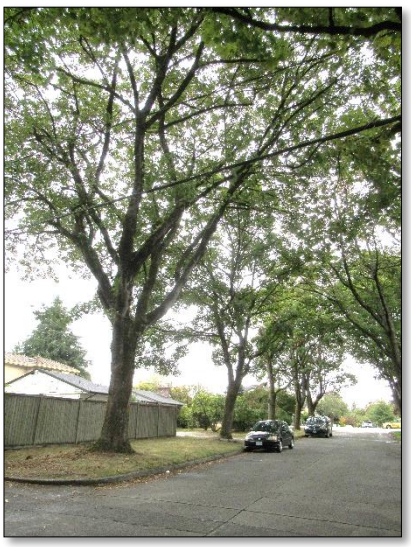
Sept 12/19 – Tree #125



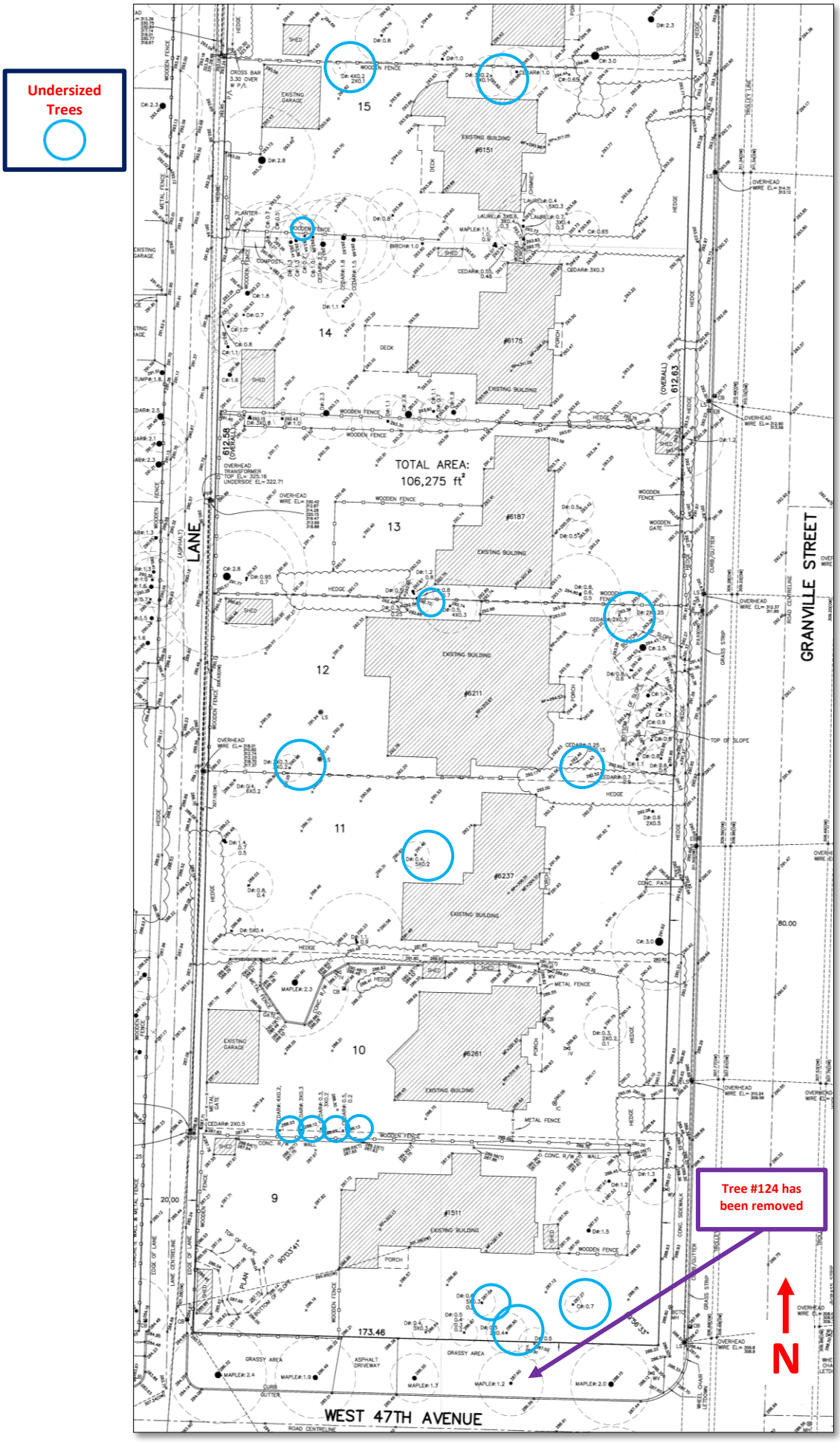
Sept 12/19 - Tree #125



