

TREE CONSERVATION REPORT FOR 1DOOR4CARE TREATMENT CENTRE
401 SMYTH ROAD, CITY OF OTTAWA, ONTARIO

Prepared for:



Prepared by:

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Date: March 31, 2025
File: C23080



This Tree Conservation Report (TCR) has been prepared as part of a proposed 1D4C Treatment Centre development on the property located at 401 Smyth Road, in the City of Ottawa, henceforth referred to as the Subject Lands. Colville Consulting Inc was initially retained to complete an arborist report for the Children's Hospital of Eastern Ontario (CHEO) in 2022 as part of the Integrated Design Brief. Colville Consulting Inc. was later retained by EllisDon in August 2023 to update the initial arborist report to reflect updates to the development plan proposed on the property.

Works undertaken as part of this report include a detailed inventory of trees on the Subject Lands and mitigation strategies to reduce impact on trees recommended to be retained. An initial inventory of trees within and adjacent to the development footprint of the proposed 1D4C Treatment Centre was completed on June 9th and 10th, 2022, with a follow up inventory and assessment completed on August 25th, 2023.

Additional work was undertaken in 2024 which included a nest sweep completed in May 2024. This assessment was completed as part of the requirement for the removal of 23 trees to facilitate work on the 1D4C Treatment Centre development including the construction of a tunnel. For the purposes of this report, these previously removed trees have been included in the total number of trees inventoried and required for removal to facilitate development on the Subject Lands. Trees removed to facilitate tunnel construction in May 2024 have been identified on mapping in Appendix B for reference.

The general intent of the TCR is to identify trees within and adjacent to the proposed development and provide input on which trees are anticipated to be removed based on the construction plans prepared by EllisDon, and which trees may be able to be retained. Information on trees to be removed includes the rationale for removal in addition to information to be used during compensation discussions as part of the development review process with the city. It is our understanding that compensation type and extent will be determined by the total number and size of trees to be removed on site, as well as the ability to incorporate replacement trees into the landscape plan. Information on mitigation strategies has been included for trees to be retained.

The TCR has been prepared with consideration to the City of Ottawa Official Plan, specifically Policy 4.8.2 and the general goal of retaining healthy trees wherever feasible as opposed to removal and replacement.

This TCR is required as per the City of Ottawa Tree By-law (No. 2020-340). Schedule E of the By-law outlines the guidelines required for the completion of a TCR and states:

"The Tree Conservation Report (TCR) provides essential information that must be integrated with all plans for a site, including the grading, servicing and landscape plans, to ensure that trees are retained in development scenarios, where feasible, and that new trees will be accommodated and planted to contribute to the City's forest cover target and to address a site's tree loss.

The purpose of the Tree Conservation Report is to demonstrate how tree cover will be retained on the site, including mature trees, stands of trees, and hedgerows, using a design with nature approach to planning and engineering. A design with nature approach incorporates the natural features of a site into the design and engineering of a proposed development. This includes, but is not limited to, measures

such as retention of vegetation, consideration of wildlife habitats, and respect for natural drainage patterns..."

PROPOSED DEVELOPMENT

The Children's Hospital of Eastern Ontario (CHEO) is currently operating on the majority of the property located at 401 Smyth Road, in the City of Ottawa. The proposed development is located on the southwestern portion of the Subject Property to the east of Ring Road. Development on the Subject Lands is understood to include the construction of the 1Door4Care Treatment Centre. The proposed 1Door4Care Treatment Centre is being built as an addition to the existing CHEO operations on the Subject Property.

Any future modification to the proposed development plan may require further investigation in accordance with the conclusions and recommendations provided within this report.

ASSUMPTIONS AND LIMITING CONDITIONS

The observations and recommendations within this document are true for the period that staff were on site and therefore do not include any other activities and/or change in overall condition or health to any trees occurring on site before or after our site visit. The existence of any and all trees on site represent a certain inherent degree of risk and our evaluation and recommendation does not preclude all potential risk of failure. Inspection of trees was conducted using visual examination and limited to information gathered through visual observation.

In spite of our recommendations and conclusions in our report, it's important to understand that all trees are living organisms, meaning that their health and status has the potential to be in constant flux over time, and that trees are not immune to changes in site conditions or seasonal variations in weather conditions.

