



McKINLEY
ENVIRONMENTAL
SOLUTIONS

Environmental Impact Statement &
Tree Conservation Report (Revised)
1026 to 1054 Hunt Club Road, Ottawa, ON



August 2017
Prepared for Claridge Homes Inc.

McKINLEY ENVIRONMENTAL SOLUTIONS
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Figure 1: Site Overview

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EXECUTIVE SUMMARY

McKinley Environmental Solutions (MES) was retained by Claridge Homes to prepare an Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) for the proposed development of the property at 1026, 1038, 1040, 1050, and 1054 Hunt Club Road, Ottawa, Ontario (the Site). The EIS and TCR are presented as an integrated submission and should be read together.

The Site is approximately 0.93 ha (2.3 acres) in size with approximately 136 m of frontage on Hunt Club Road. The Site is bounded by Hunt Club Road to the north and a thin Deciduous Hedgerow to the east, beyond which is the Airport Parkway. The property west of the Site is developed and currently includes a church and a parking lot. The area south of the Site includes a White Cedar Coniferous Forest and portions of the Lester Road Provincially Significant Wetland Complex (LRPSW). The White Cedar Coniferous Forest and the thin Deciduous Hedgerow east of the Site (along the Airport Parkway) are part of the National Capital Commission (NCC) Greenbelt. Portions of the White Cedar Coniferous Forest and LRPSW are also shown as part of the City of Ottawa Natural Heritage System on Schedule L1 of the Official Plan.

The Site consists of five (5) previously developed residential lots which are currently used as a contractor's yard, storage area, and office. Currently there are four (4) buildings found within the Site. This includes two (2) residential homes (one vacant, one used as a contractor office), a covered work area, and a storage shed. The majority of the remainder of the Site is occupied by paved and compacted gravel surfaces (driveways and parking). Vegetation within the Site is typical of older residential properties in the area, consisting mainly of mature planted trees growing in low densities, surrounded by hard surfaces and manicured lawns/gardens. In some areas lawns are overgrown with typical yard weeds (e.g. Dandelion, Canada Goldenrod, Lamb's Quarter's Pigweed, Common Burdock, Common Buckthorn, etc.) due to a lack of maintenance. A Coniferous Hedgerow dominated by planted Norwegian Spruce is present along Hunt Club Road. Within the Site there are also two (2) White Cedar hedges in the western part of the Site, as well as several isolated mature trees growing in the front yards and former gardens around the residential buildings. The backyards behind 1040 and 1054 Hunt Club Road include stands of mature trees, primarily White Cedar, surrounded by manicured lawn. 1054 Hunt Club Road also has an aboveground swimming pool. Lastly, the western, southern, and eastern Site boundaries are surrounded by a chain-link fence.

The current development concept includes redevelopment of the majority of the Site to accommodate an eight (8) storey retirement home with approximately 145 units and an eight (8) storey hotel with approximately 150 rooms. As part of this undertaking, the existing buildings at the Site will be demolished. Subsurface excavation will be required to install underground parking, for

servicing, and for construction of building foundations. Due to grading, drainage, excavation, and paving requirements, the development plan will result in the removal of the majority of the vegetation within the Site. Tree protection measures will be implemented to protect trees growing beyond the eastern and southern property lines (in the adjacent Deciduous Hedgerow and White Cedar Coniferous Forest). Where feasible, trees will also be retained along the western property line in order to provide a visual buffer for the adjacent church.

The current setback distance between the LRPSW and the property line varies between approximately 27 m and 115 m. The setback distance is narrowest in the southwest corner of 1026 Hunt Club Road, where the distance from the development area to the wetland edge is approximately 27 m. Throughout the remainder of the Site, the distance between the wetland edge and the development area is significantly greater than 27 m. In the southwest corner of the Site, the retirement home will be built approximately 10 m northeast from the property line. The landscaped area between the property line and the building (10 m) is anticipated to provide some of the functions of a wetland setback, including permeable surface for water infiltration and absorption, and additional separation distance between the building and the wetland edge. This arrangement will result in a 37 m buffer existing between the building edge and the wetland (27 m of forested buffer beyond the property line, 10 m of landscaped area within the Site). It is anticipated that the existing forested area beyond the property line, combined with landscaping areas within the property, will ultimately provide an adequate buffer to protect the LRPSW.

Currently stormwater from the Site and from portions of the NCC lands located to the south of the Site sheet drain in an uncontrolled manner to the storm sewers along the Airport Parkway and Hunt Club Road. As shown in the Grading Plan (GR2), during development the Site will be re-graded to direct stormwater flow into drainage swales, which will convey stormwater towards the southeast corner of the Site. As part of this system, a retaining wall will be constructed around the western and southern property lines. An outlet channel will be constructed in the southeast corner to connect to the existing roadside ditch and storm sewers along the Airport Parkway. Post-development flows will be controlled to pre-development levels through on-site storage. Water quality control will be provided by a hydrodynamic separator unit.

There are no other designated environmental features associated with the Site and no significant Species at Risk (SAR) concerns. Pending that the mitigation and avoidance measures outlined in this report are implemented appropriately, the proposed development is not anticipated to have a significant negative effect on the natural features and functions.

1.0 INTRODUCTION

1.1 Scoping the Environmental Impact Statement

This EIS was undertaken following the City of Ottawa's Environmental Impact Statement Guidelines. Following the City guidelines, the Environmental Impact Statement (EIS) includes the following:

- Documentation of existing natural features on and around the Site;
- Identification of potential environmental impacts of the project;
- Recommendations for ways to avoid and reduce any negative impacts; and
- Proposal of ways to enhance natural features and functions.

This EIS was prepared with guidance from the *Natural Heritage Reference Manual* (OMNRF 2005). The major objective of this EIS is to demonstrate that the proposed project will not negatively affect the significant features and functions of the study area, and that impacts will be minimized through mitigation measures.

1.2 Description of Undertaking

The current development concept includes redevelopment of the majority of the Site to accommodate an eight (8) storey retirement home with approximately 145 units and an eight (8) storey hotel with approximately 150 rooms. As part of this undertaking, the existing buildings at the Site will be demolished. Subsurface excavation will be required to install underground parking, for servicing, and for construction of building foundations. Due to excavation, grading, drainage, and paving requirements, the development plan will result in the removal of the majority of the vegetation within the Site. As part of this undertaking, the property will be rezoned to permit the intended land use. As shown in the Landscaping Plan (L1), the Site will be developed in two (2) phases. Phase 1 will include development of the retirement home and will require clearing/excavation of the western and central part of the Site. During the development of Phase 1, existing trees will be retained where feasible in the Phase 2 area, which includes portions of the eastern part of the Site. Ultimately, Phase 2 will include clearing/excavation of the eastern part of the Site and construction of the hotel.

As shown in the Grading Plan (GR2), during development the Site will be re-graded to direct stormwater flow into drainage swales, which will convey stormwater towards the southeast corner of the Site. As part of this system, a retaining wall will be constructed along the western and southern property lines. An outlet channel will be constructed in the southeast corner to connect to the existing roadside ditch and storm sewers along the Airport Parkway. Post-development flows will

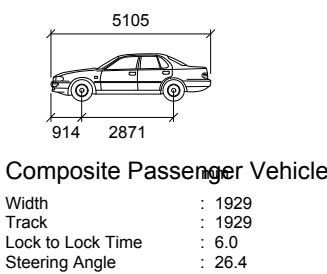
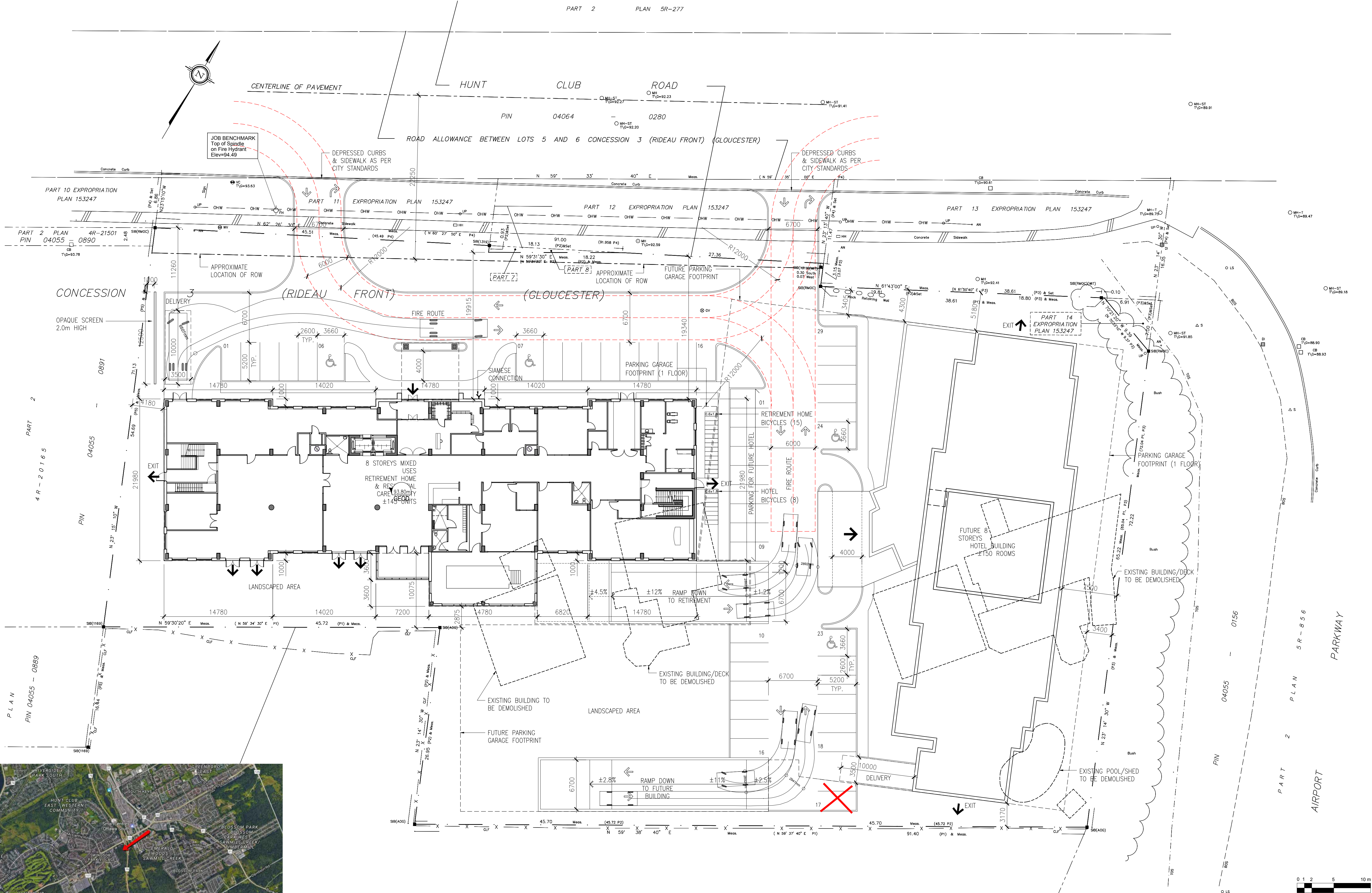
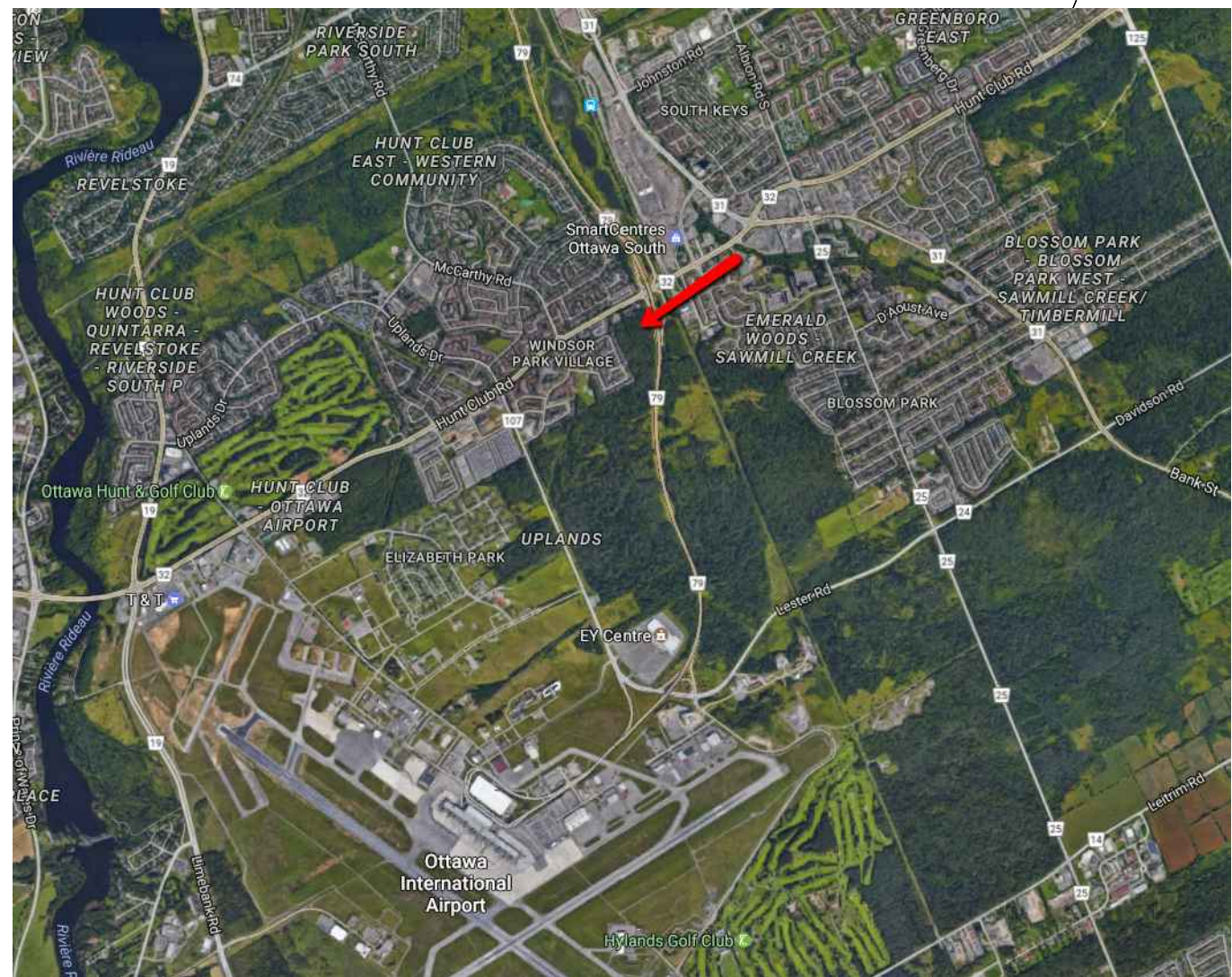
be controlled to pre-development levels through on-site storage. Water quality control will be provided by a hydrodynamic separator unit.

1.3 Agency Consultation and Permit Requirements

The City of Ottawa was contacted by Fotenn Planning and Design. An Information and Records Request was received from the Ontario Ministry of Natural Resources and Forestry (OMNRF) (Appendix B). The Rideau Valley Conservation Authority (RVCA) was circulated as part of the development application review process and provided review comments.

The City of Ottawa has advised that a Tree Cutting Permit will be required prior to the removal of trees with a diameter at breast height (dbh) of 10 cm or greater. The majority of the development area falls within the regulatory limits of the RVCA, as the majority of the Site is within 120 m of the Lester Road Provincially Significant Wetland Complex. As such, the development will require written approval from the RVCA under Ontario Regulation 174/06 – Development, Interference with Wetlands and Alterations to Shorelines and Watercourse Regulation under Section 28 of the Conservation Authorities Act.





AREA OF SITE:	44847 sq.m.*
GROSS FLOOR AREA PROPOSED:	17571 sq.m.
GROUND FLOOR / G.F.A.:	40 sq.m.
ASSISTED LIVING G.F.A. (2nd - 3rd FL.)	1619 sq.m.
DWELLING UNITS G.F.A. (4th - 8th FL.)	45982 sq.m.
PRIVATE AMENITY AREA (G.F.A.)	161 sq.m.
COMMUNAL AMENITY AREA (G.F.A.)	1000 sq.m.
NEED HEALTH OR PERS. SERV. (G.F.A.)	1110 sq.m.
SITE COVERAGE:	34 %
GROUND PARKING AREA:	30 %
LANDSCAPED AREA (EXCL. PARKING):	38 %
PARKING STALLS:	22 INTERIOR
PROVIDED BICYCLE STALLS:	16 EXTERIOR
NUMBER OF FLOORS & BUILDING HEIGHT:	21 INTERIOR
DWELLING UNITS:	15 EXTERIOR
	8 FLOORS + MECH.
	± 26.000 m
	145

- FOR EXISTING SITE CONDITIONS, SEE SURVEY PLAN BY ANNIS O'SULLIVAN VOLLEBEKK LTD. SUBMITTED SEPARATELY.
- FOR NEW GRADES AND SITE SERVICES, SEE CIVIL ENGINEERING PLAN BY NOVATECH ENG. CONSULTANTS LTD., SUBMITTED SEPARATELY.
- FOR PROPOSED VEGETATION AND LANDSCAPE INFORMATION, SEE LANDSCAPE ARCHITECTURE PLAN BY JAMES B. LENNOX & ASSOCIATES SUBMITTED SEPARATELY.

ZONING BY-LAW PARKING REQUIREMENT FOR RETIREMENT HOME	REQUIREMENT	PROPOSED
0.25 per unit	0.25 x 145 = 36	22 interior + 15 exterior
1 per 100 m ² of G.F.A. used for medical or personal services	110 m ² = 1	1 exterior

ZONING BY-LAW BICYCLES PARKING REQUIREMENT FOR RETIREMENT HOME	REQUIREMENT	PROPOSED
0.25 per unit	0.25 x 145 = 36	21 int. + 16 ext.

