Tree Inventory and Preservation Plan
3770 and 3940 Montrose Road
Niagara Falls, Ontario

prepared for

Cassone Dwelling (BT) Inc.
101 Bradwick Drive
Concord, Ontario L4K 1K5

prepared by

KUNTZ
FORESTRY
CONSULTING Inc.

146 Lakeshore Road West
PO Box 1267 Lakeshore W PO
Oakville ON L6K 0B3
t: 289.837.1871 f: 866.693.6390
e: consult@kuntzforestry.ca

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KUNTZ FORESTRY CONSULTING INC. Project P2940

Introduction

Kuntz Forestry Consulting Inc. was retained by Cassone Dwelling (BT) Inc. to complete a Tree Inventory and Preservation Plan for the proposed development at 3370 and 3930 Montrose Road in Niagara Falls, Ontario. The subject property is located on the east side of Montrose Road, north of Thorold Stone Road, and south of Monastery Road, within a mixed-use area.

The work plan for this tree preservation study included the following:

- Prepare an inventory of the tree resources measuring 10cm diameter at breast height (DBH) and greater on and within six metres of the subject property with the potential to be impacted by the proposed works and trees of all sizes within the road right-of-way;
- Evaluate potential tree saving opportunities based on proposed development plans; and
- Document the findings in a Tree Inventory and Preservation Plan.

The results of the evaluation are provided below.

Methodology

The initial tree inventory was conducted on 16 September 2021 during which trees greater than 15cm DBH on and adjacent to the subject property with the potential to be impacted by the proposed works and trees of all sizes within the road right-of-way were inventoried. A second site visit occurred on 14 February 2024 to inventory trees measuring between 10cm and 15cm DBH with the potential to be impacted by the proposed works. Trees were located using aerial imagery and estimations made from known points in the field. Trees located on the subject property were tagged and identified as Trees 657 – 689. Trees located on neighbouring properties were identified as Trees A – J. Tree polygons (groups of trees) were denoted with a "P" before their identification number / letter. Tree locations are shown on Figure 1. See Table 1 for the results of the inventory. See Appendix A for photographs of the trees.

Tree resources were assessed utilizing the following parameters:

Tree # – Number assigned to trees that corresponds to Figure 1.
Species – Common and botanical names provided in the inventory table.
DBH – Diameter (cm) at breast height, measured at 1.4m above the ground.
Condition – Condition of tree considering trunk integrity (TI), crown structure (CS) and crown vigor (CV). Condition ratings include poor (P), fair (F), and good (G).
Crown Dieback – Percentage of dead branches within the crown.
Dripline – Crown radius (m).
Comments – Any other relevant tree condition information.

Existing Site Conditions

The subject property is occupied by a commercial plaza consisting of two retail buildings, asphalt parking areas, walkways, and a driveway providing access to Montrose Road. Refer to Figure 1 for the existing site conditions.

Individual Tree Resources

The inventory documented a total of 42 trees and one tree polygon on and within six metres of the subject property with the potential to be impacted by the proposed works. Refer to Table 1 and for the full tree inventory, Figure 1 for the location of trees reported in the tree inventory, and Appendix A for photographs of the trees.

Tree resources were comprised of Austrian Pine (*Pinus nigra*), Blue Spruce (*Picea pungens*), Pyramidal English Oak (*Quercus robur 'Fastigiata'*), Eastern White Cedar (*Thuja occidentalis*), Emerald Cedar (*Thuja occidentalis 'Smaragd'*), Green Ash (*Fraxinus pennsylvanica*), Magnolia species (*Magnolia sp.*), Manitoba Maple (*Acer negundo*), Norway Maple (*Acer platanoides*), Poplar species (*Populus sp.*), Scots Pine (*Pinus sylvestris*), Thornless Honey Locust (*Gleditsia triacanthos inermis*), White Birch (*Betula papyrifera*), White Pine (*Pinus strobus*), and White Spruce (*Picea glauca*).

It should be noted that no at-risk or threatened tree species were observed on the subject property.

Proposed Development

The proposed development includes the demolition of the two existing buildings, asphalt parking areas, and walkways, and the construction of blocks of townhomes and semi-detached homes, roads, sidewalks, parking areas, and outdoor amenity spaces. Refer to Figure 1 for the proposed development.

Discussion

The following sections provide a discussion and analysis of tree impacts and tree preservation relative to the proposed development and existing conditions.