Possession of this report does not imply right of publication or use for any purpose other than to whom it is addressed to, without the prior expressed written or verbal consent of Colville Consulting Inc. This report shall be considered whole and should be considered incomplete if there are any pages missing.

SUBJECT LANDS

The Subject Lands are located on the existing surface parking lot structures, driveways, and landscaped areas on the southwestern portion of the Subject Property. The overall CHEO Subject Property occupies an approximate area of 13.9 hectares, while the Subject Lands assessed as part of this report are approximately 1.8 hectares in size. CHEO shares a campus with the Ottawa General Hospital and the University of Ottawa's Roger Guindon Hall, both located at 451 Smyth Road to the east.

The Subject Property is primarily surrounded by residential development, as well as institutional and recreational uses. A hydro corridor runs north of the Subject Property and is separated by a moderately sized woodland feature. The Location of the Subject Property and Subject Lands are shown in Figure 1 below.

METHODS

This Report has been completed in general compliance with the City of Ottawa's Tree Protection By-Law (No. 2020-340), with the goal of retaining and protecting as many trees as reasonably possible on the site and providing mitigation strategies for trees to be retained. This report is intended to be read in conjunction

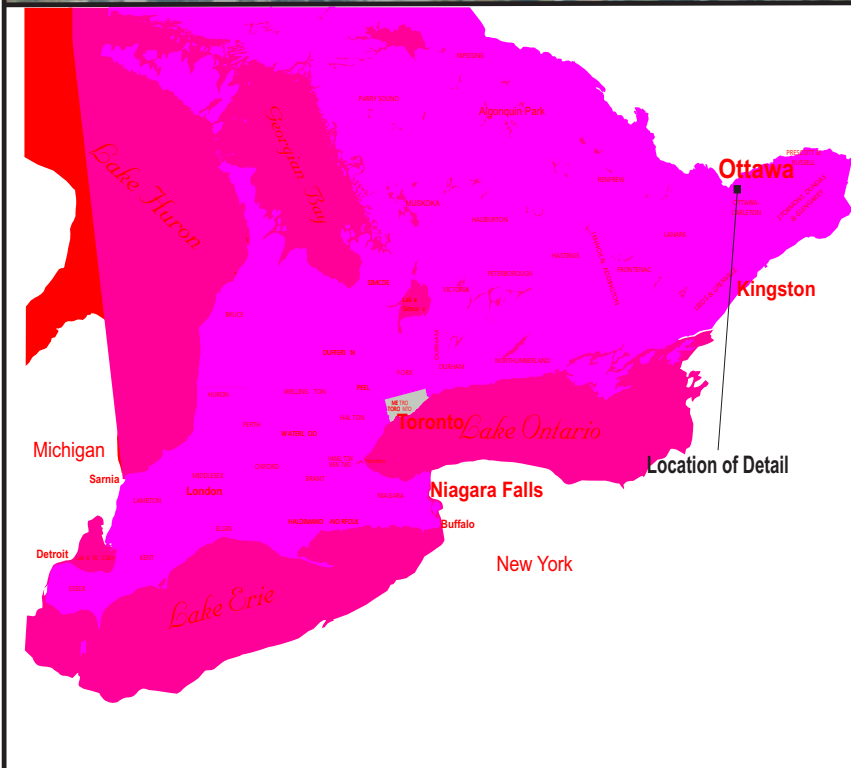


Figure 1
Location Map

Tree Conservation Report for
CHEO 1D4C Treatment Facility, City of Ottawa

Prepared for:



Prepared by:



DATE: March 2025

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with other design reports prepared for the project as part of the CHEO 1Door4Care Treatment Centre development plan prepared by EllisDon.

The work plan for this report included the following components:

- ◆ Field reconnaissance to collect tree inventory information for trees situated on the Subject Lands
- ◆ Preparation of summary mapping;
- ◆ Evaluation of potential tree saving opportunities based on the proposed site plan; and,
- ◆ Recommend appropriate mitigation measures to help preserve remaining trees on the site.

Tree inventories on the Subject lands were conducted on June 9th and 10th, 2022, and August 25th, 2023. These inventories included the following parameters:

Species – common and botanical names provided in the inventory table.

DBH – diameter at breast height (cm), measured at 1.3 m above the ground.