NOTES GÉNÉRALES General Notes

- Ces documents d'architecture sont la propriété exclusive de NEUF architectes, et ne pourront être utilisés, reproduits ou copiés sans autorisation écrite au préalable. / These architectural documents are the exclusive property of NEUF architectes and cannot be used, copied or reproduced without written pre-authorization.
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- Veuillez aviser l'architecte de toute dimension erronée et/ou divergences entre ces documents et ceux des autres professionnels. / The architect must be notified of all errors, omissions and discrepancies between these documents and those of other professionals.
- Les dimensions sur ces documents doivent être lues et non mesurées. / The dimensions on these documents must be read and not measured.

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CIVIL Civil

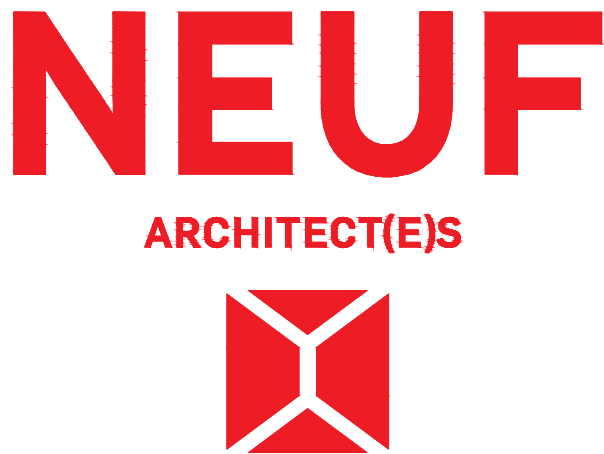
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SCEAU Seal

C:\Users\paul\Documents\Drawings\11459_A101.dwg



CLIENT Client



OUVRAGE Project

Hunt Club Development

EMPLACEMENT Location
Ottawa, ON

NO PROJET No.
11459

NO	REVISION	DATE (aa.mm.jj)
A	COORDINATION	2017.02.20
B	COORDINATION	2017.03.28
1	SITE PLAN APPLICATION	2017.05.18
2	RE-ISSUED SITE PLAN APPLICATION	2017.08.07
3	DELIVERY ACCESS REVISION	2017.08.24

DESSINÉ PAR Drawn by
PV

DATE (aa.mm.jj)
17.01.16

TITRE DU DESSIN Drawing Title

Site Plan at Ground Floor Level

RÉVISION Revision

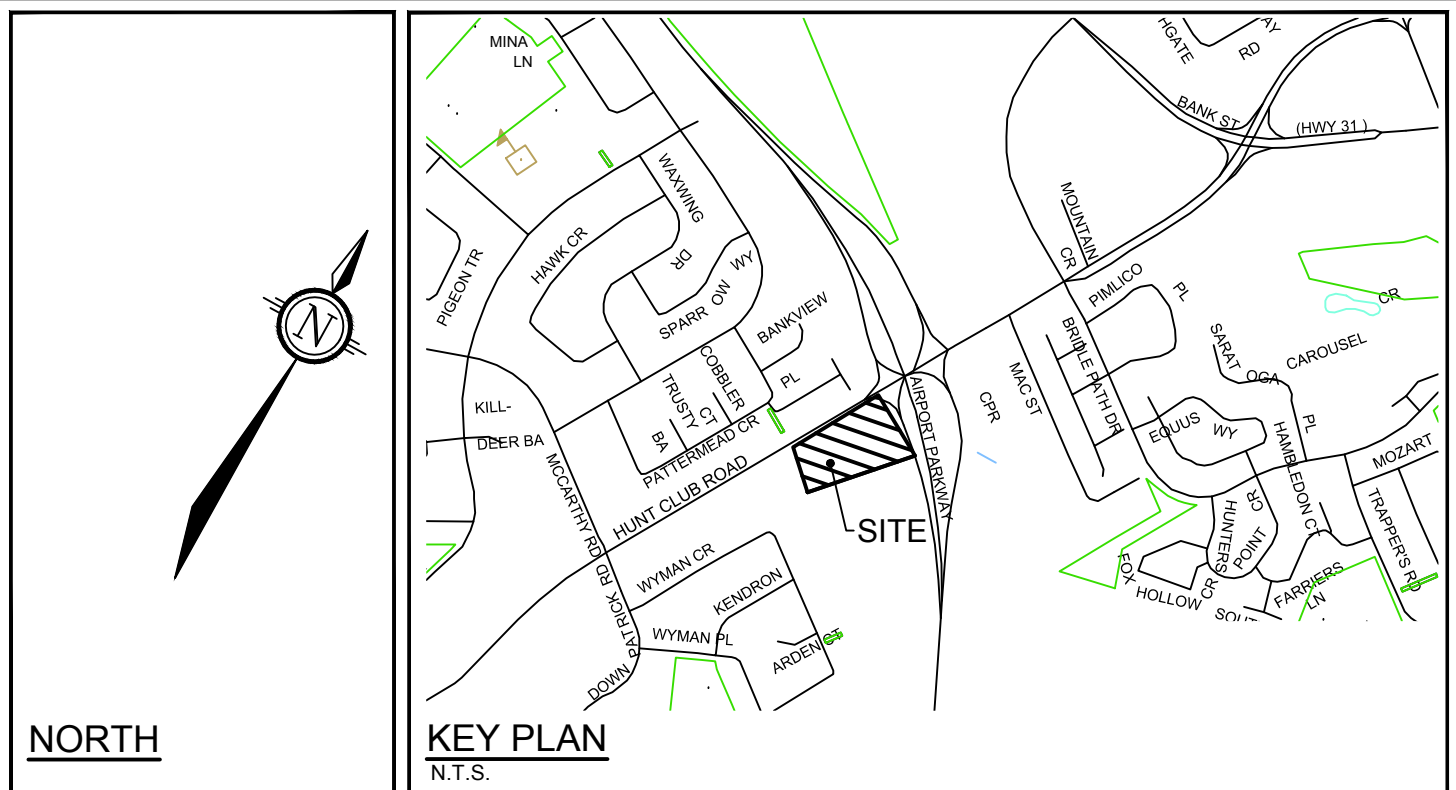
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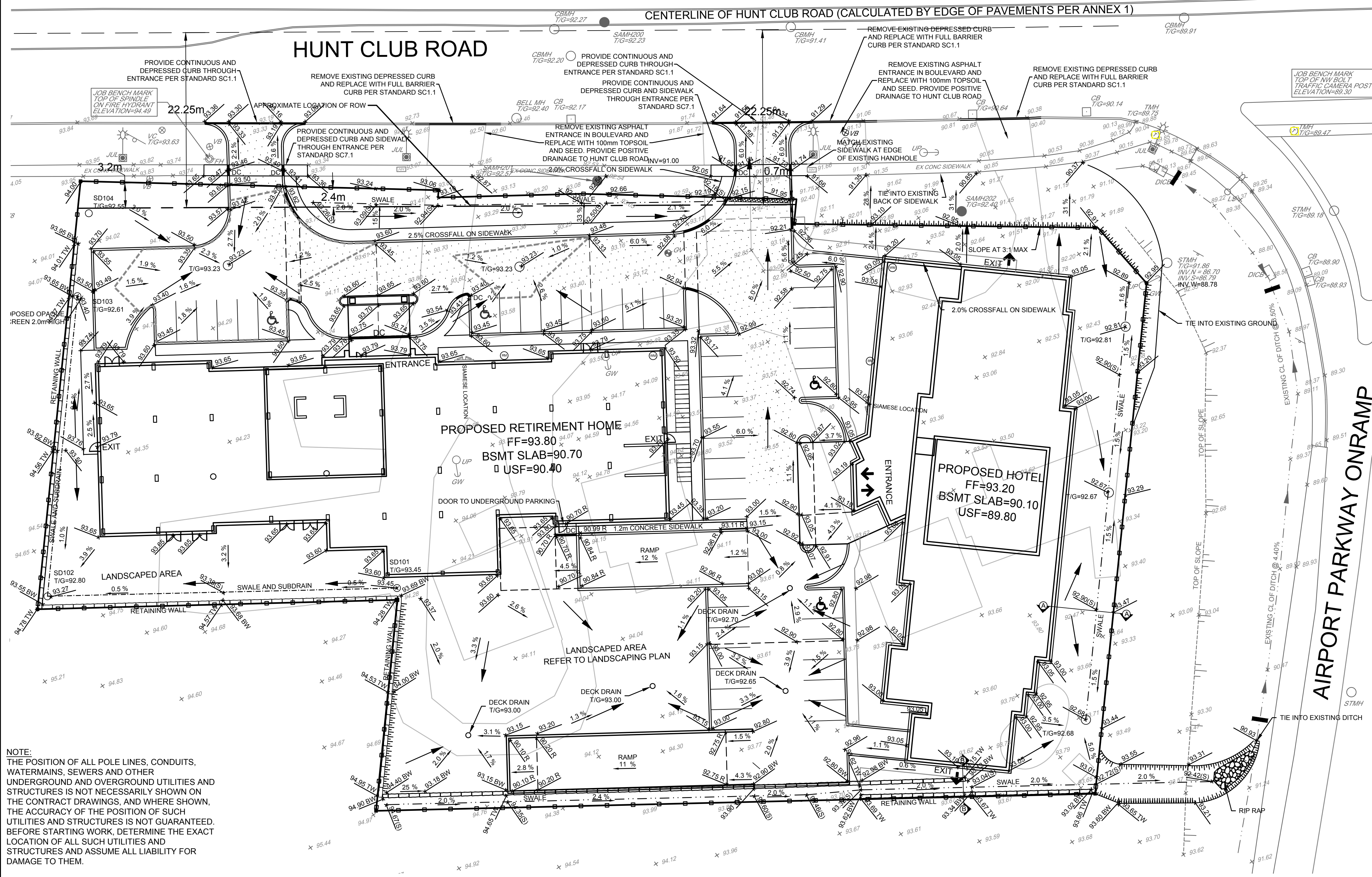
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A101



EROSION AND SEDIMENT CONTROL NOTES:

- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADERS AND CONTRACTORS.
2. DETERMINE THE EXACT LOCATION, SIZE, MATERIAL, AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND MAINTAIN RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
3. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
4. BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$5,000,000.00 INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
5. RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ADJACENCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
6. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
7. ALL ELEVATIONS ARE GEODETIC.
8. REFER TO GEOTECHNICAL REPORT (No. PG4091-1, DATED APRIL 24TH, 2017), PREPARED BY PATTERSON GROUP FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
9. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
10. REFER TO STORMWATER MANAGEMENT REPORT(R-2017-058) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
11. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND MANHOLE TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
12. PROVIDE LINE/PARKING PAINTING.
- GRADING NOTES:**
1. ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS AS DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
2. EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF GRANULARS.
3. ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUB-EXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE GEOTECHNICAL ENGINEER.
4. THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
5. MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
6. MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
7. ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
8. ALL CURBS SHALL BE BARRIER CURBS (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER CITY OF OTTAWA STANDARDS (SC-1).
9. REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
10. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING AS-BUILT ELEVATIONS OF ALL DESIGN GRASSES SHOWN ON THIS PLAN.
11. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED TO THE SATISFACTION OF THE ENGINEER, THE CITY OF OTTAWA, AND THE RIDEAU VALLEY CONSERVATION AUTHORITY. THEY ARE TO BE APPROPRIATE TO THE SITE CONDITIONS, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, ETC.) AND PRIOR TO ANY OTHER PHASES OF SITE PREPARATION AND CONSTRUCTION. THESE PRACTICES ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL, SUCH AS BUT NOT LIMITED TO: INSTALLING INSERTS UNDER CATCHBASIN GRATES AND FILTER CLOTH UNDER MANHOLE GRATES TO PREVENT SEDIMENT FROM ENTERING THE STRUCTURE AND INSTALLING AND MAINTAINING A LIGHT DUTY SILT FENCE BARRIER AS REQUIRED AS PER OPSD 219.10.
12. TO PREVENT SURFACE EROSION FROM ENTERING THE STORM SYSTEM DURING CONSTRUCTION, INSERTS AND FILTER CLOTH WILL BE PLACED UNDER ALL PROPOSED AND NEAR BY CATCHBASINS AND MANHOLES. THE FILTER CLOTH WILL BE INSTALLED UNDER ALL VEGETATION HAS BEEN ESTABLISHED AND CONSTRUCTION COMPLETE.
13. TO LIMIT EROSION: MINIMIZE THE AMOUNT OF EXPOSED SOILS AT ANY GIVEN TIME. RE-VEGETATE EXPOSED AREAS AND SLOPES AS SOON AS POSSIBLE AND PROTECT EXPOSED SLOPES WITH NATURAL OR SYNTHETIC MULCHES.
14. ANY ON-SITE STOCKPILES SHALL BE LOCATED IN AREAS TO BE DESIGNATED BY THE ENGINEER AND WELL AWAY FROM DRAINAGE SWALES AND OUTLET DITCHES.
15. THE CONTRACTOR SHALL IMPLEMENT SEQUENTIAL MEASURES ARRANGED SO AS TO ACHIEVE THE REQUIRED LEVEL OF SEDIMENT AND RUNOFF CONTROL. SOME ON-SITE MEASURES INCLUDE, BUT ARE NOT LIMITED TO: SEDIMENT PONDS, SILT FENCES, STRAW BALES, FILTER CLOTHS, CATCHBASIN INSERTS, DAMS AND/AND BERM, OR OTHER RECOGNIZED TECHNOLOGIES. SUCH MEASURES SHALL BE REQUESTED BY THE ENGINEER IN ACCORDANCE WITH THE REQUIREMENTS OF OPSF 805 WHERE APPROPRIATE, OR IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
16. EROSION AND SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED DURING CONSTRUCTION IN ACCORDANCE WITH THE "GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES" (GOVERNMENT OF ONTARIO, MAY 1987). THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEETING ALL REGULATORY AGENCY REQUIREMENTS.
17. WHERE, IN THE OPINION OF THE ENGINEER OR REGULATORY AGENCY, THE INSTALLED EROSION CONTROL MEASURES FAIL TO PERFORM ADEQUATELY, THE CONTRACTOR SHALL SUPPLY AND INSTALL ADDITIONAL OR ALTERNATIVE EROSION CONTROL MEASURES AS DIRECTED BY THE ENGINEER OR THE REGULATORY AGENCY. IF THE CONTRACTOR FAILS TO REVISE THE EROSION AND SEDIMENT MEASURES AS REQUESTED BY THE ENGINEER AND REGULATORY AGENCY HAS THE RIGHT TO IMMEDIATELY WITHDRAW ITS PERMISSION TO CONTINUE THE WORK. THE ENGINEER OR REGULATORY AGENCY MAY RENEW ITS PERMISSION TO CONTINUE THE WORK UPON BEING SATISFIED THAT THE DEFAULTS OR DEFICIENCIES HAVE BEEN RECTIFIED.
18. A VISUAL INSPECTION OF THE SEDIMENT CONTROL MEASURES WILL BE PERFORMED DAILY BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT TO THE CONTRACT ADMINISTRATOR WEEKLY INSPECTION REPORTS DETAILING AND PROVING THE SPECIFIED AND REQUIRED PERFORMANCE OF THE INSTALLED MEASURES. THE CONTRACTOR SHALL PERIODICALLY, AND WHEN REQUESTED BY THE ENGINEER, CLEAN OUT ACCUMULATED SEDIMENT DEPOSITS AS REQUIRED AT THE SEDIMENT CONTROL DEVICES WITHOUT DAMAGING THE DEVICES OR CAUSING DISCHARGE INTO THE SEWERS OR NEARBY WATERCOURSES.
19. THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE ENGINEER, THE MEASURE OR MEASURES, IS NO LONGER REQUIRED. NO CONTROL MEASURE MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE ENGINEER.
20. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO ANY DITCH OR STORM SEWER SYSTEM. APPROPRIATE RESPONSE MEASURES, INCLUDING REPAIRS TO THE EROSION AND SEDIMENT CONTROL MEASURES, WITH THE ADDITIONAL OR ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.
21. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
22. ALL STREETS TO BE SWEEP WEEKLY FOR THE DURATION OF CONSTRUCTION. SURROUNDING EXISTING STREETS TO BE SWEEP REGULARLY AS REQUIRED OR AS DIRECTED BY THE ENGINEER AND/OR CITY OF OTTAWA. IF EXCESS SWEEPING IS REQUIRED THE USE OF MUD MATS WILL BE EXAMINED. EXACT RUN OF MUD MAT TO BE FIELD CONFIRMED.
23. THE CONTRACTOR SHALL ENSURE THAT ALL WORKS, INCLUDING SUB-CONTRACTORS, IN THE WORKING AREA ARE AWARE OF THE IMPORTANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES AND INFORMED OF THE CONSEQUENCES OF THE FAILURE TO COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AGENCIES AND THE SPECIFICATIONS DETAILED HEREIN.
24. THE CONTRACTOR SHALL ENSURE THAT ALL WORKS, INCLUDING SUB-CONTRACTORS, IN THE WORKING AREA ARE AWARE OF THE IMPORTANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES AND INFORMED OF THE CONSEQUENCES OF THE FAILURE TO COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AGENCIES AND THE SPECIFICATIONS DETAILED HEREIN.
25. THE CONTRACTOR SHALL KEEP MATERIAL FOR ADDITIONAL EROSION AND SEDIMENT CONTROLS, ON-SITE AT ALL TIMES. THESE MATERIALS INCLUDE BUT ARE NOT LIMITED TO: SILT FENCES, STRAW BALES, SEDIMENT BAGS AND CLEAR STONE. A CONTINGENCY PLAN TO INCLUDE THE PROVISION OF ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES TO INSTALL ADDITIONAL CONTROL MEASURES, AS WELL AS PROVIDE AN EMERGENCY RESPONSE PLAN IN CASE OF AN ACCIDENTAL EVENT. AS SUCH, THE CONTRACTOR SHALL HAVE ADDITIONAL CONTROL MATERIALS ON-SITE AT ALL TIMES WHICH ARE EASILY ACCESSIBLE AND MAY BE IMPLEMENTED AT A MOMENT'S NOTICE.
26. IN ADDITION TO ANY OTHER REMEDY AND/OR PENALTY PROVIDED BY LAW, WHERE THERE HAS BEEN A DEFAULT OR NON-COMPLIANCE WITH ANY OF THE TERMS SPECIFIED HEREON, THE CONTRACTOR, REFUSES TO PERFORM OR RECTIFY



NOTE: THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.