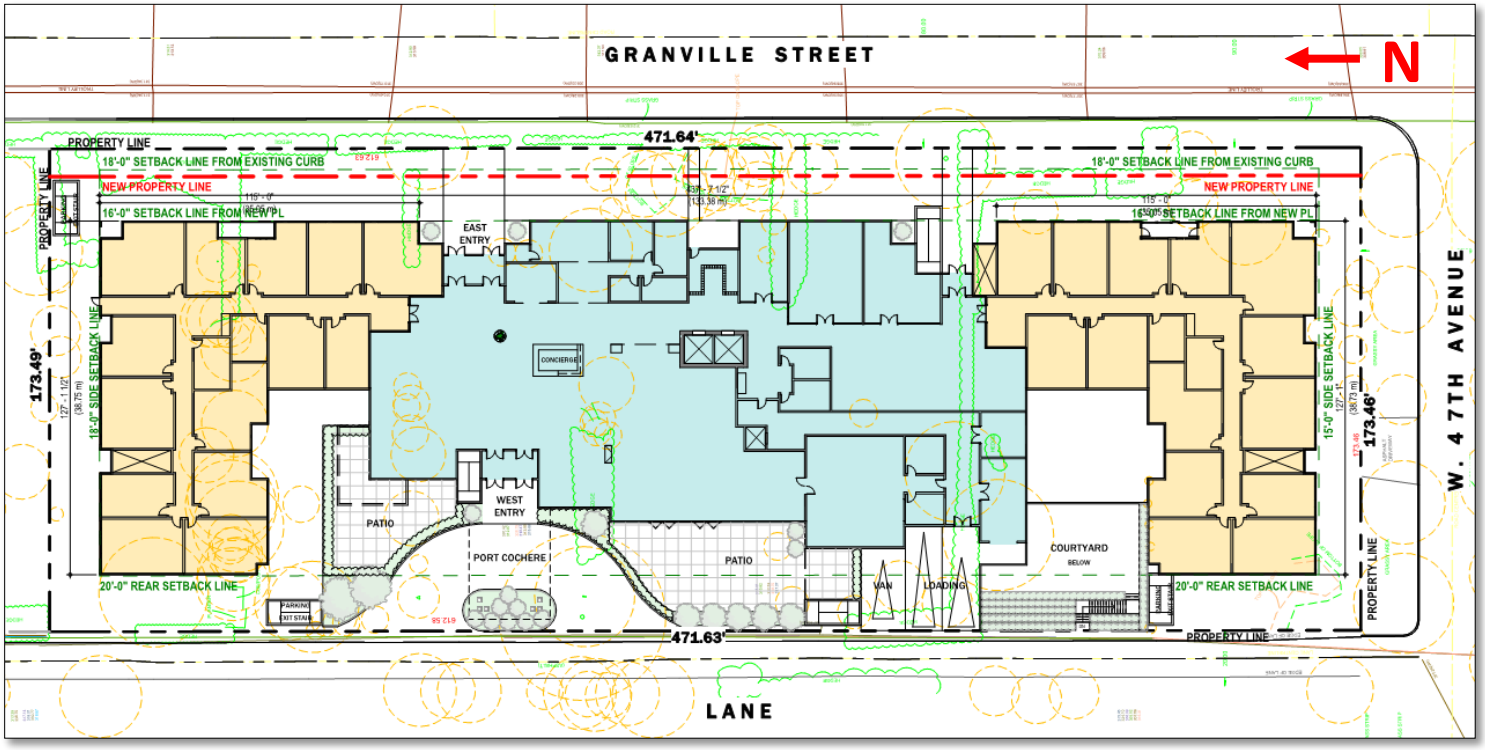
April 6/17 - Trees #127 & #126



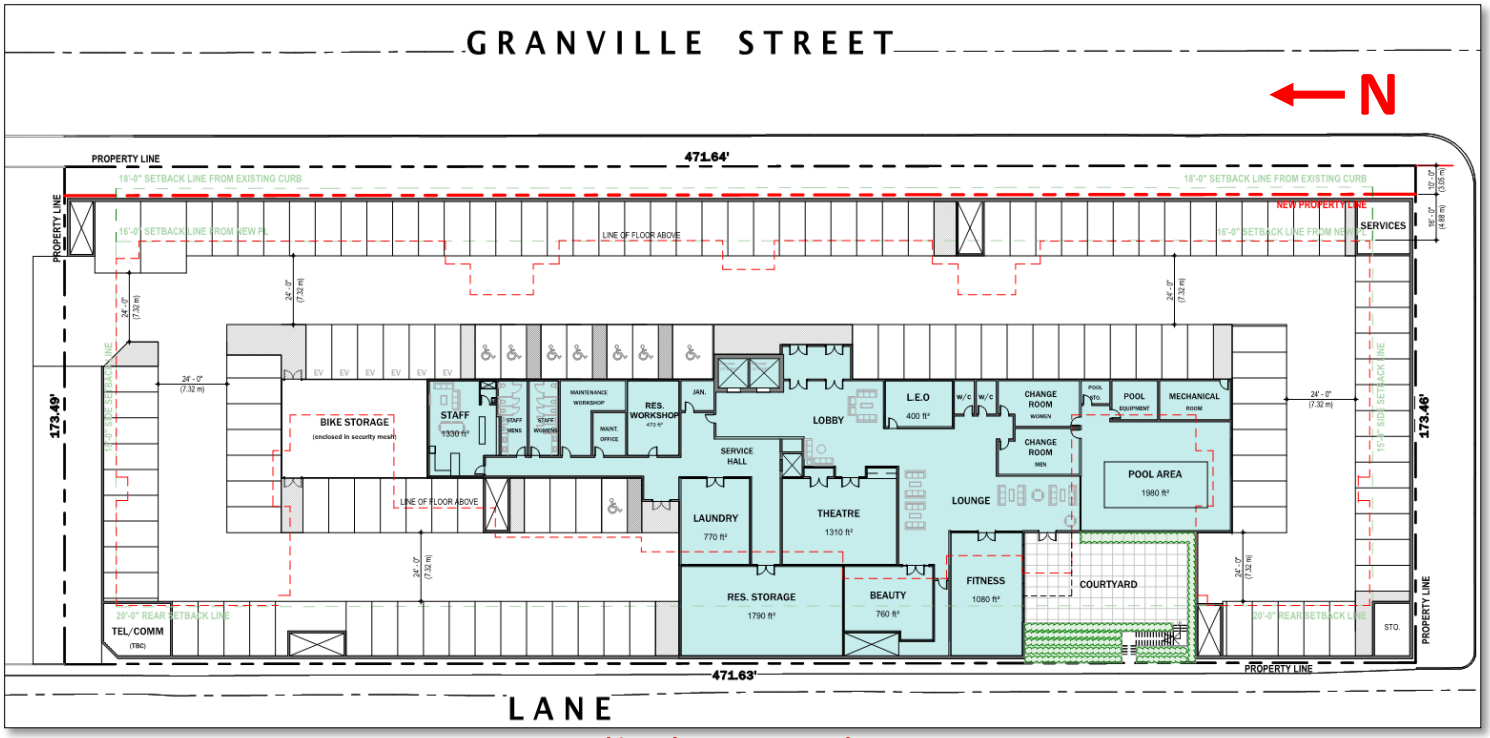
Sept 12/19 – Trees #127 - #123