Canopy Size – Approximate diameter of tree canopy.

Condition – condition of tree considering trunk integrity, crown structure and crown.

Vigor- Condition ratings include Dead (D), poor (P), fair (F), and good (G).

Location – UTM coordinates of the tagged tree.

The inventory of trees on this property was limited to trees 10cm in DBH and larger for trees located within and adjacent to areas anticipated to be impacted through the proposed 1Door4Care Treatment Centre. For the purpose of this assessment, the limit of disturbance is understood to be the entirety of the Subject Lands.

TREE INVENTORY RESULTS

Tree Inventory data for all trees surveyed as part of the proposed 1Door4Care Treatment Centre is provided in Appendix A. A total of sixty-three (63) trees were inventoried and tagged with unique tree ID numbers on and adjacent to the Subject Lands during the site assessment. To facilitate the proposed development on the site, eleven (11) of the trees inventoried are recommended to be retained, while fifty-two (52) are proposed for removal.

Trees have been recommended for removal for a number of reasons including direct impacts from development, impacts from site grading, poor overall tree health, or that they are considered invasive.

Trees to be retained are primarily located in landscaped areas north of the proposed footprint of the development along the existing CHEO building and to the west adjacent to the existing walking path.

Of the trees to be removed, nine (9) are invasive common buckthorn. A significant amount of smaller common buckthorn was also observed within the thickets adjacent to Ring Road on the southern and western edges of the Subject Lands. Small thickets of Buckthorn were also observed along the northern edge of the Subject Lands.

Detailed information and recommendations for each tree inventoried is provided within Appendix A. Appendix B identifies current vegetation including the location of surveyed trees on the Subject Lands with

a current aerial photograph. Mapping in Appendix C shows the proposed development plan with all trees inventoried on and adjacent the Subject Lands and Critical Root Zones (CRZ). Tree protection fencing and limits of construction are also shown on Mapping in Appendix C. A selection of site photographs taken during field inventories are provided in Appendix D.

GENERAL TREE CARE RECOMMENDATIONS

The following are minimum standards for tree care recommendations that shall be applied as required to trees recommended to be retained as identified in Appendix A. Any additional specific standards or specifications required by the City of Ottawa shall supersede the following recommendations and be adhered to accordingly.

Tree Protection Zone

The Tree Protection Zone (TPZ) is required for trees to be retained and in order to protect roots and soil within the critical root zone (CRZ). The CRZ is the immediate root zone surrounding the trunk of the tree and is integral to tree for tree health and stability. During construction, no machinery, grading, or general work should be conducted within the limits of TPZ. The TPZ should be delineated through the installation of tree hoarding.

The following recommendations should be adhered to prevent unintended works from occurring within the CRZ.

- ◆ Tree protection zone fencing shall be installed following design criteria as outlined by the City of Ottawa Tree Protection Specifications provided in Appendix E.
- ◆ Signage should be adhered to the tree hoarding protection identifying it and explaining the TPZ and that no works are permitted within the limits of the tree hoarding.
- ◆ Construction materials, equipment, soil, construction waste, or debris shall not be stored within the Tree Protection Zone.
- ◆ TPZ fencing must be installed prior the start of construction activities on the site and inspected by City forestry staff.
- ◆ Tree Protection should be maintained throughout the duration of construction. Should any damage occur to tree protection, it should be repaired as soon as possible.
- ◆ Tree hoarding should remain installed until all construction works have been completed.

Trunk Protection

In areas where construction activities cannot avoid encroachment into the TPZ, and the project arborist has been consulted, protection should be applied to trunks and buttress roots.

- ◆ Thick wood planks installed around the trunk overtop of foam padding and secured with straps or wires are recommended.
- ◆ Barriers should be installed at an angle to protect trunk flare and buttress roots.

Root Maintenance

Root health is essential for tree health and stability. Roots can extend approximately 2-3 times the distance of the dripline. This can result in a significant loss of feeder roots during construction and may require further mitigation.

- ◆ If root cuts are required, the cut should be made as far from the trunk as possible and not occur within the dripline.
- ◆ Any roots over 2.5cm in diameter should be pruned rather than torn or crushed. Two methods that may be employed are soil excavation followed by selective root cutting, or mechanical root pruning tools designed to cut roots. Root pruning should only be completed by a trained and experienced arborist.
- ◆ Mulch may be used as a temporary measure to protect roots systems. Mulch applied at a thickness of 15cm to 30cm can help disperse weight and reduce root compaction.