CLARIDGE
H O M E S
BUILDING QUALITY & VALUE FOR OVER 25 YEARS

APPROVED ☐ REFUSED ☐

THIS ____ DAY OF _____, 20____

DON HERWEYER, MCIP, RPP, MANAGER
DEVELOPMENT REVIEW SOUTH
PLANNING, INFRASTRUCTURE AND

2.	REVISED PER CITY COMMENTS	AUG 24/17	GJM
1.	ISSUED FOR SITE PLAN APPLICATION	MAY 25/17	GJM
No.	REVISION	DATE	BY

1:300

1:300

CHECKED

100

DRAWN

CHECKED

APPROVED

100

FOR REVIEW ONLY



NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6

Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION
CITY OF OTTAWA
HUNT CLUB DEVELOPMENT

DRAWING NAME

GRADING AND EROSION &
SEDIMENT CONTROL PLAN
PHASE 2

PROJECT No.

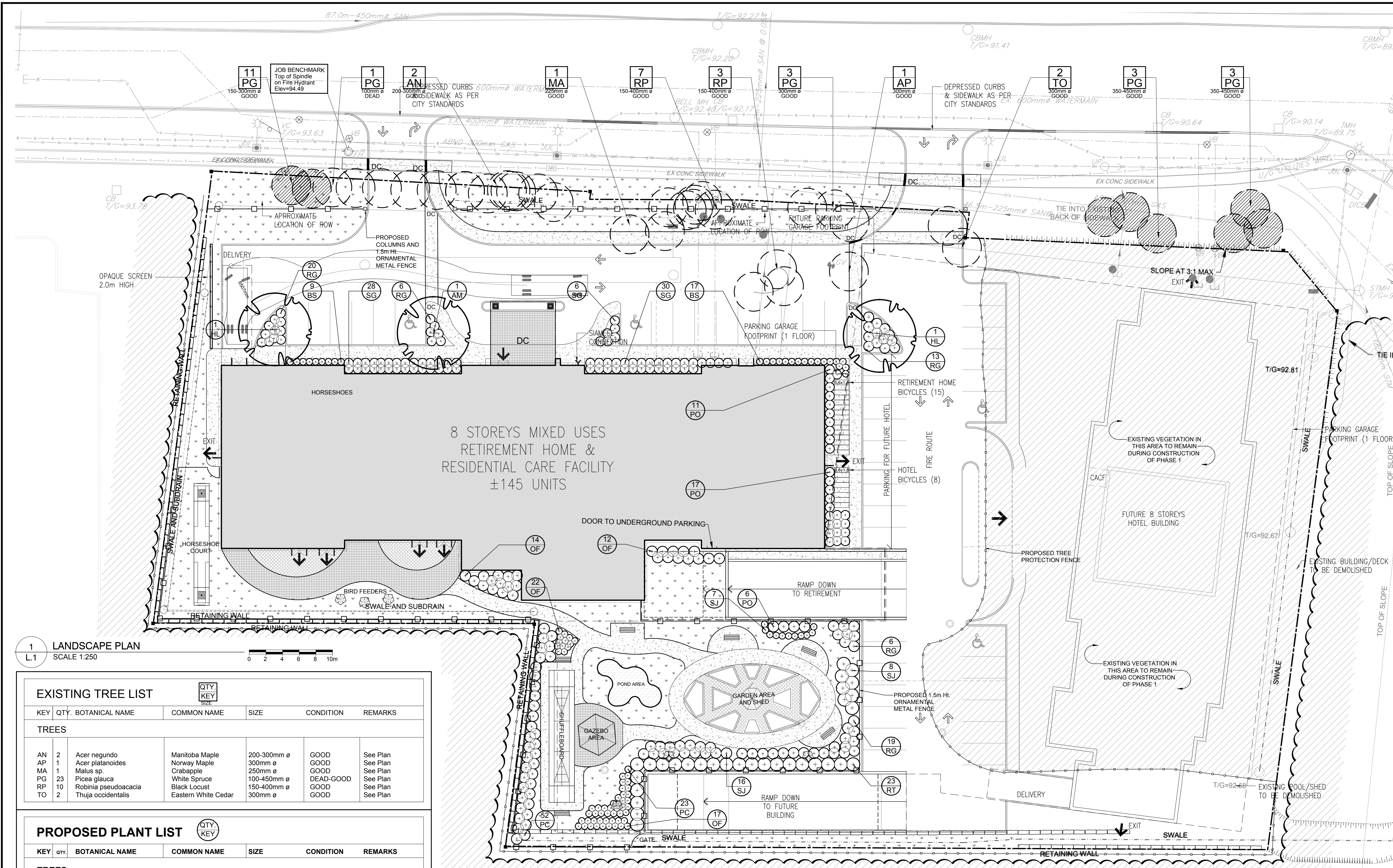
REV	117036-00
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REV # 2

DRAWING No.

PLANA1.DWG - 841mmx594mm

D07-12-17-0068



1
L.1
LANDSCAPE PLAN
SCALE 1:250

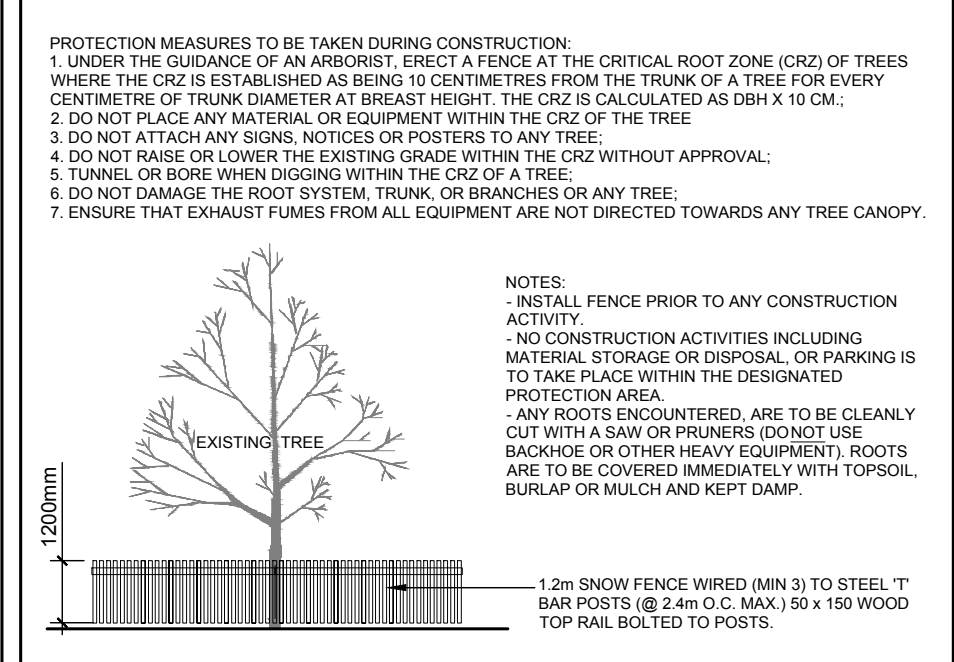
EXISTING TREE LIST					
KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
TREES					
AN	2	Acer negundo	Manitoba Maple	200-300mm ø	GOOD
AP	1	Acer platanoides	Norway Maple	300mm ø	GOOD
MA	1	Malus sp.	Crabapple	250mm ø	GOOD
PG	23	Picea glauca	White Spruce	100-450mm ø	DEAD-GOOD
RP	10	Robinia pseudoacacia	Black Locust	150-400mm ø	GOOD
TO	2	Thuja occidentalis	Eastern White Cedar	300mm ø	GOOD

PROPOSED PLANT LIST					
KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
TREES					
AM	1	Acer x freemianii 'Armstrong'	Armstrong Maple	60mm dia.	B&B
HL	2	Gleditsia triacanthos 'Draves'	Streetkeeper Honeylocust	70mm dia.	B&B
SHRUBS					
PO	34	Physocarpus opulifolius	Common Ninebark	600mm ht.	Potted
RG	64	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	500mm ht.	Potted
RT	23	Rhus typhina 'Laciniata'	Cutleaf Staghorn Sumac	800 mm ht.	Potted
SJ	31	Hypericum kalmianum	St. John's Wort	600mm Ht.	Potted
PERENNIALS					
PC	75	Polygonatum canaliculatum	Great Solomon's Seal	150mm pot	Potted
OF	65	Matteuccia struthiopteris	Ostrich Fern	1 gal pot	Potted
SG	64	Panicum virgatum	Switchgrass	250mm Pot.	Potted
BS	26	Rudbeckia hirta	Black Eyed Susan	250mm pot.	Potted

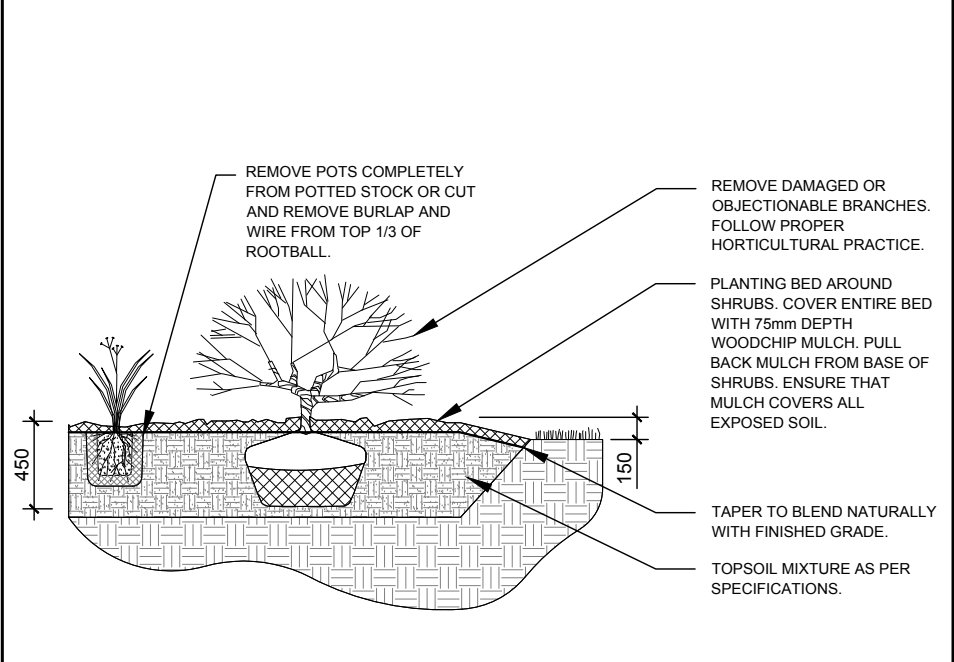
APPROVED ☐ REFUSED ☐

THIS _____ DAY OF _____, 20____

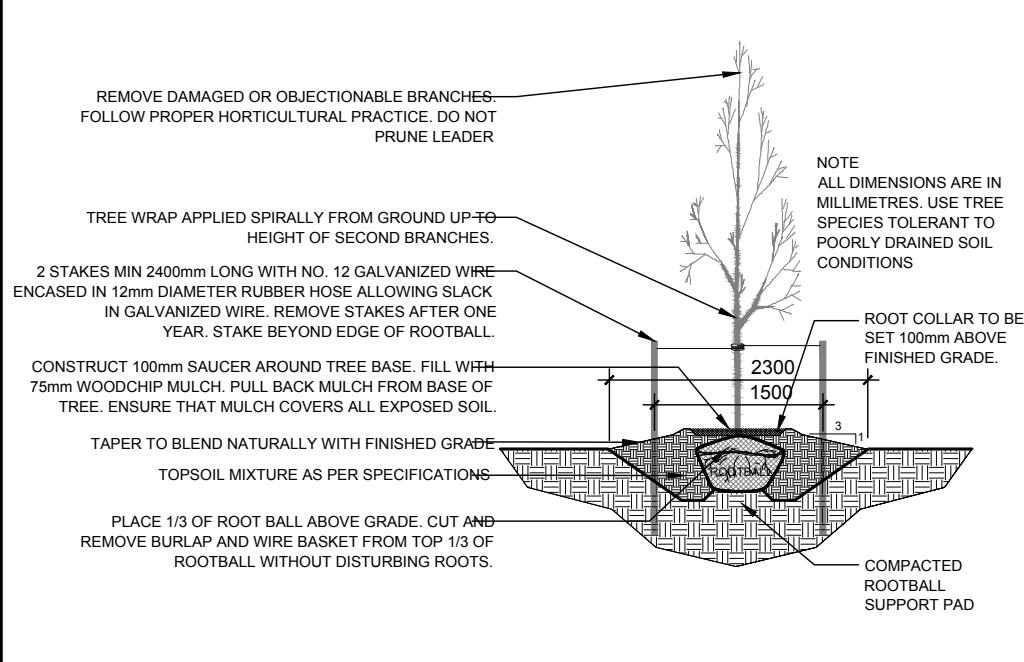
DON HERWEYER, MCIP, RPP, MANAGER
DEVELOPMENT REVIEW SOUTH
PLANNING, INFRASTRUCTURE AND
ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA



2
L.1
TREE PROTECTION FENCE
SCALE: NTS



3
L.1
SHRUB/PERENNIAL PLANTING
SCALE: NTS



4
L.1
DECIDUOUS TREE PLANTING
SCALE: NTS

GENERAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR OR OFFICIAL TO REPORT ANY ERRORS, OMISSIONS OR DISCREPANCIES ON THIS PLAN WITH ACTUAL SITE CONDITIONS TO THE LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH CONSTRUCTION.
2. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AND AUTHORITIES PRIOR TO ANY EXCAVATION AND ASCERTAIN LOCATIONS OF UNDERGROUND SERVICES.
3. THE CONTRACTOR IS TO REINSTATE ALL AREAS AND ITEMS DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITY.
4. THE CONTRACTOR IS TO COMPLY WITH ALL PERTINENT CODES AND BY-LAWS.
5. THE CONTRACTOR IS TO MAINTAIN A POSITIVE SURFACE RUN-OFF THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD.
6. THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS.
7. THE CONTRACTOR IS TO IDENTIFY ALL EXISTING TREES TO REMAIN ON SITE WITH THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
8. THE CONTRACTOR IS TO STAKE THE PROPOSED LOCATION OF ALL PLANT MATERIAL IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATION.
9. MINIMUM DISTANCES FOR SELECTED DECIDUOUS TREES ARE AS FOLLOWS:
 - BUILDING FOUNDATIONS 7.5M
 - SIDEWALKS 1.5M
 - PUBLIC STREETS 2.5M
 - UNDERGROUND INFRASTRUCTURE 2.0M
10. ALL TREES WITHIN 1M OF UNDERGROUND UTILITY TRENCHES ARE TO BE EXCAVATED BY HAND.
11. REMOVE ALL PROTECTIVE WRAPPING FROM TREE TRUNKS AFTER INSTALLATION.
12. STAKING OF TREES SHALL ONLY BE PERFORMED IF NECESSARY.
13. ENSURE THAT MULCH IS PULLED BACK A MIN. DISTANCE OF 75MM FROM BASE OF TREE TRUNK.
14. FOR DETAILED INFORMATION ON THE EXISTING TREES, REFER TO THE "ENVIRONMENTAL IMPACT STATEMENT & TREE CONSERVATION REPORT" BY MCKINLEY ENVIRONMENTAL SOLUTIONS.
15. TREE LOCATIONS SHOWN ON PLAN ARE FROM INFORMATION PROVIDED BY ANNIS O'SULLIVAN VOLLEBEKK SURVEYORS LTD., JOB 16868-15.

CLIENT: Claridge Homes
Riverstone Retirement Communities
2001 Gladstone Ave., Suite 210
Ottawa, ON
Tel: (613) 233-0030

LOCATION PLAN

CONSULTANTS

ARCHITECTS: NEUF ARCHITECTURES
6630, BOUL. RENÉ-LEVESQUE O. 32E ÉTAGE, MONTRÉAL, QC
Tel: (514) 847-1117

SURVEYORS: ANNIS O'SULLIVAN VOLLEBEKK LTD.
14 CONQUEST GATE, SUITE 500, NEPEAN, ON
Tel: (613) 727-0850

CIVIL ENGINEERS: NOVATECH ENG. CONSULTANTS LTD.
240 MICHAEL COWPLAND DRIVE, SUITE 200, OTTAWA, ON
Tel: (613) 234-9643

LEGEND

- EXISTING TREE TO REMAIN (Requires Tree Protection Fence)
- EXISTING TREE TO BE REMOVED
- PROPOSED DECIDUOUS TREE
- PROPOSED SHRUBS/PERENNIALS
- PROPOSED 1.5m HIGH ORNAMENTAL METAL FENCE
- TREE PROTECTION FENCE
- PROPOSED SOD
- PROPOSED PAVERS
- PROPOSED COLUMN

2 REVISED AS PER CITY COMMENTS 08/25/2017 LC JL

1 ISSUED FOR SITE PLAN CONTROL 05/23/2017 ML JL

No. Issue Date

JAMES B. LENNOX & ASSOCIATES INC.
LANDSCAPE ARCHITECTS
3332 CARLING AVE. OTTAWA, ONTARIO K2H 5A8
Tel. (613) 722-5168 Fax. (1866) 343-3942

PROJECT
HUNT CLUB RETIREMENT COMMUNITY

DRAWING
LANDSCAPE PLAN

STAMP

SCALE
1:250

START DATE
APRIL, 2017

PROJECT NO.
17-CLG-1728

PROJECT NORTH

DRAWING NO.
L.1

PLOT SIZE ARCH-D

D07-12-17-0068



FIGURE 1: SITE OVERVIEW

1026 to 1054 Hunt Club Road, Ottawa, Ontario

Environmental Impact Statement & Tree Conservation Report (Revised)



— - Property Boundary

Please Note: This is not a legal land survey. All dimensions and locations are shown as approximate.