Development Impacts / Tree Removal

The removal of 32 trees is required to accommodate the proposed development. The required tree removals include Trees 657 – 666 and 668 – 689. All trees identified for removal directly either conflict directly with the proposed development or the level of encroachment into their driplines resulting from the proposed work would be at an intolerable level such that we would not expect the trees to overcome the injury. It should be noted that Tree 680 is identified for removal as a result of the re-grading proposed within the buffer area. The removal of one additional tree, Tree 667, is recommended due to its poor condition.

Trees 681 – 683 are located on a neighbouring property and as such, written permission from the respective neighbouring property owner will be required prior to the removal of these trees. All other trees identified for removal are located within the boundaries of the subject property.

Refer to Figure 1 for the location of recommended and required tree removals.

Tree Preservation

The preservation of the remaining nine trees and one tree polygon will be possible with the use of appropriate tree protection measures as indicated on Figure 1. The trees and polygon designated for preservation include Trees A, B, D, and E – J, and Polygon PC. Tree protection measures must be implemented prior to the proposed development to ensure tree resources designated for retention are not impacted. Refer to Figure 1 for the location of required tree preservation fencing and general Tree Protection Plan Notes.

Where the dripline of a tree cannot be fully respected, including for Trees A and B, special mitigation measures have been prescribed and are described below.

Trees A and B

Encroachment into the driplines of Trees A and B will be required to facilitate the installation of a proposed retaining wall. If the following mitigation measures are employed, long-term adverse effects are not anticipated for these trees.

1. The preservation fencing, as shown on Figure 1, should be installed as required and maintained throughout construction.
2. Air-spade or low-pressure hydro-vacuum technology should be used to excavate a trench at the limit of excavation for the proposed retaining wall, under the supervision of a Certified Arborist.
3. The depth of the trench will depend on the depth of excavation required to install the proposed retaining wall.
4. The roots of Trees A and B are to be pruned inside the trench by a Certified Arborist in accordance with Good Arboricultural Standards.
5. The trench is to be backfilled with clean topsoil.

Given that Trees A and B are located on a neighbouring property, the respective neighbouring property owner should be engaged prior to the commencement of the proposed works to discuss the anticipated injury to their trees.

It should be noted that an approximately two-metre-high wood fence exists adjacent to Trees A, B, D, E, and F, and Polygon PC and an approximately two-metre high chain-link fence exists adjacent to Trees G – J. Should these fences be preserved throughout the proposed works, they may serve as tree preservation fencing, conditional upon approval by the City of Niagara Falls. Should these fences be removed as part of the proposed works, the installation of designated tree preservation fencing will be required in the locations indicated on Figure 1.

Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by Cassone Dwelling (BT) Inc. to complete a Tree Inventory and Preservation Plan as part of a development application for the property at 3770 and 3940 Montrose Road in the City of Niagara Falls, Ontario. A tree inventory was conducted and reviewed in the context of the proposed site plan.

The findings of the study indicate a total of 42 trees and one tree polygon on and within six metres of the subject property with the potential to be impacted by the proposed works and within the road right-of-way. The removal of 32 trees is required to accommodate the

proposed development. The removal of one additional tree is recommended due to its poor condition. The remaining nine trees and one tree polygon can be saved provided appropriate tree protection measures are installed prior to the development.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for the location of required tree preservation fencing and general Tree Protection Plan Notes.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure 1. All tree protection measures should follow the guidelines as set out in the tree preservation plan notes and the tree preservation fencing detail.

- No construction activity including surface treatments, excavations of any kind, storage of materials or vehicles, unless specifically outlined above, is permitted within the area identified on Figure 1 as a tree protection zone (TPZ) at any time during or after construction.

- Special mitigation measures have been prescribed for select trees, as outlined in the *Tree Preservation* section of this report.

- Branches and roots that extend beyond prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional. All pruning of tree roots and branches must be in accordance with Good Arboricultural Standards.

- Site visits pre, during, and post construction are recommended by either a certified consulting arborist (I.S.A.) or registered professional forester (R.P.F.) to ensure proper utilization of tree protection barriers. Trees should also be inspected for damage incurred during construction to ensure appropriate pruning or other measures are implemented.

Respectfully Submitted,

Kuntz Forestry Consulting Inc.