Retained Trees - Work within CRZ

Generally, no work should be conducted within the CRZ of trees to be retained. However, where trees are recommended to be retained and minor encroachment into the CRZ is required, additional mitigation should be implemented. Trees inventoried that were in good health and with one third (33%) or less of their TPZ impacted through development have been recommended to be retained where possible. It is anticipated that any injury to these trees will not result in significant overall decline where the appropriate mitigation measures as outlined below are adhered to.

- ◆ Any work required within the CRZ should occur as far away from the trunk as feasible.
- ◆ The use of air spading should be considered when working within the CRZ. Forced air is used to loosen compacted soil, exposing the tree's root structure. This should be completed where soil compaction within the CRZ has occurred, or significant root pruning is required.
- ◆ Where above ground work is required, wood chip mulch may be used as a temporary measure to protect roots systems. Mulch applied at a thickness of 15cm to 30cm can help disperse weight and reduce root compaction. Mulch should be removed once work has been completed.
- ◆ If more than one-third of the tree's root system is required for removal, the structural stability may be compromised, and it is recommended that the tree be removed to prevent creating a hazard. Consultation with City staff should occur prior to removal.
- ◆ No changes to the final grade within the CRZ should occur.
- ◆ When work within the CRZ has been completed, the area should be returned to a suitable condition and tree hoarding reinstalled to the full extent of the CRZ to prevent further work within CRZ.

SPECIFIC TREE CARE RECOMMENDATIONS

Most trees to be retained will be adequately protected with adherence to the CRZ and installation of tree hoarding. In some instances, minor encroachment into the CRZ is required to facilitate construction. Tree #548 is in close proximity to the proposed realigned walking path on the west side of the development. The physical pathway does not run through tree 548. To facilitate the proposed pathway design, limited work will be required to occur within the TPZ of Tree 548. Based on conversations with Landscape Design, it is understood that the extent of grade change within the tree protection zone is limited and will result in a minimal change in the grade within the TPZ. Tree 548 is considered a viable tree for retention based on existing size and vigour.

The use of air spading for work within the impacted area of Tree 548 should be used to assist in root pruning and reducing impacts on the root system during construction. Additional mitigation measures recommended to be applied include installing boards at an angle to protect trunk flare and buttress root, flush cutting any roots encountered during construction within the TPZ and decompaction and mulching of the area post grading as required.

CONCLUSION

The proposed development of the 1Door4Care Treatment Centre is anticipated to require the removal of fifty-two (52) trees to facilitate grading and construction. Some trees recommended for retention are located in close proximity to the proposed 1Door4Care Treatment Centre and may need to be removed as part of additional design requirements moving forward. Additional assessments would be required to address these design changes as needed.

Based on the existing site plans, all work is proposed to occur on the Subject Property and well removed from adjacent properties. Should any additional work outside of what has been proposed be required along property lines, or within the drip lines of trees growing on adjacent properties that have the potential to be impacted, a consent letter from the neighboring property owners would be required. Updates to this report would also be required to reflect plan changes would also be required.

Tree Protection measures should be incorporated into design plans as recommended in this report for trees that may be impacted through development. Tree protection measures identified for individual trees should be strictly adhered to in order to limit negative impacts and improve long-term viability.

Based on background research, our site visits, and our findings, we have come to a few important recommendations and conclusions which include the following:

- ◆ It is anticipated that to facilitate the proposed development of the 1Door4Care Treatment Centre, fifty-two (52) trees will need to be removed on the Subject Lands.
- ◆ Of the 52 trees recommended for removal, 23 have already been removed in May 2024 to facilitate construction of the 1Door4Care tunnel.
- ◆ Recommendations for the retention and removal of individual trees are subject to change pending modifications to the final development plan and/or grading requirements associated with construction.
- ◆ As per the City of Ottawa By-law (No. 2020-340), The removal of trees on the site cannot occur until written approval of a Tree Conservation Report has been granted through a tree permit.
- ◆ A limit of work fence/ tree hoarding shall be installed along the CRZ of trees to be retained as shown on the site plan in Appendix C.
- ◆ Where work within the CRZ cannot be avoided for trees recommended to be retained, mitigation measures described in the above tree care recommendations should be followed to reduce potential damage to the tree.
- ◆ Tree hoarding for trees to be retained shall meet the City of Ottawa Tree Protection Specifications, as attached in Appendix E.
- ◆ Any Common Buckthorn or other invasive tree species observed during construction should be removed and replaced with native species where possible.