2.0 METHODOLOGY

The presence of natural heritage features was assessed by completing the following:

- Site surveys to describe vegetative communities;
- Site surveys to assess the potential for habitat of species at risk (SAR), wetlands, fish habitat, significant wildlife habitat features, and other significant habitat features to be present;
- Examination of aerial imagery to evaluate landscape features;
- Natural Heritage Information Center (NHIC) database review;
- Submission of an Information and Records Request to the OMNRF;
- Review of Official Plan designations; and
- Review of background geotechnical information.

Refer to Appendix A for a discussion of tree inventory methods employed in the TCR. Site visits to conduct a tree inventory and to identify wildlife habitat features were undertaken by Dr. McKinley on February 6th and May 15th, 2017. During the February 6th visit, the Site was snow covered, although hard surfaces within the Site had been cleared of snow. During the May 15th site visit, mid-spring conditions were observed and conditions included mostly sunny skies and 18 °C. Ecological Land Classification (ELC) was not required for the Site, due to the absence of natural vegetative communities. Trees occurring within the Site are described in greater detail in the TCR (Appendix A). Site photographs are also included in Appendix A.



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3.0 EXISTING CONDITIONS

3.1 Geological Conditions

The Site has a gradual slope from the southwest to the northeast. Elevations along the southern and western property lines are approximately 96 m and 95 m ASL (respectively). Elevations at the northeast corner of the Site at Hunt Club Road are approximately 90 m ASL. Drainage from the Site would hence primarily be in the direction of Hunt Club Road, as opposed to in the direction of the White Cedar Coniferous Forest and the Lester Road Provincially Significant Wetland Complex (LRPSW) (south of the Site). Within the Site, the surface layer is predominantly composed of hard surfaces including paved/compacted gravel driveways, parking areas, and the roofs of the existing buildings within the Site. A layer of topsoil is present in the gardens and lawns within the Site. Historic borehole information (sampling completed by others) indicates that approximately 1 to 2 m of sandy/silty fill is present beneath the surface layer.

3.2 Vegetative Communities

Vegetation within the Site is typical of older residential properties in the area, consisting mainly of mature trees growing in low densities, surrounded by hard surfaces and manicured lawns/gardens. Mature trees growing within the Site are surrounded by lawn, gardens, compacted gravel, or paved surfaces with little natural ground or shrub cover, and hence are not part of any natural vegetative community. In some areas lawns are overgrown with typical yard weeds (e.g. Dandelion, Canada Goldenrod, Lamb's Quarter's Pigweed, Common Burdock, Common Buckthorn, etc.) due to a lack of maintenance. The area south of the property line was visually assessed from the property line, and was determined to include a White Cedar Coniferous Forest. Trees found within the backyards within the Site are separated from the adjacent White Cedar Coniferous Forest by the existing chain-link fence. Features found within the Site include a Coniferous Hedgerow (along Hunt Club Road), a recent regrowth Deciduous Hedgerow found east of the Site along the Airport Parkway, two (2) White Cedar Hedges growing in the western part of 1026 Hunt Club Road, various planted mature trees growing in the front yards of 1026, 1038, 1040 and 1050 Hunt Club Road, and stands of mature trees (primarily White Cedar) in the backyards of 1038, 1050 and 1054 Hunt Club Road. The locations of these features are shown in Figure 2 (below).

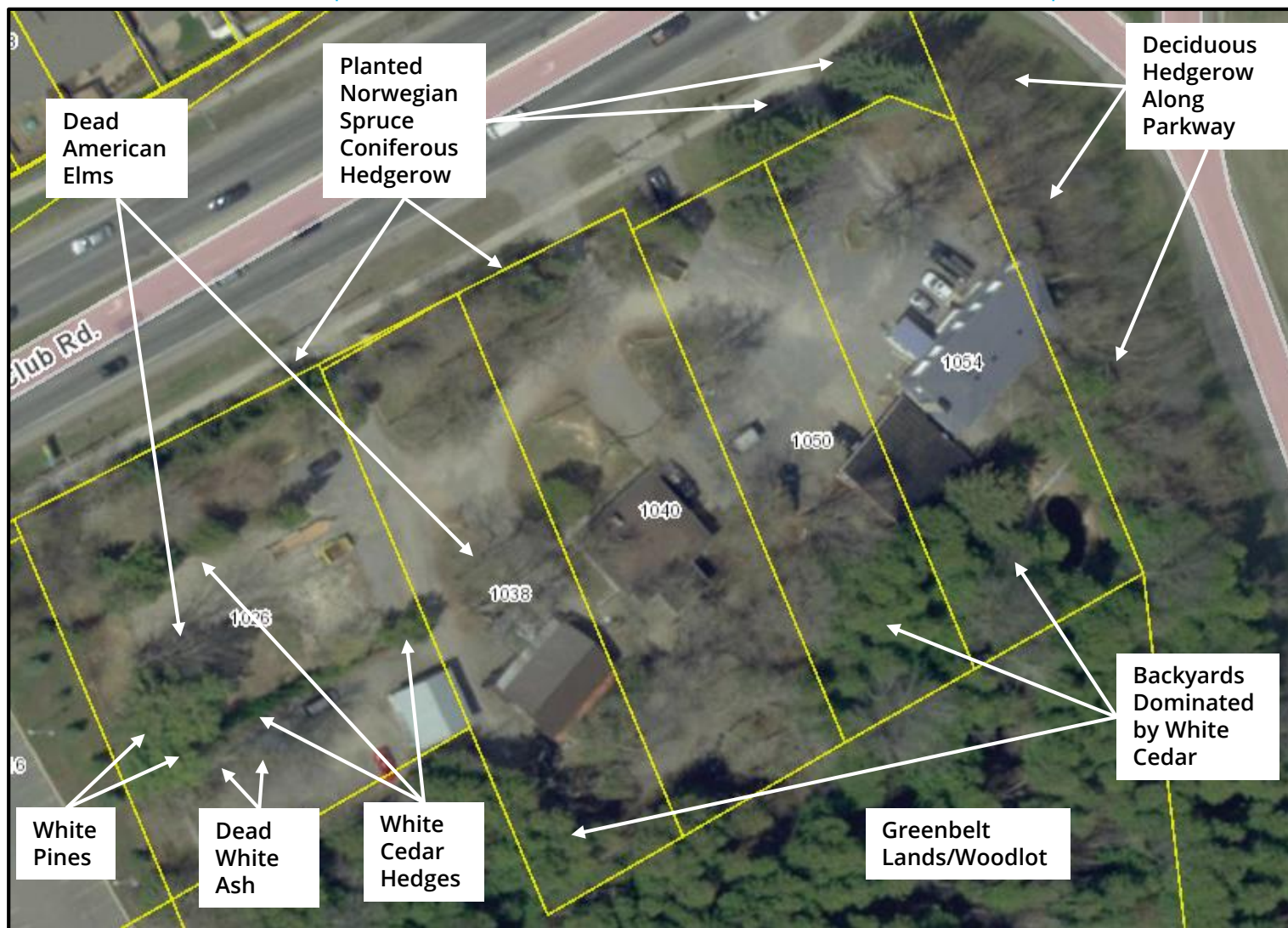
The condition, size, and species of trees occurring within the Site are described in greater detail in the TCR Report (Appendix A). Photographs of trees within the Site are also included in Appendix A.



FIGURE 2: VEGETATION MAPPING

1026 to 1054 Hunt Club Road, Ottawa, Ontario

Environmental Impact Statement & Tree Conservation Report (Revised)



Please Note: This is not a legal land survey. All dimensions and locations are shown as approximate.

3.3 Wetlands and Watercourses

There are no significant wetland or watercourse features within the Site. The patch of open water visible in the aerial photograph in the backyard of 1054 Hunt Club Road is an aboveground swimming pool. As described above, the Site is entirely occupied by artificial features including paved/compacted gravel driveways and parking areas, existing buildings, and planted trees growing within manicured lawns/gardens. The Site is well drained. Based on existing Site elevations, drainage is from the southwest to the northeast, and therefore the Site drains towards Hunt Club Road, rather than towards the LRPSW.

A portion of the LRPSW is located southwest of the Site, within the adjacent White Cedar Coniferous Forest. As shown in Figure 1, under current conditions the distance between the wetland edge and the property line varies between approximately 27 m and 115 m. The southwest corner of the Site within 1026 Hunt Club Road is closest to the wetland edge, and is separated from the wetland by approximately 27 m. At the current time, all of the area between the property line and the wetland edge is occupied by a White Cedar Coniferous Forest. The area immediately adjacent to the Site was visually assessed from the property line, and there were no wetland features noted along the property line. Therefore, no unevaluated wetland was found to exist immediately adjacent to the property line, and adjacent areas were assessed to be part of the White Cedar Coniferous Forest.

The LRPSW edge was defined based on existing wetland mapping completed by the City of Ottawa and Golder Associates. The extent of the LRPSW within the City of Ottawa and NCC lands south of the Site has been previously studied by Beacon Environmental and was confirmed by the City in 2012 through an Official Plan Amendment (City of Ottawa 2012). More recently, the wetland boundaries were again studied and confirmed by Golder Associates as part of the 2016 Airport Parkway and Lester Road Widening Environmental Assessment Study (Parsons 2016). The boundaries of the LRPSW, as shown in Figure 1, reflect the wetland mapping completed during these previous studies, which has been made available through Geo-Ottawa (City of Ottawa 2017).

3.4 Adjacent Lands and Significant Features

Portions of the White Cedar Coniferous Forest found south of the Site are part of the City of Ottawa's Natural Heritage System, as shown in Schedule L1 of the Official Plan (City of Ottawa 2014). The White Cedar Coniferous Forest and Deciduous Hedgerow are also shown to be part of the National Capital Commission (NCC) Greenbelt. The portion of the White Cedar Coniferous Forest directly south of the Site is dominated by White Cedar stems, varying in size between 30 and 50 cm dbh. Aerial photography shows that the forest is connected to a much larger forested area, which extends south from the Site to the Ottawa International Airport. This forested area includes several

wetland patches that are shown to be part of the LRPSW. Although the White Cedar Coniferous Forest and connected areas were not assessed in detail, it appears likely that they would qualify as a Significant Woodlot under several criteria due to the size of the forested area, the presence of interior forest habitat, linkage functions, and the presence of a wetland within the forested area (OMNRF 2005).

Trees occurring within the Site are surrounded by manicured lawns and/or paved and compacted gravel surfaces and lack natural shrub or ground cover and hence are not part of natural vegetative communities. Most of the trees within the Site appear to have been planted as landscaping features, and those present in the backyards of the residences are separated from the adjacent forest by an existing chain-link fence. Therefore, the treed areas of the Site are not considered part of the adjacent forest, and hence would not qualify as part of a Significant Woodlot.

3.5 Wildlife and Significant Wildlife Habitat

As described above, the Site is entirely occupied by artificial features including paved/compacted gravel driveways and parking areas, existing buildings, and planted trees growing within manicured lawns/gardens. In some areas lawns are overgrown with typical yard weeds (e.g. Dandelion, Canada Goldenrod, Lamb's Quarter's Pigweed, Common Burdock, Common Buckthorn, etc.) due to a lack of maintenance. Due to the lack of natural habitats within the Site, very little evidence of wildlife was noted. The only species observed within the Site were Eastern Grey Squirrel, Red Squirrel, American Crow, and American Robin. Each of these species are common in urban and suburban areas.

As discussed below in Section 3.6, no evidence of nesting Barn Swallows or Chimney Swifts was noted within the buildings found within the Site. No stick nests, amphibian breeding habitat, migratory bird stopover points, heron rookeries, reptile hibernacula, caves, bedrock fissures, wetlands, or any other features which may qualify as Significant Wildlife Habitat were noted within the Site (OMNRF 2014b). The adjacent LRPSW and White Cedar Coniferous Forest found south of the Site may contain wildlife habitat features, however, no significant features were visible in close proximity to the property line.

3.6 Species at Risk

The Natural History Information Center (NHIC) records for the nine (9) grids that include and surround the Site were reviewed. This included an area 3 km x 3 km in size and all published species at risk (SAR) records were noted. An Information and Records Request Response was received from the OMNRF and is included in Appendix B. The following SAR were identified as having the potential to occur within the vicinity of the Site, based both on NHIC records and conditions within the Site:

- Butternut Trees - Endangered
- Blanding's Turtle – Threatened (2009 NHIC record south of the Site)
- Eastern Meadowlark – Threatened (1995 NHIC record northwest of the Site)
- Bobolink – Threatened
- Barn Swallow - Threatened
- Chimney Swift – Threatened
- Bank Swallow – Threatened
- Tricolored Bat – Endangered
- Northern Long Eared Bat – Endangered
- Little Brown Bat – Endangered
- Eastern Small Footed Myotis – Endangered
- Eastern Wood Pewee – Special Concern
- Wood Thrush – Special Concern
- Snapping Turtle – Special Concern
- Monarch – Special Concern

The potential for each of these species to be found within the Site and surrounding area is discussed below:

- **Butternut Trees:** Butternut Trees are an endangered species that are found in many woodlots and forested areas throughout the region. No Butternut Trees were noted within the Site, nor within the adjacent areas of the Deciduous Hedgerow and the White Cedar Coniferous Forest south of the Site. Therefore, Butternut Trees are not anticipated to be a significant concern for this undertaking. Additional information on tree species found within the Site is included in the TCR Report (Appendix A).
- **Blanding's Turtle:** NHIC records for Blanding's Turtle were noted south of the Site, in association with wetlands found close to the Ottawa International Airport. Blanding's Turtle are primarily associated with wetland habitats (OMNRF 2014a). As previously discussed, there are no significant wetland or watercourse features found within the Site. The LRPSW is found southwest of the Site, with the wetland edge approximately 27 m to 115 m from the property line. As discussed below in Section 4.2, the retirement home will be built approximately 10 m northeast from the property line, which would result in a 37 m buffer existing between the building edge and the wetland (27 m of forested buffer beyond the property line, 10 m landscaped area within the Site). The 10 m between the back of the retirement home and the property line (within the Site) will be landscaped, following grading to redirect stormwater runoff. The 10 m landscaped area will not be reforested, however, this area will continue to contribute to the total buffer distance between the wetland and the



new building by providing permeable surface for water infiltration and by increasing the setback distance between the building and wetland. The *General Habitat Description for Blanding's Turtle* (OMNRF 2014a) identifies three types of Blanding's Turtle habitat. Category 1 and 2 habitat includes nesting areas, hibernacula, and wetland features, as well as the terrestrial area within 30 m of wetland edges. If Blanding's Turtle were hypothetically found within the adjacent section of the LRPSW south of the Site, this would designate the wetland and the surrounding 30 m as Category 2 habitat. Including the landscaped area behind the proposed retirement home, the setback distance between the wetland edge and the proposed development will be a minimum of 30 m in all areas, and will vary between 37 and 115 m across the Site, which would effectively avoid any areas which may qualify as Category 1 or 2 Blanding's Turtle habitat. Category 3 Blanding's Turtle habitat includes the area 250 m from the wetland edge (OMNRF 2014a). Hypothetically, if Blanding's Turtle were found within the adjacent section of the LRPSW, this would designate the majority of the Site as being within Category 3 Blanding's Turtle habitat. The primary function of Category 3 habitat is to provide terrestrial areas that connect adjacent Category 1 and 2 habitat features, allowing Blanding's Turtle to move overland between disconnected wetlands and nesting areas (OMNRF 2014a). As noted above, the majority of the Site is previously developed with hard paved/compacted gravel surfaces (driveways and parking areas) and the Site is also surrounded by an existing chain-link fence on its western, southern, and eastern sides. There are also no wetland features found within the Site, and the adjacent areas west, north, and east of the Site are occupied by major roadways (Hunt Club Road and the Airport Parkway) and other developed properties. It is therefore highly unlikely that the Site provides functional Category 3 habitat under current conditions, and there are no adjacent features beyond the Site which would attract Blanding's Turtle to traverse the area. It is therefore considered highly unlikely that the proposed development would significantly impact Blanding's Turtle habitat or individuals of the species. As noted below in Section 4.4, as a precaution it is recommended that temporary wildlife exclusion fencing should be maintained around the southern, western, and eastern Site edges throughout the duration of construction, in order to mitigate the risk that turtles or other wildlife may enter the work area.

- **Bobolink and Eastern Meadowlark:** NHIC records for Eastern Meadowlark were noted northwest of the Site, and Bobolink were also identified as potentially being present. Eastern Meadowlark and Bobolink are associated with grasslands, old pastures, hayfields, and meadows (SARO 2017). As described above, no habitats which may be suitable for Eastern Meadowlark and Bobolink are found within the Site or in the immediately surrounding area. Therefore, Eastern Meadowlark and Bobolink are not likely to be a significant concern for the proposed development.

- **Barn Swallow:** Barn Swallows may be found nesting in many anthropogenic structures including old barns and sheds, culverts, and under bridges (SARO 2017). Currently there are four (4) buildings found within the Site. All accessible interior and exterior surfaces which may be suitable for Barn Swallow nesting were examined during the Site visit. Photographs 1 to 9 (below) show examples of these surfaces. The residential home at 1054 Hunt Club Road is utilized as a contractor office. The exterior overhangs of the residence are made from vinyl plastic and/or painted metal. These surfaces are not typically utilized for nesting by Barn Swallows, as the species is generally found nesting on rough surfaces such as wood, rock, or concrete (SARO 2017). The residential home at 1054 Hunt Club Road is hence unlikely to be suitable for Barn Swallow nesting. The temporary covered work area at 1054 Hunt Club Road consists of a wooden lattice roof structure placed on top of metal shipping containers. The underside of the roof could be potentially suitable for nesting Barn Swallows, however, this structure was examined and no evidence of nesting was noted. The residential home at 1040 Hunt Club Road is currently vacant. The exterior overhangs of the residence are also made from vinyl plastic and/or painted metal, and hence the residential home at 1040 Hunt Club Road is not likely to be suitable for Barn Swallow nesting. Lastly, the storage shed at 1038 Hunt Club Road includes painted metal siding on top of a wooden frame. The exterior overhangs of this structure are made from metal, and so are not likely to be suitable for Barn Swallow nesting. The interior of the building is accessible due to large openings around the entrance doors, and hence the wooden frame of the structure could potentially be used for Barn Swallow nesting. However, the storage shed was examined and no evidence of Barn Swallow nesting was noted. No evidence of Barn Swallow nesting was noted in any of the existing buildings within the Site, and therefore Barn Swallows are not likely to be a significant concern for the proposed development.
- **Chimney Swift:** Chimney Swifts may be found nesting in uncapped stone chimneys (SARO 2017). As shown in Photograph 10, the residential home at 1054 Hunt Club Road includes a chimney with a wire mesh cap that would prevent Chimney Swifts from nesting. As shown in Photograph 11, the residential home at 1040 Hunt Club Road includes a chimney with a ceramic liner and a metal cap that would prevent Chimney Swifts from nesting. Neither structure includes uncapped chimneys that could be suitable for Chimney Swift nesting. The temporary covered work area and storage shed found within the Site do not have any chimneys. Due to the absence of potentially suitable chimneys, Chimney Swifts are not likely to be a significant concern for the proposed development. Due to the absence of potentially suitable chimneys, a follow-up survey for Chimney Swifts is not required.
- **Bank Swallow:** Bank Swallow are typically found nesting in association with natural and/or artificial silt and sand banks (SARO 2017). Areas where Bank Swallows may nest can include riverbanks, eroded hillsides, natural and artificial cliffs, stockpiles, quarries and large open

excavations (SARO 2017). No exposed sand or silt banks exist within the Site, and there are no adjacent natural or artificial features which may provide nesting habitat for Bank Swallow. Therefore, Bank Swallow are not likely to be a significant concern for the proposed development.