Kaylee Harper

Kaylee Harper, B.Sc.Env. Ecology
Ecologist, ISA Certified Arborist #ON-2749A
Email: kaylee.harper@kuntzforestry.ca
Office: 289-837-1871 ext. 24
Cell: 519-572-5949

Limitations of Assessment

Only the tree(s) identified in this report were included in the inventory. The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These may include a visual examination taken from the ground of all the above-ground parts of the tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of attack by insects, discoloured foliage, the condition of any visible root structures, the degree of lean (if any), the general condition of the trees and the identification of potentially hazardous trees or recommendations for removal (if applicable). Where trees could not be directly accessed (i.e. due to obstructions, and/or on neighbouring properties), trees were assessed as accurately as possible from nearby vantage points.

Locations of trees provided in the report are determined as accurately as possible based on the best information available. If official survey information is not provided, tree location in the report may not be exact. In this case, if trees occur on or near property boundaries, an official site survey may be required to determine ownership utilizing specialized survey protocol to gain precise location.

Furthermore, recommendations made in this report are based on the site plans that have been provided at the time of reporting. These recommendations may no longer be applicable should changes be made to the site plan and/or grading, servicing, or landscaping plans following report submission.

Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms, and their health and vigor constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather conditions. Any tree will fail if the forces applied to the tree exceed the strength of the tree or its parts.

Although every effort has been made to ensure that this assessment is reasonably accurate, the trees should be re-assessed periodically. The assessment presented in this report is valid at the time of inspection.

Table 1. Tree Inventory

Location: 3770 and 3930 Montrose Road, Niagara Falls Date: 16 September 2021 and 14 February 2024 Surveyors: KNH

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	DL	Comments	Action
657	Honey Locust (Shademaster)	*Gleditsia triacanthos inermis*	31.5	G	G	G		4.5	Exposed roots (L), deadwood (L), union at 3m	Remove
658	Honey Locust (Shademaster)	*Gleditsia triacanthos inermis*	38.0	G	G	G		5.0	Union at 2m, pruning wounds (L)	Remove
659	Austrian Pine	*Pinus nigra*	43.0	FG	G	G		4.0	Pruning wounds (L), lean (L), exposed roots (VL)	Remove
660	White Spruce	*Picea glauca*	40.0	FG	G	G		3.0	Sweep (L), pruning wounds (L)	Remove
661	Austrian Pine	*Pinus nigra*	43.0	G	G	G		3.5	Pruning wounds (L)	Remove
662	White Birch	*Betula papyrifera*	19.5, 8	P	PF	F	10	3.5	Poor form (M), bow (M), crack (M) with decay in larger leader, decay along larger leader to base, deadwood (L)	Remove
663	Austrian Pine	*Pinus nigra*	~48	FG	G	FG		3.5	Lean (L), pruning wounds (L)	Remove
664	White Spruce	*Picea glauca*	40.0	G	G	G		2.5	Lean (VL), pruning wounds (L)	Remove
665	Austrian Pine	*Pinus nigra*	39.0	F	FG	FG		4.0	Lean (L), V-union at 2m (co-dominance) with 3 leaders, pruning wounds (L)	Remove
666	White Spruce	*Picea glauca*	38.0	FG	G	FG		4.0	Sweep (L), epicormic branching (L)	Remove
667	Green Ash	*Fraxinus pennsylvanica*	37.5	P	P	PF	70	3.0	Emerald Ash Borer, main leader dead with decay, epicormic branching (H), bark sloughing	Remove (Condition)
668	Austrian Pine	*Pinus nigra*	41.0	F	G	FG		4.0	Pruning wounds (L), girdling roots (L), sweep (L), bow (L)	Remove
669	Austrian Pine	*Pinus nigra*	~28	FG	G	FG		4.0	Lean (L), pruning wounds (L)	Remove
670	Austrian Pine	*Pinus nigra*	38.0	F	G	G		4.0	Lean (M), pruning wounds (L), girdling roots (L)	Remove
671	White Spruce	*Picea glauca*	41.0	FG	G	G		3.0	Epicormic branching (L), pruning wounds (L), lean (L)	Remove
672	Austrian Pine	*Pinus nigra*	48.0	G	G	G		4.0	Pruning wounds (L)	Remove
673	Austrian Pine	*Pinus nigra*	48.0	G	G	G		3.5	Pruning wounds (L), sweep (VL)	Remove
674	Scots Pine	*Pinus sylvestris*	35.5	FG	G	G		3.5	Lean (L), pruning wounds (L)	Remove
675	Blue Spruce	*Picea pungens*	33.5	G	G	G		2.5	Pruning wounds (L), exposed roots (VL)	Remove