- ◆ Tree care recommendations provided should be considered a minimum standard and applied to all trees to be retained in development areas.
- ◆ Tree protection measures and mitigation cannot guarantee tree protection and long term survival, and the potential for damage may still occur. Ongoing monitoring to ensure tree protection measures are effective is recommended.
- ◆ Any species proposed to be planted on the Subject Lands through the landscape plan should be selected based on the site specific conditions. Due to the urban nature of the development, tree species selected should generally be tolerant to urban pressures such as increased soil compaction due to potential foot traffic and higher rates of sodium in the soil due to de-icing efforts.
- ◆ Wherever possible, native and non-invasive trees species should be utilized within the landscape plan.
- ◆ Where possible, tree replacement plantings should be incorporated in areas where tree removal has occurred to facilitate construction to maintain existing canopy cover levels in these locations.
- ◆ Vegetation loss on the Subject Lands to facilitate development should be offset to maintain and/or enhance the canopy cover and plant diversity on the site. Recommendations within the Landscape Plan should be adhered to meet these objectives.

Respectfully submitted by:



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Vertechs Design Landscape Architects, December 5, 2024. 1Door4Care (1D4C) RFP CHEO Integrated Treatment Landscape Plan and Tree Georeferencing Information.

APPENDICES

Appendix A – Tree Inventory Data

Appendix B – Figure #2 - Current Vegetation on Subject Lands

Appendix C – Figure #3 – Tree Inventory and CRZ for Proposed 1Door4Care Treatment Centre

Appendix D– Site Photographs – 1Door4Care Treatment Centre

Appendix E– City of Ottawa Tree Protection Specifications

Appendix A

Tree Inventory Data

Appendix B

Figure #2 - Current Vegetation on Subject Lands



Legend

— Subject Property Boundary

Individual Trees Inventoried

- Tree Inventory
- Critical Root Zone
- Trees Removed for Tunnel Construction May 2024

Tree Clusters

- Cluster of Trees/Shrubs
- Hedgerow

GeoOttawa Data

- Tree Canopy
- Property Parcel

*All trees inventoried are located on the Subject Lands
No city or shared ownership trees within Work Area

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Figure 2
Current Vegetation on Subject Lands