- **Eastern Small-footed Myotis (endangered), Little Brown Bat (endangered), Northern Long Eared Bat (endangered), and Tricolored Bat (endangered):** No caves, bedrock fissures, mining shafts, suitable abandoned buildings, or other features which may function as bat hibernacula habitat were noted within the Site. The OMNRF (2011) guidelines for bat surveying are outlined in the *Bats and Bat Habitats: Guidelines for Wind Power Projects*. These guidelines state that deciduous and mixed forest habitats have the potential to provide maternity roosting habitat. As noted above, the development area does not currently include any forested habitats. The adjacent forested areas to the south of the Site are not anticipated to be directly negatively impacted by the proposed development. Therefore, potential impacts to bat roosting habitat are not likely to be a significant concern for the proposed development.
- **Wood Thrush (special concern), and Eastern Wood Pewee (special concern):** The habitat of species of special concern is not protected under the rules and regulations of the ESA. Wood Thrush and Eastern Wood Pewee breed in forested areas (SARO 2017). As noted above, the development area does not currently include any forested habitats. The adjacent forested areas to the south of the Site are not anticipated to be directly negatively impacted by the proposed development. Therefore, Eastern Wood Pewee and Wood Thrush are not likely to be a significant concern for the proposed development.
- **Snapping Turtle (special concern):** The habitat of species of special concern is not protected under the rules and regulations of the ESA. Snapping Turtles occur in close proximity to wetlands and watercourses (SARO 2017). Snapping Turtle could potentially be found within the LRPSW. However, the separation distance between the LRPSW and the Site is anticipated to be sufficient that it is unlikely that Snapping Turtle would be directly impacted by the undertaking. As noted in Section 4.4 (below), toed in silt fencing will be installed around the south, west, and east sides of the development perimeter as temporary wildlife exclusion fencing. This silt fencing will help mitigate the risk of Snapping Turtles entering the work area.
- **Monarch (special concern):** Monarch Butterflies are found in association with their Milkweed host plants, which typically occur in grasslands, meadows, pasture, and other open habitats (SARO 2017). No Milkweed were noted within the Site, and therefore Monarch are not likely to be a significant concern for the proposed development.



Photograph 1: Residential home at 1054 Hunt Club Road. Note vinyl plastic siding and painted metal overhang (February 6th, 2017).



Photograph 2: Residential home at 1054 Hunt Club Road. Note vinyl plastic siding and painted metal overhang (February 6th, 2017).



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Photograph 3: Temporary covered work area at 1054 Hunt Club Road. Note wooden lattice roof on shipping containers (February 6th, 2017).



Photograph 4: Roof of temporary covered work area at 1054 Hunt Club Road. Note wooden lattice roof on shipping containers (May 15th, 2017).



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Photograph 5: Residential home at 1040 Hunt Club Road. Note vinyl plastic siding and painted metal overhang (February 6th, 2017).



Photograph 6: Residential home at 1040 Hunt Club Road. Note vinyl plastic siding and painted metal overhang (February 6th, 2017).



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Photograph 7: Storage shed at 1038 Hunt Club Road. Note painted metal siding on wooden frame (May 15th, 2017).



Photograph 8: Interior of storage shed at 1038 Hunt Club Road. Note painted metal siding on wooden frame (May 15th, 2017).



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Photograph 9: Interior of storage shed at 1038 Hunt Club Road. Note painted metal siding on wooden frame (May 15th, 2017).



Photograph 10: Chimney at 1054 Hunt Club Road. Note wire mesh cap on chimney (February 6th, 2017).



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Photograph 11: Chimney at 1040 Hunt Club Road. Note metal cap and ceramic liner (February 6th, 2017).

3.7 Linkages

As noted previously, the Site is bounded by Hunt Club Road to the north and a thin Deciduous Hedgerow to the east, beyond which is the Airport Parkway. The property west of the Site is developed and currently includes a church and a parking lot. The area south of the Site includes a White Cedar Coniferous Forest and portions of the LRPSW. Because the Site is bounded by existing developed areas on its western, northern, and eastern sides, it does not provide connection between any two adjacent natural areas, and hence is not likely to provide a significant linkage function.



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4.0 DESCRIPTION OF ENVIRONMENTAL IMPACTS AND MITIGATION

4.1 Terrestrial Habitat and Tree Removal

As shown in the Landscaping Plan (L1), the Site will be developed in two (2) phases. Phase 1 will include development of the retirement home and will require clearing/excavation of the western and central part of the Site. During the development of Phase 1, existing trees will be retained where feasible in the Phase 2 area, which includes portions of the eastern part of the Site. Ultimately, Phase 2 will include clearing/excavation of the eastern part of the Site and construction of the hotel.

As shown in the Site Plan (A101), the development would result in the removal of the majority of the vegetation within the Site. The majority of the surface area of the Site will be significantly impacted during the large scale excavation that will be required to construct the underground parking, building foundations, and for the installation of servicing. Furthermore, grading and drainage requirements will prevent retention of trees in most areas (Refer to the Grading Plan). This will prevent trees from being retained within the interior of the Site, and opportunities for tree retention will be limited to the property edges.

The potential for tree retention is discussed in greater detail in Section 4.1 of the TCR report. In summary, the Coniferous Hedgerow found along Hunt Club Road is not considered a priority for tree retention, and most trees will be removed to accommodate surface parking and surrounding landscaping. However, several White Spruce will be preserved in the northwest and northeast corners of the Site, as shown in the Landscaping Plan (L1). The two (2) White Cedar hedges present within the front yard of 1026 Hunt Club Road are within the footprint of the proposed retirement home and surface parking and hence cannot be retained. Front yard and backyard trees growing throughout the Site fall within the proposed footprint of the retirement home, the hotel, the surface parking areas, and/or the large excavation area that will be required during the construction of underground parking, building foundations, and servicing. Therefore, trees cannot be retained throughout the majority of the Site.

The removal of trees within the Site is not likely to result in significant edge effects on the adjacent White Cedar Coniferous Forest, as most of the edge of this feature is already exposed, and any trees occurring near the edge within the Site occur in low densities. Therefore, clearing within the Site will not result in the creation of a new forest edge in most areas.

Tree retention along the western property line should be undertaken where feasible, in order to provide a visual buffer for the adjacent church. The Deciduous Hedgerow found adjacent to the Airport Parkway is part of the NCC Greenbelt. The majority of trees that form part of this feature are

found beyond the property line and hence will be retained. However, the stormwater swale is designed to connect to the existing stormwater sewers and drainage ditch along the Airport Parkway, and hence will need to pass through the Deciduous Hedgerow. This will result in the removal of a small number of young trees beyond the property line, in the path of the swale.

All trees that are within the White Cedar Coniferous Forest beyond the southern property line will be retained. Mitigation measures to protect retained trees are outlined in Section 4.2 of the TCR Report.

4.1.1 Landscaping

In order to mitigate the loss of woody vegetation from Site clearing, a Landscaping Plan (L1) has been developed (see above). This plan includes replanting selectively around the Site following completion of construction, including in gardens and landscaping beds. The planting locations and specific planting requirements are shown in the Landscaping Plan (L1). As shown in the Landscaping Plan, plantings will emphasize the use of native trees and shrubs. Planting of Ash trees will be avoided due to the high likelihood that any planted Ash trees will become infested with Emerald Ash Borer.

4.2 Wetlands and Watercourses

4.2.1 Stormwater and Hydrological Impacts

As noted previously, a portion of the LRPSW is located southwest of the Site, within the adjacent White Cedar Coniferous Forest. Because the Site is previously developed and is predominantly occupied by hard surfaces including the paved/compacted gravel driveways, parking areas, and the roofs of existing buildings, redevelopment of the Site is not likely to significantly negatively impact the adjacent LRPSW. Currently stormwater from the Site and from portions of the NCC lands located to the south of the Site sheet drain in an uncontrolled manner to the storm sewers along the Airport Parkway and Hunt Club Road. As shown in the Grading Plan (GR2), during development the Site will be re-graded to direct stormwater flow into drainage swales, which will convey stormwater towards the southeast corner of the Site. As part of this system, a retaining wall will be constructed around the western and southern property lines. An outlet channel will be constructed in the southeast corner to connect to the existing roadside ditch and storm sewers along the Airport Parkway. Post-development flows will be controlled to pre-development levels through on-site storage. Water quality control will be provided by a hydrodynamic separator unit. Stormwater runoff will be redirected away from the LRPSW, and hence stormwater is unlikely to negatively impact the wetland.

Paterson Group (2017) have analyzed the potential for the building construction to impact the groundwater level in surrounding areas, including the LRPSW. Paterson Group concluded that "...it is expected that the occurrence of groundwater lowering within the immediate area surrounding the Site is negligible. The proposed development will not negatively impact the wetland area..." (Paterson Group 2017). Therefore, it is anticipated that the proposed development will not significantly negatively impact the hydrology of the wetland.

As noted in Section 4.4 (below), toed in silt fencing will be installed around the south, west, and east sides of the development perimeter as temporary wildlife exclusion fencing. This silt fencing will also help to mitigate sediment and erosion impacts, as it will separate the development from surrounding natural areas.

4.2.2 Tree Retention

The removal of trees within the Site is unlikely to significantly impact the features and functions of the wetland, as trees occurring within the Site are mostly those that were planted for landscaping purposes. As noted previously, mature trees growing within the Site are surrounded by lawn, gardens, or paved/compacted gravel surfaces with little natural ground or shrub cover, and hence are not part of any natural vegetative community. Trees found within the backyards within the Site are separated from the adjacent White Cedar Coniferous Forest by the existing chain-link fence. Tree mitigation measures to protect trees found adjacent to the Site in the Deciduous Hedgerow and the White Cedar Coniferous Forest are outlined in Section 4.2 of the TCR report. Tree removal within the Site is hence not anticipated to significantly negatively impact the natural vegetative communities or the wetland found south of the Site.

As discussed previously, a retaining wall and stormwater swale will be built close to the property line to meet grading and stormwater management requirements. The presence of these structures limits the potential for additional trees to be retained and/or planted along the southern/southwestern property lines, which also limits the potential to expand the forested buffer of the LRPSW. Even if additional trees were planted and/or retained within the Site, the presence of the stormwater management structures would create a break in the buffer along the southern and southwestern property lines, which would prevent any continuous buffer from being maintained within the property. Trees located on the development side of the stormwater management structures would also be within the area of grading and excavation, and hence can't be retained during construction. If additional trees were planted along the southern/southwestern property line following construction, they may block drainage to the swale, and could also potentially undermine the foundation of the retaining wall. Therefore, additional trees cannot be planted and/or retained along the southern/southwestern property line on the development side of the stormwater

management structures, due to the constraints created by the excavation, grading, and drainage requirements.

4.2.3 Wetland Setback

The current setback distance between the LRPSW and the property line varies between approximately 27 m and 115 m. The setback distance is narrowest in the southwest corner of 1026 Hunt Club Road, where the distance from the development area to the wetland edge is approximately 27 m. Throughout the remainder of the Site, the distance between the wetland edge and the development area is significantly greater than 27 m. In the southwest corner of the Site, the retirement home will be built approximately 10 m northeast from the property line. The landscaped area between the property line and the building (10 m) is anticipated to provide some of the functions of a wetland setback, including permeable surface for water infiltration and absorption, and additional separation distance between the building and the wetland edge. This arrangement will result in a 37 m buffer existing between the building edge and the wetland (27 m of forested buffer beyond the property line, 10 m of landscaped area within the Site). The buffer will help to slow, filter and absorb overland stormwater flow, it will provide habitat for wildlife, and it will also provide a buffer from edge effects, noise, pollution, and other forms of human disturbance. As noted above, the constraints created by the stormwater management infrastructure, as well as excavation, grading and drainage requirements, are such that it is not possible to extend the existing forested area by retaining and/or planting additional trees within the Site. It is anticipated that the existing forested area beyond the property line, combined with landscaping areas within the property, will ultimately provide an adequate buffer to protect the LRPSW.

4.3 Adjacent Lands and Significant Features

The potential for tree retention is discussed in greater detail in Section 4.1 of the TCR report. As noted above, the Deciduous Hedgerow found adjacent to the Airport Parkway is part of the NCC Greenbelt. A small number of young deciduous trees will be removed from within this feature, in order to connect the stormwater swale to the stormwater sewer along the Airport Parkway. All trees that are within the White Cedar Coniferous Forest beyond the southern property line will be retained. Mitigation measures to protect retained trees are outlined in Section 4.2 of the TCR Report.

4.4 Wildlife and Species at Risk

As discussed previously, relatively little evidence of wildlife occurring within the Site was noted, and so the risk that wildlife may be negatively impacted during tree clearing is comparatively low. Potential impacts on wildlife at the construction stage may include the following:

- Removal of habitat features and displacement of wildlife from existing habitat areas;
- Potential injury or mortality of adults in terrestrial habitats due to vehicle impacts, during excavations, or during land clearing; and
- Interruption of movement to essential foraging, breeding, or overwintering areas due to site hoarding or sediment and erosion control fencing.

As noted previously, there are no SAR which are known to occur within the Site and impacts to SAR are considered unlikely. Mitigation for wildlife during tree clearing is summarized here. These recommendations include provisions from the City of Ottawa (2015) *Protocol for Wildlife Protection During Construction*:

- **Pre-Stressing:** Prior to tree removal, the area should be pre-stressed by traversing the Site with a loud noise such as an excavator horn. This will encourage wildlife to leave the area;
- **Tree Clearing Direction:** Tree clearing should proceed from Hunt Club Road towards the south. This will encourage wildlife to leave the work area and move in the direction of the retained trees within the adjacent White Cedar Coniferous Forest;
- **Temporary Fencing:** Silt fencing will be arranged to also function as temporary wildlife exclusion fencing to reduce the likelihood of turtles, frogs, mammals and other wildlife from entering the work area. Toed in silt fencing should be installed at the edge of development along the east, west, and south sides of the Site. If possible, silt fencing should be put in place prior to the turtle active season (April to end of October);
- **Inspections:** The fencing and work area will be inspected by a designated staff member prior to commencement of work to ensure that the arrangement will reduce the likelihood of wildlife entering the work area. Any wildlife or significant wildlife habitat features that are encountered will be identified and marked;
- **Sweeps:** Prior to vegetation clearing, preconstruction sweeps of vegetated areas will be undertaken to ensure wildlife are not present. Construction staff will be required to review the mitigation measures included in this EIS and the TCR (Appendix A). A designated staff member will be required to conduct daily sweeps each morning prior to commencement of work to ensure wildlife have not entered the work area. The designated staff member will also periodically inspect the temporary exclusion fencing to ensure there are no gaps or holes in the fence;
- **SAR Encounters:** If SAR are encountered in the work area, construction in the vicinity must be stopped immediately and measures must be taken to ensure the SAR is not harmed. The project biologist and the OMNRF must be contacted to discuss how to proceed prior to commencement of work;
- **General Provisions:** General provisions for Site management include the following:
 - Do not harm, feed, or unnecessarily harass wildlife;

- Drive slowly and avoid hitting wildlife;
 - Keep Site tidy and free of garbage and food wastes. Secure all garbage in appropriate sealed containers;
 - Ensure proper Site drainage so that standing water does not accumulate on Site. This will reduce the likelihood that turtles and other wildlife may enter the Site;
 - Any stockpiles should be properly secured with silt fencing to prevent wildlife from accessing areas of loose fill; and
- **Timing Windows:** Vegetation clearing and site preparation will be undertaken outside of the core migratory bird breeding season of April 15th to August 15th each year in order to avoid impacting the nests of migratory birds.



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5.0 CUMULATIVE EFFECTS

Cumulative effects were considered in the design of the mitigation measures outlined above in Section 4.0. As discussed in Section 3.1 of the TCR Report, the majority of the Site has been developed with residential homes since at least 1965. Currently, the majority of the Site is occupied by hard surfaces including paved/compacted gravel parking areas and driveways, and the roofs of four (4) existing buildings. As such, in its current condition the Site does not provide any significant natural vegetative communities and redevelopment of the Site is therefore not anticipated to contribute significantly to the cumulative loss of natural habitats or forest cover. Refer to the attached TCR (Appendix A) for further information.

6.0 MONITORING

Construction stage monitoring requirements are outlined in Section 4.4 (above). Monitoring will include pre-construction sweeps to inspect fencing and vegetation prior to clearing, and daily sweeps by construction staff. No post construction monitoring is required.

7.0 CLOSURE

We trust that the above information is sufficient; should you have any questions or require further information, please do not hesitate to contact the undersigned, at your convenience.

Sincerely,



Dr. Andrew McKinley, EP, RP Bio.
Senior Biologist, McKinley Environmental Solutions



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8.0 REFERENCES

City of Ottawa (2012) Official Plan Amendment – Natural Heritage System Mapping, Lester Road Wetland Complex, Kizell Drain Wetlands and the Cardinal Creek Karst. Reference Number: ACS2012-PAI-PGM-0214.