676	Blue Spruce	*Picea pungens*	28.0	FG	G	FG		2.5	Exposed roots (L), pruning wounds (L) with sap, stem wounds (L) with sap, lean (VL), epicormic branching (VL)	Remove
677	Blue Spruce	*Picea pungens*	28.0	G	G	G		2.5	Pruning wounds (L) with sap	Remove
678	Blue Spruce	*Picea pungens*	28.0	FG	G	FG		2.5	Pruning wounds (L) with sap, lean (L), epicormic branching (VL)	Remove
679	Manitoba Maple	*Acer negundo*	33.0	F	FG	FG		4.0	V-union at 1.5m with included bark, epicormic branching (M), exposed roots (M), vine competition (M)	Remove
680	Blue Spruce	*Picea pungens*	19.5	G	G	G		2.0	Pruning wounds (L), exposed roots (VL)	Remove
681	Honey Locust (Shademaster)	*Gleditsia triacanthos inermis*	23.5	FG	FG	F	10	4.0	Bow (L), pruning wounds (L), sparse crown (L), deadwood (L), epicormic branching (L)	Remove
682	Honey Locust (Shademaster)	*Gleditsia triacanthos inermis*	16.0	G	F	PF	25	3.0	Union at 2m, epicormic branching (H), sparse crown (M), deadwood (L)	Remove
683	Honey Locust (Shademaster)	*Gleditsia triacanthos inermis*	13.5	G	F	PF	35	2.5	Union at 2m, epicormic branching (H), sparse crown (M), deadwood (M)	Remove
684	English Oak (Pyramidal)	*Quercus robur 'Fastigiata'*	32, 18	FG	FG	G		4.5	Union at 0.2m, asymmetrical crown (L)	Remove
685	English Oak (Pyramidal)	*Quercus robur 'Fastigiata'*	30.0	G	FG	G		3.5	Union at 0.2m, asymmetrical crown (L)	Remove
686	English Oak (Pyramidal)	*Quercus robur 'Fastigiata'*	24, 28, 24	FG	FG	G		5.0	Union at 0.1m and 0.2m, asymmetrical crown (L)	Remove
687	Honey Locust (Shademaster)	*Gleditsia triacanthos inermis*	39.0	FG	G	G		5.5	Lean (L), union at 2m, pruning wounds (L)	Remove
688	Honey Locust (Shademaster)	*Gleditsia triacanthos inermis*	37.5	G	G	G		5.5	Union at 1.5m, pruning wounds (L)	Remove
689	Honey Locust (Shademaster)	*Gleditsia triacanthos inermis*	33.0	G	G	G		5.5	Pruning wounds (L), included branching in trunk, exposed roots (L)	Remove
A	Honey Locust (Shademaster)	*Gleditsia triacanthos inermis*	~55	G	G	G		8.0	Union at 3m, pruning wounds (L)	Preserve
B	Norway Maple (Crimson King)	*Acer platanoides 'Crimson King'*	~50	FG	G	G		4.0	Girdling roots (M)	Preserve

PC	Emerald Cedar	*Thuja occidentalis 'Smaragd'*	~15	G	G	G		1.0	Three trees	Preserve
	Eastern White Cedar	*Thuja occidentalis*	~15	G	G	G			One tree	Preserve
D	Magnolia species	*Magnolia sp.*	~16, 16, 12	G	G	G		3.0	Union at base, union at 0.5m with included bark	Preserve
E	Norway Maple	*Acer platanoides*	~22	F	G	G		3.0	Exposed roots (L), girdling roots (M), lean (VL)	Preserve
F	White Pine	*Pinus strobus*	~10	F	F	F		1.0	Multiple branch attachments, poor branch unions	Preserve
G	Poplar species	*Populus sp.*	~12	FG	G	G		3.0	Lean (L)	Preserve
H	Manitoba Maple	*Acer negundo*	~14	F	F	F		3.0	Bow (M), epicormic branching (M)	Preserve
I	Poplar species	*Populus sp.*	~15	FG	G	G		4.0	Lean (L)	Preserve
J	Poplar species	*Populus sp.*	~12	FG	G	G		2.5	Bow (L)	Preserve