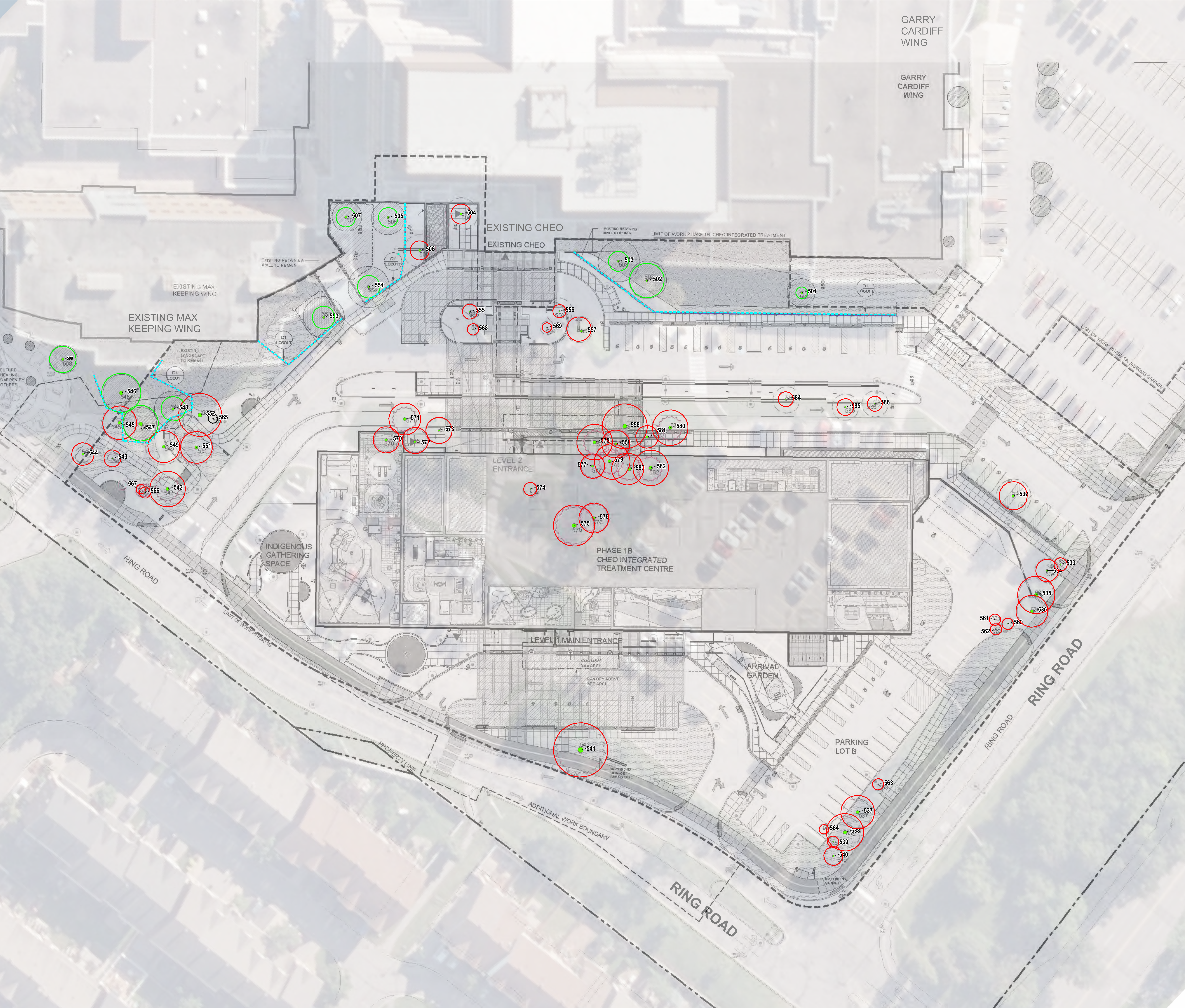
Proposed Treatment Facility
401 Smyth Road, Ottawa

Prepared for: Ellis Don
Prepared by: COLVILLE CONSULTING INC.

DATE: December 2024 FILE: C23080

Appendix C

Figure #3 - Tree Inventory and CRZ for Proposed
1Door4Care Treatment Centre



- Legend**
- Tree Inventory (DBH)
 - Critical Root Zone
 - Recommended to be Removed
 - Recommended to be Retained
 - Required Tree Protection Fencing