City of Ottawa (2014) Natural Heritage System Overlay (East). Official Plan Schedule L1.

City of Ottawa (2015) Protocol for Wildlife Protection During Construction.

City of Ottawa (2017) Geo-Ottawa Municipal Mapping Site. Retrieved February 13, 2017 at <<http://maps.ottawa.ca/geottawa/>>

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2005) OMNRF Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005, Second Edition.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2011) Bats and Bat Habitats: Guidelines for Wind Power Projects.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2014a) General Habitat Description for Blanding's Turtle.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2014b) Significant Wildlife Habitat Mitigation Support Tool.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2017) Natural Heritage Information Center <<http://nhic.mnr.gov.on.ca/>> (Accessed February 7, 2017).

Parsons (2016) Airport Parkway and Lester Road Widening Environmental Assessment Study – Environmental Study Report.

Paterson Group (2017) Response to RVCA Review Comments – Proposed Multi-Storey Buildings – 1026-1054 Hunt Club Road – Ottawa. File Number PG4091-LET.01

Species at Risk Ontario (SARO) (2017) Species at Risk Ontario. Retrieved February 13, 2017 at <<http://www.ontario.ca/environment-and-energy/species-risk-ontario-list>>

APPENDIX A

Tree Conservation Report



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1.0 INTRODUCTION AND SUMMARY

This Tree Conservation Report (TCR) has been prepared to support the Environmental Impact Statement (EIS) for the proposed development of the property at 1026, 1038, 1040, 1050, and 1054 Hunt Club Road, Ottawa, Ontario (the Site). This TCR is presented as an appendix to the EIS study and should be read in conjunction with the EIS (attached). Refer to the EIS for the associated project description, the Site Plan (A101) and the Grading and Erosion and Sediment Control Plan (GR2). The Site is approximately 0.93 ha (2.3 acres) in size with approximately 136 m of frontage on Hunt Club Road. The Site is bounded by Hunt Club Road to the north and a thin Deciduous Hedgerow to the east, beyond which is the Airport Parkway. The property west of the Site is developed and currently includes a church and a parking lot. The area south of the Site includes a White Cedar Coniferous Forest and portions of the Lester Road Provincially Significant Wetland Complex (LRPSW). The White Cedar Coniferous Forest and the thin Deciduous Hedgerow east of the Site (along the Airport Parkway) are part of the National Capital Commission (NCC) Greenbelt. Portions of the White Cedar Coniferous Forest and LRPSW are also shown as part of the City of Ottawa Natural Heritage System on Schedule L1 of the Official Plan.

The Site consists of five (5) previously developed residential lots which are currently used as a contractor's yard, storage area, and office. Currently there are four (4) buildings found within the Site. This includes two (2) residential homes (one vacant, one used as a contractor office), a covered work area, and a storage shed. The majority of the remainder of the Site is occupied by paved and compacted gravel surfaces (driveways and parking). Vegetation within the Site is typical of older residential properties in the area, consisting mainly of mature planted trees growing in low densities, surrounded by hard surfaces and manicured lawns/gardens. In some areas lawns are overgrown with typical yard weeds due to a lack of maintenance. A Coniferous Hedgerow dominated by planted Norwegian Spruce is present along Hunt Club Road. Within the Site there are also two (2) White Cedar hedges in the western part of the Site, as well as several isolated mature trees growing in the front yards and former gardens around the residential buildings. The backyards behind 1040 and 1054 Hunt Club Road include stands of mature trees, primarily White Cedar, surrounded by manicured lawn. 1054 Hunt Club Road also has an aboveground swimming pool. Lastly, the western, southern, and eastern Site boundaries are surrounded by a chain-link fence.

The development plan will result in the removal of the majority of the vegetation within the Site. Tree protection measures will be implemented to protect trees growing beyond the eastern and southern property lines (in the adjacent Deciduous Hedgerow and White Cedar Coniferous Forest). Where feasible, trees will also be retained along the western property line in order to provide a visual buffer for the adjacent church. The current setback distance between the LRPSW and the property line varies

between approximately 27 m and 115 m. The setback distance is narrowest in the southwest corner of 1026 Hunt Club Road, where the distance from the development area to the wetland edge is approximately 27 m. Throughout the remainder of the Site, the distance between the wetland edge and the development area is significantly greater than 27 m. In the southwest corner of the Site, the retirement home will be built approximately 10 m northeast from the property line. The landscaped area between the property line and the building (10 m) is anticipated to provide some of the functions of a wetland setback, including permeable surface for water infiltration and absorption, and additional separation distance between the building and the wetland edge. This arrangement will result in a 37 m buffer existing between the building edge and the wetland (27 m of forested buffer beyond the property line, 10 m of landscaped area within the Site). It is anticipated that the existing forested area beyond the property line, combined with landscaping areas within the property, will ultimately provide an adequate buffer to protect the LRPSW.

1.1 Definitions

The following terms are used throughout this report:

- Diameter at Breast Height (dbh) means the measurement of the trunk of a tree at a height of 120 cm above grade for trees 15 cm diameter or greater, and at a height of 30 cm above grade for trees less than 15 cm diameter.
- The Critical Root Zone (CRZ) is 10 centimeters from the trunk of the tree for every centimeter of trunk dbh. The CRZ is calculated as $\text{dbh} \times 10 \text{ cm}$.

2.0 TREE INVENTORY METHODS

Site visits to conduct a tree inventory and to identify wildlife habitat features were undertaken by Dr. McKinley on February 6th and May 15th, 2017. During the February 6th visit, the Site was snow covered, although hard surfaces within the Site had been cleared of snow. During the May 15th site visit, mid-spring conditions were observed and conditions included mostly sunny skies and 18 °C. TCR plots were not required to inventory trees within the Site, as no large areas of dense tree coverage (e.g. forest) exist within the Site. Instead, tree specimens with a dbh of 10 cm or greater were measured throughout the Site, such that approximately half the trees growing within the Site were measured. Tree sizes were measured with the use of a D-tape which is a calibrated diameter at breast height tape. Measurements for each of the qualifying trees within the Site were taken 1.2 m from the ground surface and recorded.

3.0 TREE INVENTORY

3.1 Site History

Historic air photos from 1965, 2002 and 2011 are included below. The 1965 air photo is the oldest currently available. This photo shows that the majority of the Site was developed with residential homes in 1965 and that there were few trees present in the front yards at that time. Coniferous trees, likely White Cedar, are present in the backyards. The White Cedar Coniferous Forest found south of the Site was present in 1965 and the Airport Parkway had not yet been constructed (east of the Site).

Air photos from 2002 and 2011 show that the Site was occupied by residential homes as recently as 2011, and that mature trees were growing in much of the surrounding yards. However, by 2011 much of the front yards were paved or covered with compacted gravel to make parking areas/driveways, reducing the number of trees and extent of permeable surfaces. The storage shed located at 1038 Hunt Club Road was also constructed between 2002 and 2011, further reducing the extent of mature trees. Stands of mature trees remained in the backyards and in the adjacent White Cedar Coniferous Forest south of the Site in 2011.

Figures 1 and 2 (below) show the Site in 2014. By 2014 the residential home at 1026 Hunt Club Road had been demolished and the paved/compacted gravel surfaces associated with the driveway and parking areas had been expanded compared to the 2002 and 2011 air photos. The extent of mature trees currently found within the Site appears less than in 2011. In part, this is due to the die-off of large White Ash and American Elm trees within the Site (discussed below).



Photograph 1: Historic Air Photo from 1965. Property boundary shown in red. Note majority of Site is developed with residential homes. Few mature trees are present in the front yards. White Cedar trees are present in the backyards. The adjacent White Cedar Coniferous Forest (south) is present in 1965 (Photos from City of Ottawa 2017).



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Photograph 2: Historic Air Photo from 2002. Property boundary shown in red. Note majority of Site is developed with residential homes surrounded by numerous mature trees. White Cedar trees are present in the backyards. The adjacent White Cedar Coniferous Forest (south) remains present (Photos from City of Ottawa 2017).



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Photograph 3: Historic Air Photo from 2011. Property boundary shown in red. Note majority of Site is developed with residential homes surrounded by numerous mature trees. White Cedar trees are present in the backyards. The extent of mature trees within the yards is reduced compared to 2002. The adjacent White Cedar Coniferous Forest (south) remains present (Photos from City of Ottawa 2017).



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FIGURE 1: SITE OVERVIEW

1026 to 1054 Hunt Club Road, Ottawa, Ontario

Environmental Impact Statement & Tree Conservation Report (Revised)



— - Property Boundary

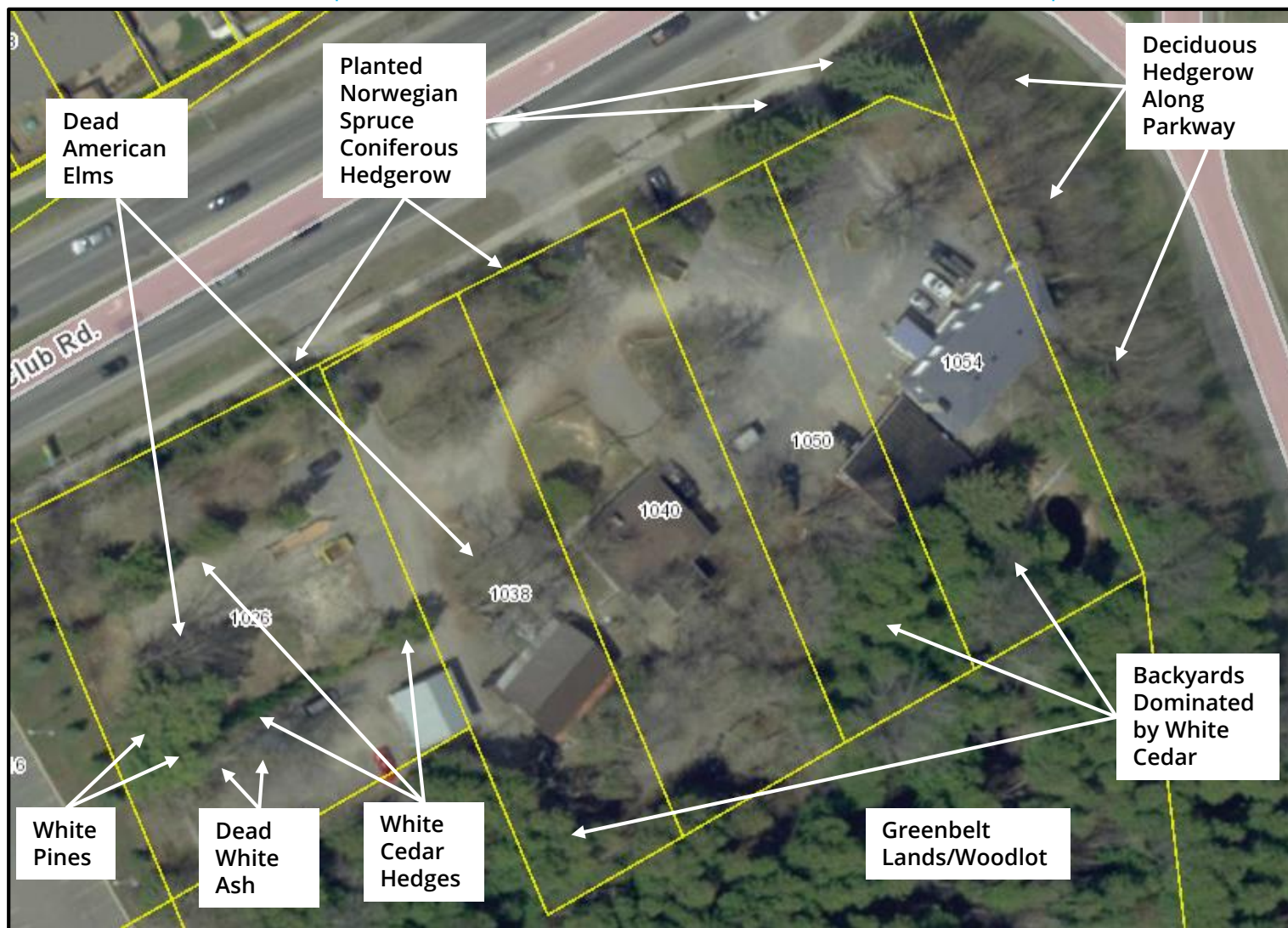
Please Note: This is not a legal land survey. All dimensions and locations are shown as approximate.



FIGURE 2: VEGETATION MAPPING

1026 to 1054 Hunt Club Road, Ottawa, Ontario

Environmental Impact Statement & Tree Conservation Report (Revised)



Please Note: This is not a legal land survey. All dimensions and locations are shown as approximate.

3.2 Tree and Vegetation Composition

Vegetation within the Site is typical of older residential properties in the area, consisting mainly of mature trees growing in low densities, surrounded by hard surfaces and manicured lawns/gardens. In some areas lawns are overgrown with typical yard weeds (e.g. Dandelion, Canada Goldenrod, Lamb's Quarter's Pigweed, Common Burdock, Common Buckthorn, etc.) due to a lack of maintenance. Mature trees growing within the Site are surrounded by lawn, gardens, compacted gravel, or paved surfaces, and hence are not part of any natural vegetative community. Trees found within the backyards within the Site are separated from the adjacent White Cedar Coniferous Forest by the existing chain-link fence. The following is a summary of trees found within the Site:

- **Coniferous Hedgerow (Hunt Club Road):** A Coniferous Hedgerow is present along the northern Site boundary (along Hunt Club Road). The core of the hedgerow adjacent to Hunt Club Road is dominated by planted non-native Norwegian Spruce (*Picea abies*) which vary in size between approximately 20 and 35 cm dbh. There are several small patches of manicured lawn immediately south of the hedgerow, between the Norwegian Spruce and the paved and compacted gravel driveway/parking areas. Within these manicured lawns there are planted White Spruce (*Picea glauca*), Sugar Maple (*Acer saccharum*), White Cedar (*Thuja occidentalis*), and domestic Honey Locust (*Gleditsia triacanthos*) growing as landscaping features. These trees vary in size between 20 and 40 cm dbh. Due to a lack of maintenance, regrowth stems of Trembling Aspen (*Populus tremuloides*), invasive Manitoba Maple (*Acer negundo*), and White Ash (*Fraxinus americana*) are also present within and around the Coniferous Hedgerow. These regrowth stems vary between approximately 10 and 45 cm dbh. Most trees within the hedgerow are in good condition, however, the feature is not considered ecologically significant as it is present adjacent to a major roadway and is surrounded by development, roads, or parking areas on all sides.
- **Deciduous Hedgerow (Airport Parkway):** A recent regrowth Deciduous Hedgerow is present east of the property line along the Airport Parkway. This hedgerow is approximately 10 to 12 m wide and consists mainly of young stems that have regenerated following recent clearing. The Deciduous Hedgerow is dominated by young Manitoba Maple, White Cedar, White Ash, and Sugar Maple, varying in size between approximately 10 and 20 cm dbh.
- **White Cedar Hedges (1026 Hunt Club Road):** Two (2) White Cedar hedges are present within the front yard of 1026 Hunt Club Road. These hedges are aligned in a west-east direction and are dominated by young White Cedar. White Spruce, White Ash, Manitoba Maple, and Sugar Maple are found growing around the White Cedar hedges.
- **Front Yard Trees (1026, 1038, 1040, and 1050 Hunt Club Road):** Planted Bur Oak (*Quercus macrocarpa*), White Pine (*Pinus strobus*), American Elm (*Ulmus americana*), Manitoba Maple, White Ash, and Sugar Maple are found growing in the front yards of the former residential homes. Many of these trees are mature, varying in size from approximately 20 to 50 cm dbh.



It should be noted that several of the largest trees found within the Site are American Elm and White Ash which are either dead or dying. Extensive evidence of infestation by Emerald Ash Borer (EAB) was noted, and most of the large White Ash trees throughout the Site were either dead or in very poor condition. This includes a dead 55 cm dbh American Elm found in the western part of 1026 Hunt Club Road, a 49 cm dbh and a 51 cm dbh dead White Ash found in the western part of 1026 Hunt Club Road, and a stressed 62 cm/55 cm/50 cm (3 stems) American Elm growing in the central part of 1038 Hunt Club Road. Notable large trees within the Site included four healthy White Pines (40 cm, 45 cm, 44 cm, and 42 cm dbh) growing in the western part of 1026 Hunt Club Road and a 48 cm dbh Sugar Maple growing in the western part of 1050 Hunt Club Road. Most of these trees appear to have been planted as landscaping features.

- **Backyard Trees (1038, 1050, and 1054 Hunt Club Road):** The backyards of 1038, 1050, and 1054 Hunt Club Road are dominated by stands of White Cedar, varying in size between approximately 20 and 40 cm dbh. These trees likely represent regrowth, originating from seeds coming from the adjacent White Cedar Coniferous Forest. The White Cedars growing in the backyards occur in low density and are surrounded by manicured lawn, a swimming pool, and paved/compacted gravel areas. They are also separated from the adjacent White Cedar Coniferous Forest by a chain-link fence, which surrounds the southern, eastern and western property boundaries. There are also isolated White Ash and White Spruce stems growing in the backyards, varying in size between 20 and 40 cm dbh.





Photograph 4: Looking at northeast corner, Hunt Club Road in background on left (May 15th, 2017).



Photograph 5: Looking east at planted Norwegian Spruce in Coniferous Hedgerow. Hunt Club Road on left (May 15th, 2017).



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Photograph 6: Looking southeast at 1054 Hunt Club Road with Deciduous Hedgerow in background (February 6th, 2017).



Photograph 7: Looking south along Deciduous Hedgerow. Fence at eastern property line on right, Airport Parkway on left (February 6th, 2017).



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Photograph 8: Looking north along Deciduous Hedgerow. 1056 Hunt Club Road on left, Airport Parkway on right (February 6th, 2017).



Photograph 9: White Cedar hedge in western part of 1026 Hunt Club Road (on right), looking west. Large White Pines and large dead White Ash in western part of 1026 Hunt Club Road shown (May 15th, 2017).