Codes		
DBH	Diameter at Breast Height	(cm)
TI	Trunk Integrity	(G, F, P)
CS	Crown Structure	(G, F, P)
CV	Crown Vigor	(G, F, P)
CDB	Crown Dieback	%
DL	Dripline	(m)
P = poor, F = fair, G = good, ~ = estimate, (VL) = very light, (L) = light, (M) = moderate, (H) = heavy		

Appendix A. Site Photographs

Image 1. Trees 658 (left) and 658 (right)

Image 2. From left to right, Trees 659 - 661

Image 3. From left to right, Trees 662, A, and B

Image 4. From left to right, Trees 663 - 666


Image 5. Tree 667


Image 6. From left to right, Trees 668 - 671

Image 7. From left to right, Trees 671 – 674

Image 8. Tree 675

Image 9. From left to right, Trees 676 – 678

Image 10. Tree polygon PD


Image 11. Tree E


Image 12. Tree 679

Image 13. Tree 680

Image 14. From right to left, Trees 681 - 683

Image 15. Tree 684 (centre), Tree 685 (left), and Tree 686 (right)

Image 16. From left to right, Tree 687 – 689


Image 17. Tree F


Image 18. Tree G (left) and Tree I (right)

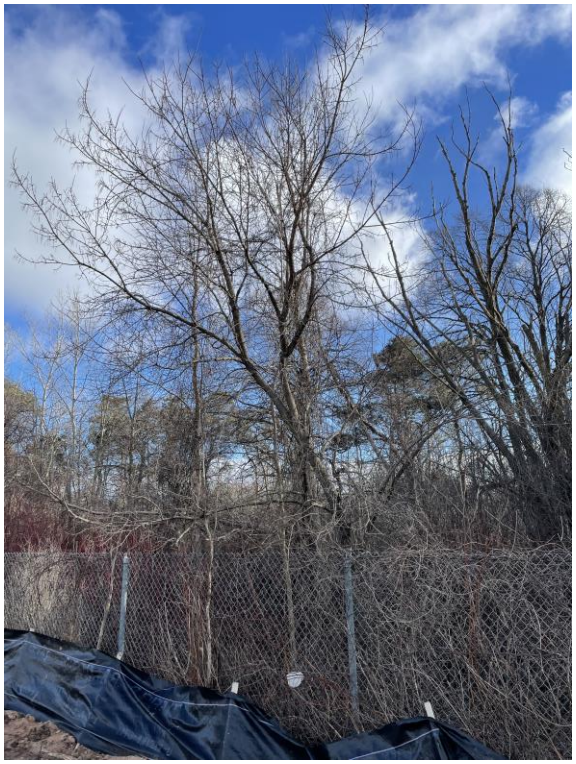
Image 19. Tree H

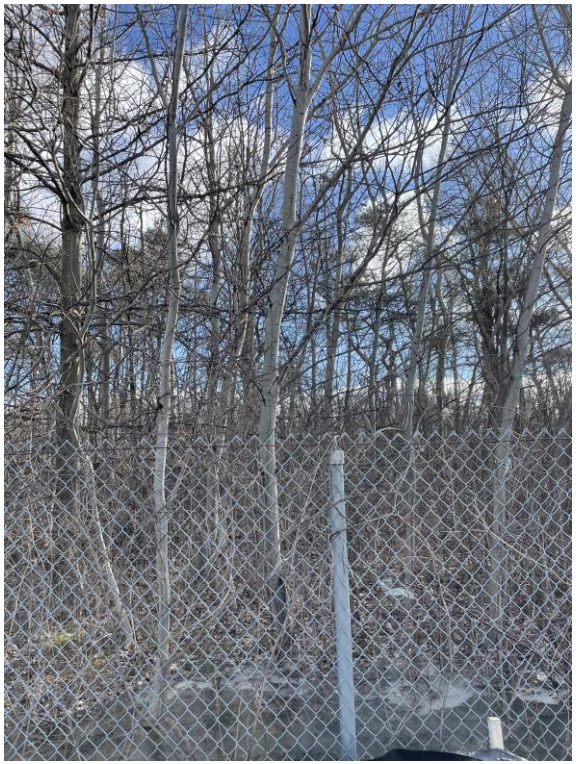
Image 20. Tree J (centre)