Figure 3
Tree Inventory

Proposed 1Door4Care
401 Smyth Road, Ottawa

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Appendix D

Site Photographs - Proposed
1Door4Care Treatment Centre

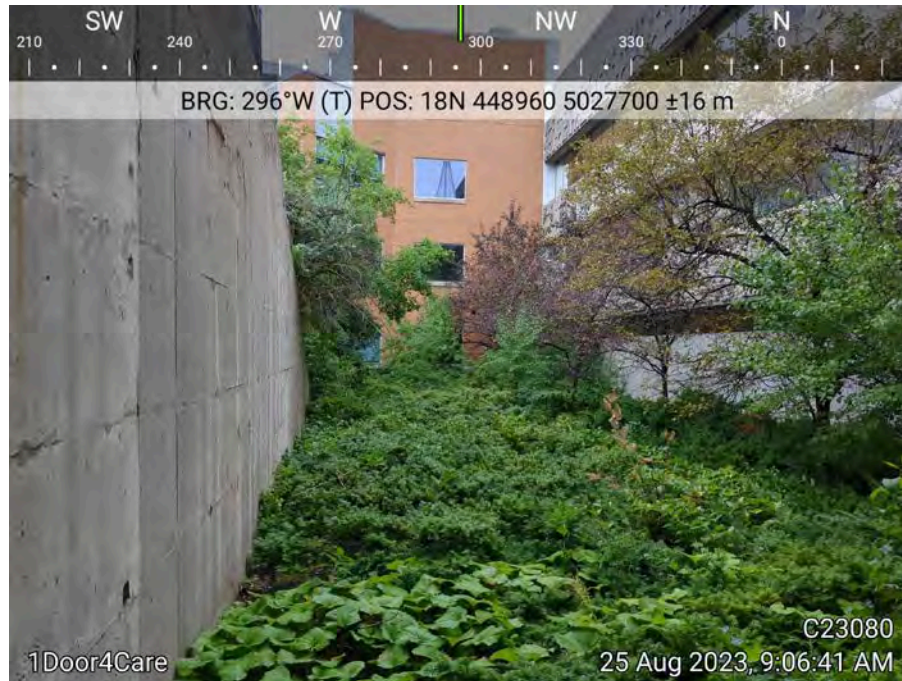


Photo 1: Landscaping adjacent existing hospital below drop off area.



Photo 2: Viewing northwest at manicured area north of drop off area.



Photo 3: Trees adjacent walking path on northwest portion of proposed development



Photo 4: Vegetation adjacent existing hospital staff access



Photo 5: View of trees to be removed in footprint of new building.



Photo 6: View of landscaped trees southeast of existing patient drop off door.



Photo 7: View of trees to be removed southwest of patient drop off door.



Photo 8: View of trees and vegetation in hedgerow adjacent Ring Road.



Photo 9: Example of vegetation conditions within hedgerow along Ring Road.



Photo 10: Cluster of trees in landscaped area southwest of CHEO main entrance.



Photo 11: Tree #534 in poor/fair condition with significant canopy dieback.



Photo 12: Tree #556 adjacent CHEO main entrance, fair condition with reduced canopy.

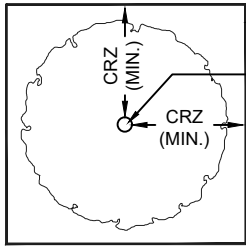


Photo 13: Tree #546, weak union at 1.5 metres.

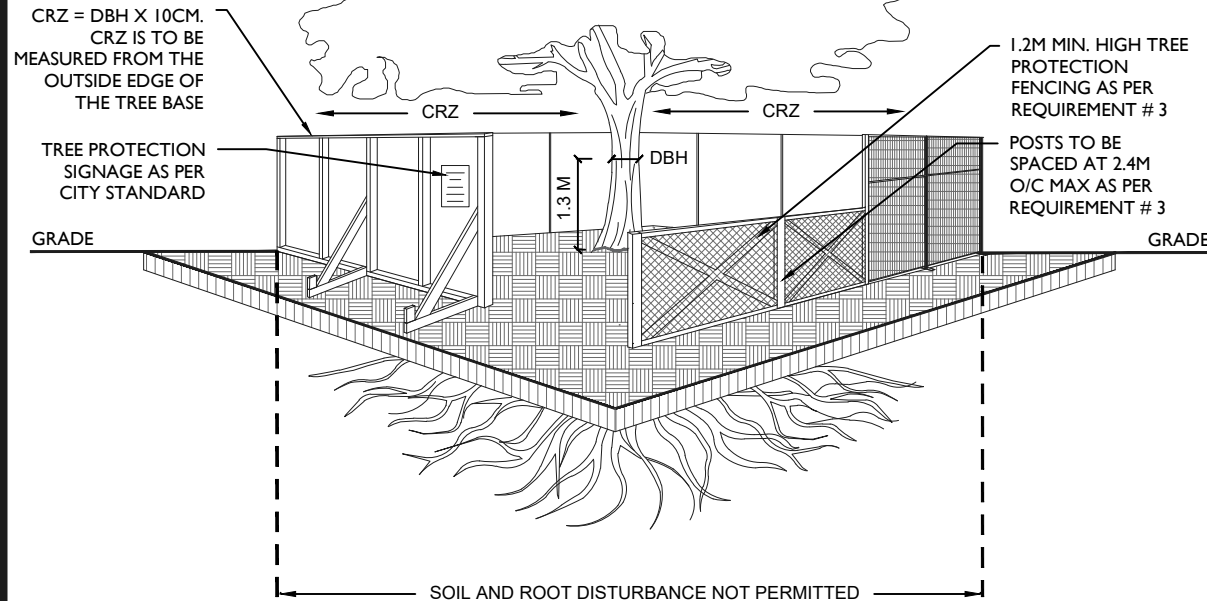


Photo 14: Tree #562, example of larger DBH Common Buckthorn present in hedgerows around parking area.