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Photograph 10: Looking east at storage shed in 1038 Hunt Club Road. Large stressed American Elm at left of storage shed. Chain-link fence marks property edge on right (White Cedars are beyond property line) (February 6th, 2017).



Photograph 11: Looking south at house at 1040 Hunt Club Road. Front yard trees in foreground, backyard White Cedars in background (February 6th, 2017).



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Photograph 12: Looking south at residence (left) and covered work area (right) within 1056 Hunt Club Road. Residence is used as a contractor office. Backyard White Cedars in background (February 6th, 2017).



Photograph 13: Looking north from southern property line, behind 1056 Hunt Club Road. Note backyard swimming pool. 1056 Hunt Club Road residence is shown in background (February 6th, 2017).



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Photograph 14: Looking east from southern property line, behind 1050 Hunt Club Road. Note White Cedars growing in low density in backyard (May 15th, 2017).



Photograph 15: Looking north from southern property line, behind 1056 Hunt Club Road (May 15th, 2017).



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Photograph 16: Close-up of large dead White Ash in 1026 Hunt Club Road, showing extensive damage from Emerald Ash Borer (February 6th, 2017).



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3.3 Significant Woodlot Assessment

Portions of the White Cedar Coniferous Forest found south of the Site are part of the City of Ottawa's Natural Heritage System, as shown in Schedule L1 of the Official Plan (City of Ottawa 2014). The White Cedar Coniferous Forest and Deciduous Hedgerow are also shown to be part of the National Capital Commission (NCC) Greenbelt. The portion of the White Cedar Coniferous Forest directly south of the Site is dominated by White Cedar stems, varying in size between 30 and 50 cm dbh. Aerial photography shows that the forest is connected to a much larger forested area, which extends south from the Site to the Ottawa International Airport. This forested area includes several wetland patches that are shown to be part of the LRPSW. Although the White Cedar Coniferous Forest and connected areas were not assessed in detail, it appears likely that they would qualify as a Significant Woodlot under several criteria due to the size of the forested area, the presence of interior forest habitat, linkage functions, and the presence of a wetland within the forested area (OMNRF 2005).

Trees occurring within the Site are surrounded by manicured lawns and/or paved and compacted gravel surfaces and lack natural shrub or ground cover and hence are not part of natural vegetative communities. In some areas lawns are overgrown with typical yard weeds (e.g. Dandelion, Canada Goldenrod, Lamb's Quarter's Pigweed, Common Burdock, Common Buckthorn, etc.) due to a lack of maintenance. Most of the trees within the Site appear to have been planted as landscaping features, and those present in the backyards of the residences are separated from the adjacent forest by an existing chain-link fence. Therefore, the treed areas of the Site are not considered part of the adjacent forest, and hence would not qualify as part of a Significant Woodlot.

4.0 VEGETATION REMOVAL AND TREE MITIGATION

4.1 Potential Tree Retention

As shown in the Site Plan (A101) and the Grading and Erosion and Sediment Control Plan (GR2) (Refer to the attached EIS), the development would result in the removal of the majority of the vegetation within the Site. The majority of the surface area of the Site will be significantly impacted during the large scale excavation that will be required to construct the underground parking, building foundations, and for the installation of servicing. Grading and drainage requirements will also impact most areas. This will prevent trees from being retained within the interior of the Site, and opportunities for tree retention will be limited to the property edges. The potential for tree retention within the Site is summarized as follows:

- **Coniferous Hedgerow (Hunt Club Road):** The Coniferous Hedgerow present along the northern property line consists almost entirely of planted trees with a high proportion of non-native stems (Norwegian Spruce and Manitoba Maple). Most trees within the hedgerow are in good condition, however, this feature is not considered ecologically significant as it is present adjacent to a major roadway and is surrounded by development, roads, or parking areas on all sides. Tree retention in this area is not considered a priority, and most trees will be removed to accommodate surface parking and surrounding landscaping. However, several White Spruce may be retained along Hunt Club Road in the northwestern and northeastern corners of the Site (Refer to the Landscaping Plan (below)).
- **Deciduous Hedgerow (Airport Parkway):** The Deciduous Hedgerow found adjacent to the Airport Parkway is part of the NCC Greenbelt. The majority of trees that form part of this feature are found beyond the property line and hence will be retained. However, the stormwater swale is designed to connect to the existing stormwater sewers and drainage ditch along the Airport Parkway, and hence will need to pass through the Deciduous Hedgerow. This will result in the removal of a small number of young trees beyond the property line, in the path of the swale. Mitigation measures to protect retained trees are outlined below.
- **White Cedar Hedges (1026 Hunt Club Road):** The two (2) White Cedar hedges present within the front yard of 1026 Hunt Club Road are within the footprint of the proposed retirement home and surface parking and hence cannot be retained.
- **Front Yard and Backyard Trees:** Front yard and backyard trees growing throughout the Site fall within the proposed footprint of the retirement home, the hotel, the surface parking areas, and/or the large excavation area that will be required during the construction of underground parking, building foundations, and servicing. Therefore, trees cannot be retained throughout the majority of the Site. Tree retention along the western property line should be undertaken where feasible, in order to provide a visual buffer for the adjacent church. All trees that are

within the forested area beyond the southern property line will be retained. Mitigation measures to protect retained trees are outlined below.

As discussed in the EIS, a retaining wall and stormwater swale will be built close to the property line to meet grading and stormwater management requirements. The presence of these structures limits the potential for additional trees to be retained and/or planted along the southern/southwestern property lines, which also limits the potential to expand the forested buffer of the LRPSW. Even if additional trees were planted and/or retained within the Site, the presence of the stormwater management structures would create a break in the buffer along the southern and southwestern property lines, which would prevent any continuous buffer from being maintained within the property. Trees located on the development side of the stormwater management structures would also be within the area of grading and excavation, and hence can't be retained during construction. If additional trees were planted along the southern/southwestern property line following construction, they may block drainage to the swale, and could also potentially undermine the foundation of the retaining wall. Therefore, additional trees cannot be planted and/or retained along the southern/southwestern property line on the development side of the stormwater management structures, due to the constraints created by the excavation, grading, and drainage requirements.



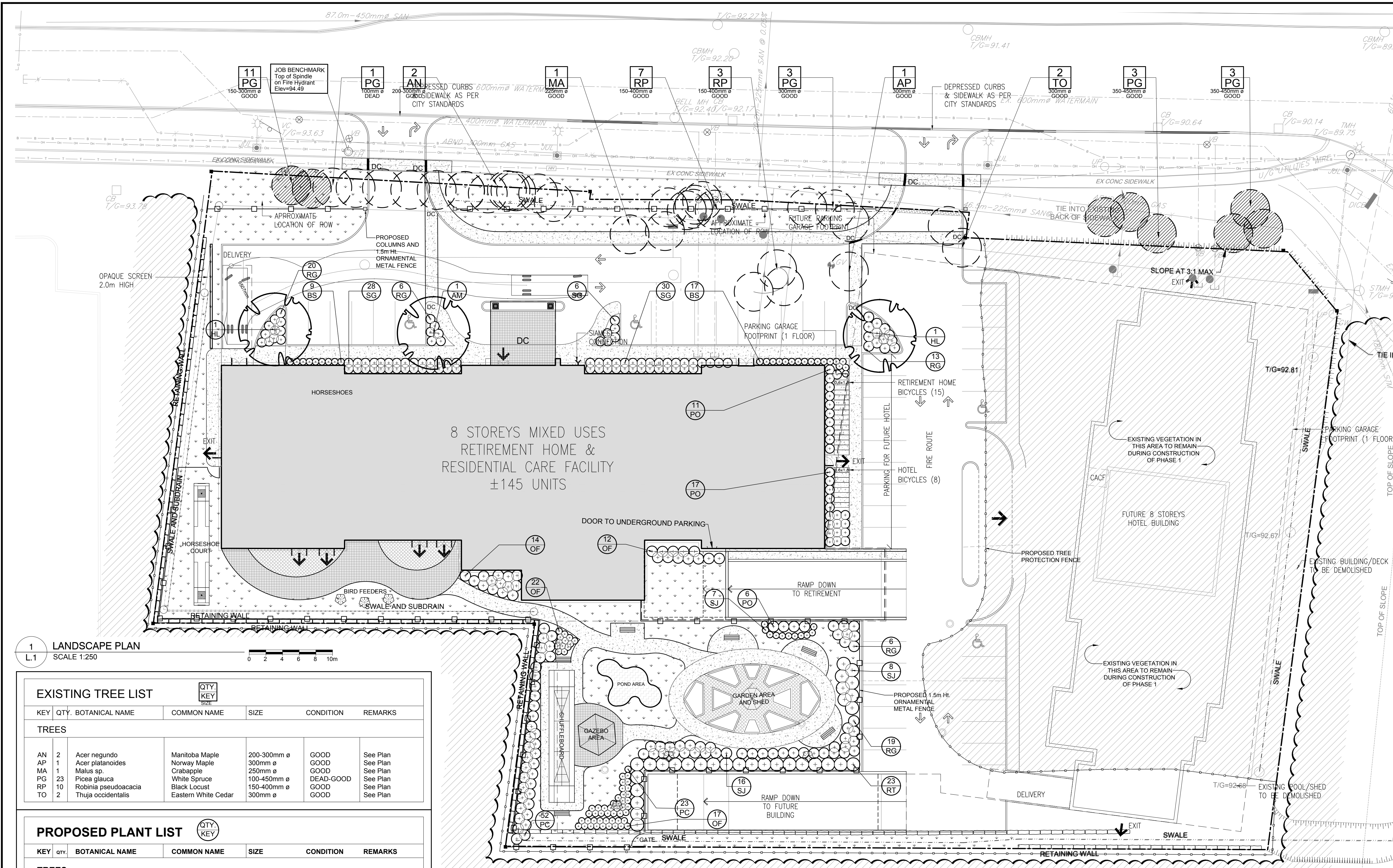
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1
L.1
LANDSCAPE PLAN
SCALE 1:250

EXISTING TREE LIST

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	REMARKS
TREES						
AN	2	Acer negundo	Manitoba Maple	200-300mm ø	GOOD	See Plan
AP	1	Acer platanoides	Norway Maple	300mm ø	GOOD	See Plan
MA	1	Malus sp.	Crabapple	250mm ø	GOOD	See Plan
PG	23	Picea glauca	White Spruce	100-450mm ø	DEAD-GOOD	See Plan
RP	10	Robinia pseudoacacia	Black Locust	150-400mm ø	GOOD	See Plan
TO	2	Thuja occidentalis	Eastern White Cedar	300mm ø	GOOD	See Plan

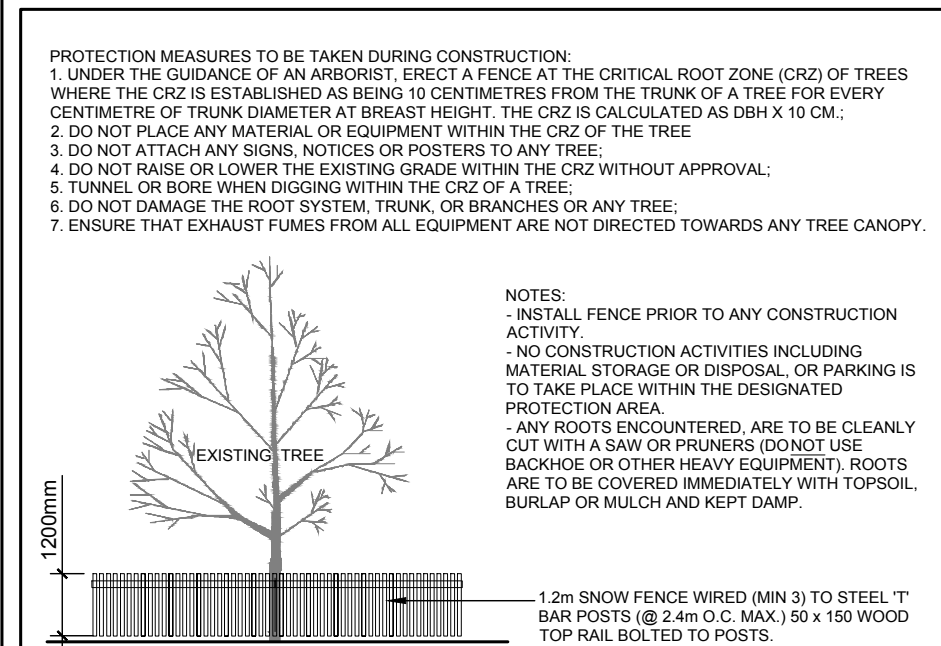
PROPOSED PLANT LIST

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	REMARKS
TREES						
AM	1	Acer x freemianii 'Armstrong'	Armstrong Maple	60mm dia.	B&B	
HL	2	Gleditsia triacanthos 'Draves'	Streetkeeper Honeylocust	70mm dia.	B&B	
SHRUBS						
PO	34	Physocarpus opulifolius	Common Ninebark	600mm ht.	Potted	1000 mm o.c.
RG	64	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	500mm ht.	Potted	800 mm o.c.
RT	23	Rhus typhina 'Laciniata'	Cutleaf Staghorn Sumac	800 mm ht.	Potted	1200 mm o.c.
SJ	31	Hypericum kalmianum	St. John's Wort	600mm Ht.	Potted	800 mm o.c.
PERENNIALS						
PC	75	Polygonatum canaliculatum	Great Solomon's Seal	150mm pot	Potted	400 mm o.c.
OF	65	Matteuccia struthiopteris	Ostrich Fern	1 gal pot	Potted	800 mm o.c.
SG	64	Panicum virgatum	Switchgrass	250mm Pot.	Potted	800 mm o.c.
BS	26	Rudbeckia hirta	Black Eyed Susan	250mm pot.	Potted	800 mm o.c.

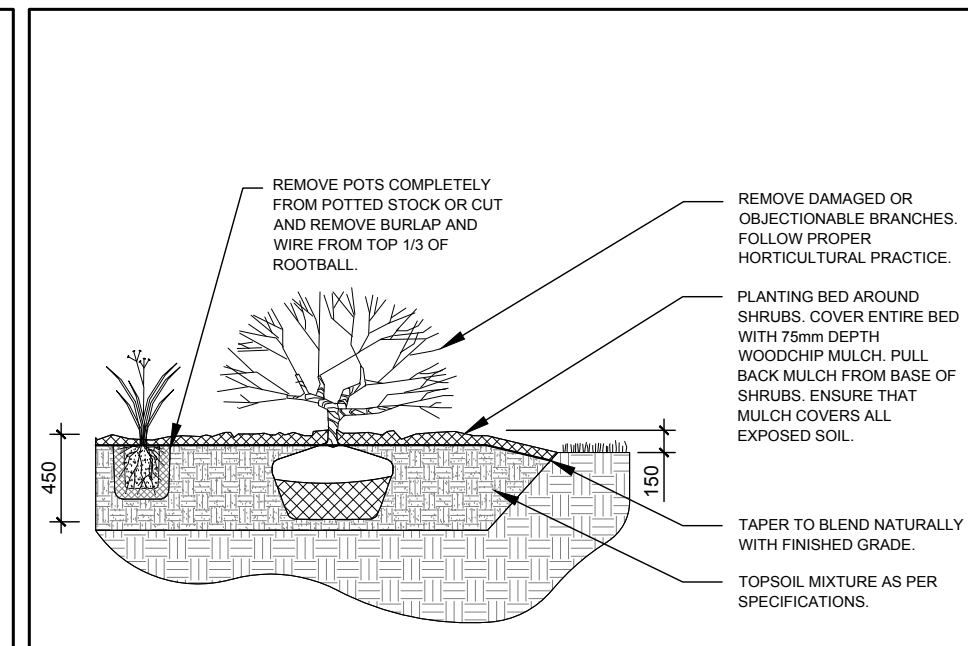
APPROVED ☐ REFUSED ☐

THIS _____ DAY OF _____, 20____

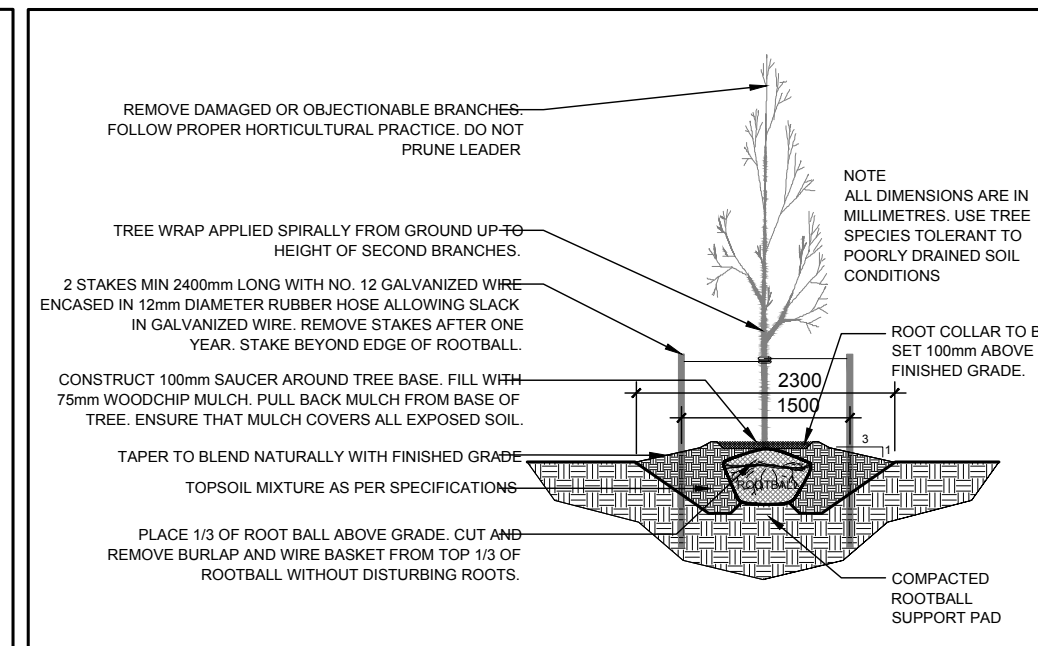
DON HERWEYER, MCIP, RPP, MANAGER
DEVELOPMENT REVIEW SOUTH
PLANNING, INFRASTRUCTURE AND
ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA



2
L.1
TREE PROTECTION FENCE
SCALE: NTS



3
L.1
SHRUB/PERENNIAL PLANTING
SCALE: NTS



4
L.1
DECIDUOUS TREE PLANTING
SCALE: NTS

GENERAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR OR OFFICIAL TO REPORT ANY ERRORS, OMISSIONS OR DISCREPANCIES ON THIS PLAN WITH ACTUAL SITE CONDITIONS TO THE LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH CONSTRUCTION.
2. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AND AUTHORITIES PRIOR TO ANY EXCAVATION AND ASCERTAIN LOCATIONS OF UNDERGROUND SERVICES.
3. THE CONTRACTOR IS TO REINSTATE ALL AREAS AND ITEMS DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITY.
4. THE CONTRACTOR IS TO COMPLY WITH ALL PERTINENT CODES AND BY-LAWS.
5. THE CONTRACTOR IS TO MAINTAIN A POSITIVE SURFACE RUN-OFF THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD.
6. THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS.
7. THE CONTRACTOR IS TO IDENTIFY ALL EXISTING TREES TO REMAIN ON SITE WITH THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
8. THE CONTRACTOR IS TO STAKE THE PROPOSED LOCATION OF ALL PLANT MATERIAL IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATION.
9. MINIMUM DISTANCES FOR SELECTED DECIDUOUS TREES ARE AS FOLLOWS:
 - BUILDING FOUNDATIONS 7.5M
 - SIDEWALKS 1.5M
 - PUBLIC STREETS 2.5M
 - UNDERGROUND INFRASTRUCTURE 2.0M
10. ALL TREES WITHIN 1M OF UNDERGROUND UTILITY TRENCHES ARE TO BE EXCAVATED BY HAND.
11. REMOVE ALL PROTECTIVE WRAPPING FROM TREE TRUNKS AFTER INSTALLATION.
12. STAKING OF TREES SHALL ONLY BE PERFORMED IF NECESSARY.
13. ENSURE THAT MULCH IS PULLED BACK A MIN. DISTANCE OF 75MM FROM BASE OF TREE TRUNK.
14. FOR DETAILED INFORMATION ON THE EXISTING TREES, REFER TO THE 'ENVIRONMENTAL IMPACT STATEMENT & TREE CONSERVATION REPORT' BY MCKINLEY ENVIRONMENTAL SOLUTIONS.
15. TREE LOCATIONS SHOWN ON PLAN ARE FROM INFORMATION PROVIDED BY ANNIS O'SULLIVAN VOLLEBEKK SURVEYORS LTD., JOB 16868-15.