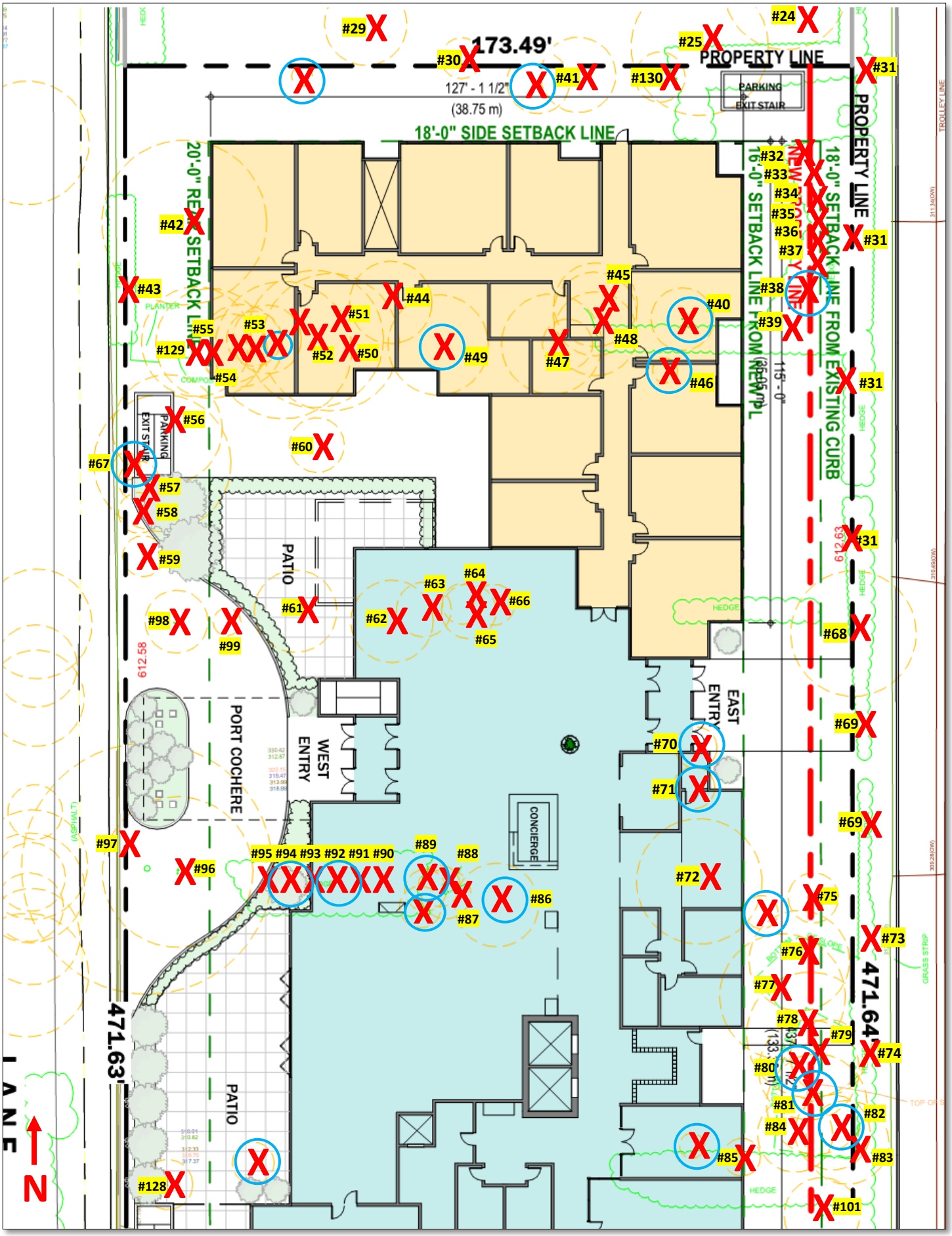
Site Survey for 6151, 6175, 6187, 6211, 6237 & 6251 Granville St. & 1511 West 47 Ave. – Not to Scale