Appendix E
City of Ottawa Tree
Protection Specifications



PLAN VIEW



ACCESSIBLE FORMATS AND COMMUNICATION
SUPPORTS ARE AVAILABLE, UPON REQUEST

TREE PROTECTION REQUIREMENTS:

1. PRIOR TO ANY WORK ACTIVITY WITHIN THE CRITICAL ROOT ZONE (CRZ = 10 X DIAMETER) OF A TREE, TREE PROTECTION FENCING MUST BE INSTALLED SURROUNDING THE CRITICAL ROOT ZONE, AND REMAIN IN PLACE UNTIL THE WORK IS COMPLETE.
2. UNLESS PLANS ARE APPROVED BY CITY FORESTRY STAFF, FOR WORK WITHIN THE CRZ:
 - DO NOT PLACE ANY MATERIAL OR EQUIPMENT - INCLUDING OUTHOUSES;
 - DO NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE;
 - DO NOT RAISE OR LOWER THE EXISTING GRADE;
 - TUNNEL OR BORE WHEN DIGGING;
 - DO NOT DAMAGE THE ROOT SYSTEM, TRUNK, OR BRANCHES OR ANY TREE;
 - ENSURE THAT EXHAUST FUMES FROM ALL EQUIPMENT ARE NOT DIRECTED TOWARD ANY TREE CANOPY.
 - DO NOT EXTEND HARD SURFACE OR SIGNIFICANTLY CHANGE LANDSCAPING
3. TREE PROTECTION FENCING MUST BE AT LEAST 1.2M IN HEIGHT, AND CONSTRUCTED OF RIGID OR FRAMED MATERIALS (E.G. MODULOC - STEEL, PLYWOOD HOARDING, OR SNOW FENCE ON A 2"X4" WOOD FRAME) WITH POSTS 2.4M APART, SUCH THAT THE FENCE LOCATION CANNOT BE ALTERED. ALL SUPPORTS AND BRACING MUST BE PLACED OUTSIDE OF THE CRZ, AND INSTALLATION MUST MINIMISE DAMAGE TO EXISTING ROOTS. (SEE DETAIL)
4. THE LOCATION OF THE TREE PROTECTION FENCING MUST BE DETERMINED BY AN ARBORIST AND DETAILED ON ANY ASSOCIATED PLANS FOR THE SITE (E.G. TREE CONSERVATION REPORT, TREE INFORMATION REPORT, ETC). THE PLAN AND CONSTRUCTED FENCING MUST BE APPROVED BY CITY FORESTRY STAFF PRIOR TO THE COMMENCEMENT OF WORK.
5. IF THE FENCED TREE PROTECTION AREA MUST BE REDUCED TO FACILITATE CONSTRUCTION, MITIGATION MEASURES MUST BE PRESCRIBED BY AN ARBORIST AND APPROVED BY CITY FORESTRY STAFF. THESE MAY INCLUDE THE PLACEMENT OF PLYWOOD, WOOD CHIPS, OR STEEL PLATING OVER THE ROOTS FOR PROTECTION OR THE PROPER PRUNING AND CARE OF ROOTS WHERE ENCOUNTERED.

THE CITY'S TREE PROTECTION BY-LAW, 2020-340 PROTECTS BOTH CITY-OWNED TREES, CITY-WIDE, AND PRIVATELY-OWNED TREES WITHIN THE URBAN AREA. PLEASE REFER TO WWW.OTTAWA.CA/TREEBYLAW FOR MORE INFORMATION ON HOW THE TREE BY-LAW APPLIES.



TREE PROTECTION SPECIFICATION

TO BE IMPLEMENTED FOR RETAINED TREES, BOTH ON SITE AND ON ADJACENT SITES, PRIOR TO ANY TREE REMOVAL OR SITE WORKS AND MAINTAINED FOR THE DURATION OF WORK ACTIVITIES ON SITE.

SCALE: NTS

DATE: MARCH 2021

DRAWING NO.: 1 of 1