CLIENT: Claridge Homes
Riverstone Retirement Communities
2001 Gladstone Ave., Suite 210
Ottawa, ON
Tel: (613) 233-0030

LOCATION PLAN

CONSULTANTS

ARCHITECTS: NEUF ARCHITECTURES
6630, BOUL. RENÉ-LEVESQUE O. 32E ÉTAGE, MONTRÉAL, QC
Tel: (514) 847-1117

SURVEYORS: ANNIS O'SULLIVAN VOLLEBEKK LTD.
14 CONQUEST GATE, SUITE 500, NEPEAN, ON
Tel: (613) 727-0850

CIVIL ENGINEERS: NOVATECH ENG. CONSULTANTS LTD.
240 MICHAEL COWPLAND DRIVE, SUITE 200, OTTAWA, ON
Tel: (613) 234-9643

LEGEND

EXISTING TREE TO REMAIN (Requires Tree Protection Fence)

PROPOSED DECIDUOUS TREE

EXISTING TREE TO BE REMOVED

PROPOSED SHRUBS/ PERENNIALS

PROPOSED 1.5m HIGH ORNAMENTAL METAL FENCE

PROPOSED COLUMN

TREE PROTECTION FENCE

PROPOSED SOD

PROPOSED PAVERS

2	REVISED AS PER CITY COMMENTS	08/25/2017	LC	JL
1	ISSUED FOR SITE PLAN CONTROL	05/23/2017	ML	JL
No.	Issue	Date	ML	DR

JAMES B. LENNOX & ASSOCIATES INC.
LANDSCAPE ARCHITECTS
3332 CARLING AVE. OTTAWA, ONTARIO K2H 5A8
Tel. (613) 722-5168 Fax. (1866) 343-3942

PROJECT
HUNT CLUB RETIREMENT COMMUNITY

DRAWING
LANDSCAPE PLAN

STAMP

SCALE
1 : 250

START DATE
APRIL, 2017

PROJECT NO.
17-CLG-1728

PROJECT NORTH

DRAWING NO.
L.1

PLOT SIZE ARCH-D

D07-12-17-0068

4.2 Tree Protection Measures

As shown in the Landscaping Plan (L1), the Site will be developed in two (2) phases. Phase 1 will include development of the retirement home and will require clearing/excavation of the western and central part of the Site. During the development of Phase 1, existing trees will be retained where feasible in the Phase 2 area, which includes portions of the eastern part of the Site. Ultimately, Phase 2 will include clearing/excavation of the eastern part of the Site and construction of the hotel.

For mitigation measures related to Wildlife and Species at Risk during tree clearing, refer to the attached EIS. In order to protect trees in adjacent treed areas occurring south, west and east of the development Site, the following mitigation measures will be implemented where trees occur close to construction activities:

- Soil compaction, vegetation damage, intrusion of construction equipment and other potential impacts on the core of the root system of trees adjacent to the edge of the Site will be avoided by restricting grading and other site alteration activities to the Site. This will be achieved by providing construction fencing or suitable boundary definition to clearly mark the boundaries between the edge of the Site and adjacent properties (where required) during each phase of tree clearing and construction;
- Note that an existing chain-link fence is present around the southern, western, and eastern property lines. This fence already provides suitable boundary definition. If the fence requires removal during construction, another form of boundary definition will be provided instead;
- Tree protection fencing will be installed to protect the retained White Spruce trees along Hunt Club Road, which are present in the northwestern and northeastern corners of the property;
- Much of the critical root zone of trees along the southwestern edge of the development would fall within the project landscaping areas, and hence shouldn't be impacted by deep excavation. Trees growing near the southeast side of the development area, where excavation would occur closer to the property line, could potentially see their critical root zone impacted. Tree mitigation measures to protect trees that may be impacted during excavation are listed below; and
- If off-site vegetation damage occurs, an arborist should review any damage to determine the best course of action to restore the original vegetative functions.

Tree mitigation measures have been proposed to help protect and preserve trees around the proposed development. Trees to be retained adjacent to the tree clearing area should be protected by the following tree preservation measures:

- Mark the edge of the tree clearing area to ensure only designated trees are removed. Protect the critical root zone (CRZ) of retained trees, where the CRZ is established as being 10 cm from the trunk of a tree for every centimeter of trunk dbh. The CRZ is calculated as $\text{dbh} \times 10 \text{ cm}$;
- When trees to be removed overlap with the CRZ of trees to be retained, cut roots at the edge of the CRZ and grind down stumps after tree removal. Do not pull out stumps. Ensure there is not root pulling or disturbance of the ground within the CRZ;
- If roots must be cut, roots 20 mm or larger should be cut at right angles with clean, sharp horticultural tools without tearing, crushing, or pulling;
- Do not place any material or equipment within the CRZ of any tree;
- Do not attach any signs, notices, or posters to any tree;
- Do not damage the root system, trunk, or branches of any tree; and
- Ensure that exhaust fumes from all equipment are directed away from any tree canopy.

The City of Ottawa has advised that a Tree Cutting Permit will be required prior to the removal of trees with a diameter at breast height (dbh) of 10 cm or greater.

5.0 LANDSCAPING

In order to mitigate the loss of woody vegetation from Site clearing, a Landscaping Plan (L1) has been developed (see above). This plan includes replanting selectively around the Site following completion of construction, including in gardens and landscaping beds. The planting locations and specific planting requirements are shown in the Landscaping Plan (L1). As shown in the Landscaping Plan, plantings will emphasize the use of native trees and shrubs. Planting of Ash trees will be avoided due to the high likelihood that any planted Ash trees will become infested with Emerald Ash Borer.



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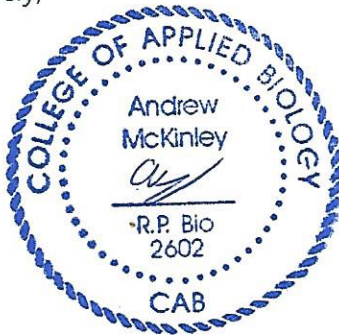
mckinleyenvironmental@gmail.com

www.mckinleyenvironmental.com

6.0 CLOSURE

We trust that the above information is sufficient; should you have any questions or require further information, please do not hesitate to contact the undersigned, at your convenience.

Sincerely,



Dr. Andrew McKinley, EP, RP Bio.

Senior Biologist, McKinley Environmental Solutions



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7.0 REFERENCES

City of Ottawa (2014) Natural Heritage System Overlay (East). Official Plan Schedule L1.

City of Ottawa (2017) Geo-Ottawa Municipal Mapping Site. Retrieved February 13, 2017 at
<<http://maps.ottawa.ca/geoottawa/>>

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2005) OMNRF Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005, Second Edition.



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APPENDIX B

OMNRF Information Request Response



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Kemptville District

District de Kemptville

10 Campus Drive
Postal Box 2002
Kemptville ON K0G 1J0
Tel.: 613 258-8204
Fax: 613 258-3920

10, promenade Campus
Case postale, 2002
Kemptville ON K0G 1J0
Tél.: 613 258-8204
Télééc.: 613 258-3920

Wed. Jul 19, 2017

Andrew McKinley
McKinley Environmental Solutions
PO Box 45505, 3151 Strandherd Dr.
Ottawa, Ontario
K2J 5N1
(613) 620-2255
mckinleyenvironmental@gmail.com

Attention: Andrew McKinley

Subject: Information Request - Developments

Project Name: 1026, 1038, 1040, 1050, and 1054 Hunt Club Road EIS

Site Address: 1026, 1038, 1040, 1050, and 1054 Hunt Club Road, Ottawa, Ontario, K1V 8S9

Our File No. 2017_GLO-4108

Natural Heritage Values

The Ministry of Natural Resources and Forestry (MNRF) Kemptville District has carried out a preliminary review of the above mentioned area in order to identify any potential natural resource and natural heritage values.

The following Natural Heritage values were identified for the general subject area:

- Evaluated Wetland, Lester Road Wetland Complex (Evaluated-Provincial)
- Lake (Non-Sensitive)
- Municipal Drain, Alexander (SAWMILLCK) Drain (Non-Sensitive)
- Pond (Non-Sensitive)
- Unevaluated Wetland (Not evaluated per OWES)
- Significant Woodlands

Municipal Official Plans contain information related to natural heritage features. Please see the local municipal Official Plan for more information, such as specific policies and direction pertaining to activities which may impact natural heritage features. For planning advice or Official Plan interpretation, please contact the local municipality. Many municipalities require environmental impact studies and other supporting studies be carried out as part of the development application process to allow the municipality to make planning decisions which are consistent with the Provincial Policy Statement (PPS, 2014).

The MNRF strongly encourages all proponents to contact partner agencies and appropriate municipalities early on in the planning process. This provides the proponent with early knowledge

regarding agency requirements, authorizations and approval timelines; Ministry of the Environment and Climate Change (MOECC) and the local Conservation Authority may require approvals and permitting where natural values and natural hazards (e.g., floodplains) exist.

As per the Natural Heritage Reference Manual (NHRM, 2010) the MNRF strongly recommends that an ecological site assessment be carried out to determine the presence of natural heritage features and species at risk and their habitat on site. The MNRF can provide survey methodology for particular species at risk and their habitats.

The NHRM also recommends that cumulative effects of development projects on the integrity of natural heritage features and areas be given due consideration. This includes the evaluation of the past, present and possible future impacts of development in the surrounding area that may occur as a result of demand created by the presently proposed project.

In Addition, the following Fish species were identified: brook stickleback, central mudminnow, creek chub, fathead minnow, northern redbelly dace, pearl dace.

Wildland Fire

MNRF woodland data shows that the site contains woodlands. The lands should be assessed for the risk of wildland fire as per PPS 2014, Section 3.1.8 "*Development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire. Development may however be permitted in lands with hazardous forest types for wildland fire where the risk is mitigated in accordance with wildland fire assessment and mitigation standards*". Further discussion with the local municipality should be carried out to address how the risks associated with wildland fire will be covered for such a development proposal. Please see the Wildland Fire Risk Assessment and Mitigation Guidebook (2016) for more information.

Significant Woodlands

Section 2.1.5 b) of the PPS states: *Development and site alteration shall not be permitted in significant woodlands unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.* The 2014 PPS directs that significant woodlands must be identified following criteria established by the Ontario Ministry of Natural Resources and Forestry, i.e. the Natural Heritage Reference Manual (NHRM), 2010. Where the local or County Official Plan has not yet updated significant woodland mapping to reflect the 2014 PPS, all wooded areas should be reviewed on a site specific basis for significance. The MNRF Kemptville District modelled locations of significant woodlands in 2011 based on NHRM criteria. The presence of significant woodland on site or within 120 metres should trigger an assessment of the impacts to the feature and its function from the proposed development.

Significant Wildlife Habitat

Section 2.1.5 d) of the PPS states: *Development and site alteration shall not be permitted in significant wildlife habitat unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.* It is the responsibility of the approval authority to identify significant wildlife habitat or require its identification. The MNRF has several guiding

documents which may be useful in identification of significant wildlife habitat and characterization of impacts and mitigation options:

- Significant Wildlife Habitat Technical Guide, 2000
- The Natural Heritage Reference Manual, 2010
- Significant Wildlife Habitat Mitigation Support Tool, 2014
- Significant Wildlife Habitat Criteria Schedule for Ecoregion 5E and 6E, 2015

The habitat of special concern species (as identified by the Species at Risk in Ontario list) and Natural Heritage Information Centre tracked species with a conservation status rank of S1, S2 and S3 may be significant wildlife habitat and should be assessed accordingly.

Species at Risk

A review of the Natural Heritage Information Centre (NHIC) and internal records indicate that there is a potential for the following threatened (THR) and/or endangered (END) species on the site or in proximity to it:

- Bank Swallow (THR)
- Barn Swallow (THR)
- Blanding's Turtle (THR)
- Bobolink (THR)
- Butternut (END)
- Chimney Swift (THR)
- Eastern Meadowlark (THR)
- Tri-Colored Bat (END)
- Eastern Small-footed Myotis (END)
- Little Brown Bat (END)
- Northern Long-eared Bat (END)

All endangered and threatened species receive individual protection under section 9 of the ESA and receive general habitat protection under Section 10 of the ESA, 2007. Thus any potential works should consider disturbance to the individuals as well as their habitat (e.g. nesting sites). General habitat protection applies to all threatened and endangered species. Note some species in Kemptville District receive regulated habitat protection. The habitat of these listed species is protected from damage and destruction and certain activities may require authorization(s) under the ESA. For more on how species at risk and their habitat is protected, please see: <https://www.ontario.ca/page/how-species-risk-are-protected>.

If the proposed activity is known to have an impact on any endangered or threatened species at risk (SAR), or their habitat, an authorization under the ESA may be required. It is recommended that MNRF Kemptville be contacted prior to any activities being carried out to discuss potential survey protocols to follow during the early planning stages of a project, as well as mitigation measures to avoid contravention of the ESA. Where there is potential for species at risk or their habitat on the property, an Information Gathering Form should be submitted to Kemptville MNRF at sar.kemptville@ontario.ca.

The Information Gathering Form may be found here:

<http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?OpenForm&ACT=RDR&TAB=PROFILE&ENV=WWE&NO=018-0180E>

For more information on the ESA authorization process, please see:

<https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization>

One or more special concern species has been documented to occur either on the site or nearby. Species listed as special concern are not protected under the ESA, 2007. However, please note that some of these species may be protected under the Fish and Wildlife Conservation Act and/or Migratory Birds Convention Act. Again, the habitat of special concern species may be significant wildlife habitat and should be assessed accordingly. Species of special concern for consideration:

- Eastern Wood-Pewee (SC)
- Monarch (SC)
- Snapping Turtle (SC)
- Wood Thrush (SC)

If any of these or any other species at risk are discovered throughout the course of the work, and/or should any species at risk or their habitat be potentially impacted by on site activities, MNRF should be contacted and operations be modified to avoid any negative impacts to species at risk or their habitat until further direction is provided by MNRF.

Please note that information regarding species at risk is based largely on documented occurrences and does not necessarily include an interpretation of potential habitat within or in proximity to the site in question. Although this data represents the MNRF's best current available information, it is important to note that a lack of information for a site does not mean that additional features and values are not present. It is the responsibility of the proponent to ensure that species at risk are not killed, harmed, or harassed, and that their habitat is not damaged or destroyed through the activities carried out on the site.

The MNRF continues to strongly encourage ecological site assessments to determine the potential for SAR habitat and occurrences. When a SAR or potential habitat for a SAR does occur on a site, it is recommended that the proponent contact the MNRF for technical advice and to discuss what activities can occur without contravention of the Act. For specific questions regarding the Endangered Species Act (2007) or SAR, please contact MNRF Kemptville District at sar.kemptville@ontario.ca.

The approvals processes for a number of activities that have the potential to impact SAR or their habitat have recently changed. For information regarding regulatory exemptions and associated online registration of certain activities, please refer to the following website: <https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization>.

Please note: The advice in this letter may become invalid if:

- The Committee on the Status of Species at Risk in Ontario (COSSARO) re-assesses the status of the above-named species OR adds a species to the SARO List such that the section 9 and/or 10 protection provisions apply to those species; or

- Additional occurrences of species are discovered on or in proximity to the site.

This letter is valid until: Thu. Jul 19, 2018

The MNRF would like to request that we continue to be circulated on information with regards to this project. If you have any questions or require clarification please do not hesitate to contact me.

Sincerely,

Jane Devlin
Management Biologist
jane.devlin@ontario.ca

Encl.\
-ESA Infosheet
-NHIC/LIO Infosheet