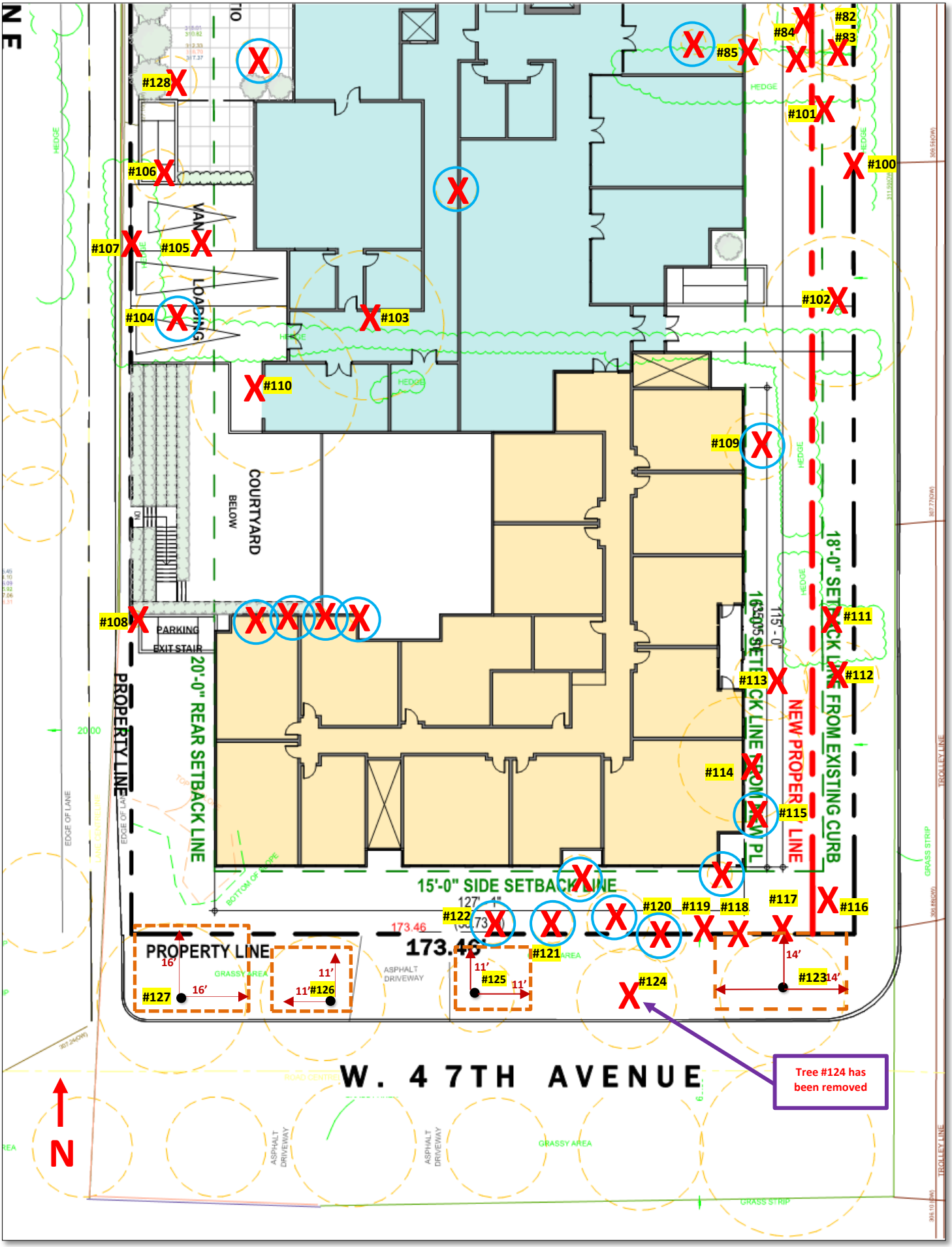
Site Plan – Not to Scale



P1 Parking Plan – Not to Scale



Tree Management Plan for 6151, 6175, 6187 & 6211 Granville St., Scale 1" = 30'



Tree Management Plan for 6237 & 6251 Granville St. & 1511 West 47 Ave., Scale 1" = 30'