

ENO REMINGTON NORTH, OAKVILLE, ONTARIO

TREE CANOPY COVERAGE ANALYSIS



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1.1 PURPOSE OF ANALYSIS

The Eno Remington North Tree Canopy Coverage Analysis represents a general assessment of the projected tree canopy coverage for the captioned project site located within North Oakville. The proposed development is planned as a mix of residential dwellings, including single detached dwellings, Lane-Based townhouse dwellings, Street Townhouses. In addition to the residential dwellings, a 4.34 ha. Park block along the West-side of the subject site, and a stormwater management pond (SWM) Block on the Southern portion of the subject site have been proposed. Furthermore, a total of 2.68 ha. of NHS land has been proposed along the southern portion of the subject lands.

The purpose of the analysis herein, is to determine how the proposed land uses and development will contribute to the overall tree canopy coverage requirements outlined in the North Oakville Urban Forest Strategic Management Plan (NOUFSMP) including achieving the Town of Oakville's long term objective of a 40% urban forest canopy cover along with criteria related to soil volume, tree health and tree spacing.

The projected coverage for streets, and open space blocks will be determined through in standard calculation methods outlined in the North Oakville Urban Forest Strategic Management Plan (NOUFSMP). This analysis will be informed by the current land use plan available, with future driveway, parking layouts and utility constraints assumed as an average based on similarly scaled residential developments in the surrounding communities.

1.2 STUDY AREA OVERVIEW

The development site for Eno North Remington is situated South-East of Burnhamthorpe Rd, East of Neyagawa Blvd. and West of Sixth Line. The existing topography and vegetation of the subject lands is that of gently rolling farmland, hedgerows, and wooded areas. NHS lands, including small woodlots and are a significant natural feature to be maintained and enhanced through future buffer plantings. The Eno North Remington lands are surrounded on all sides by future development applications. Built form in the surrounding future developments will include a variety of single detached homes and townhouses, mixed-use commercial, an elementary school block, and parkland which will provide amenities and services for the wider community.

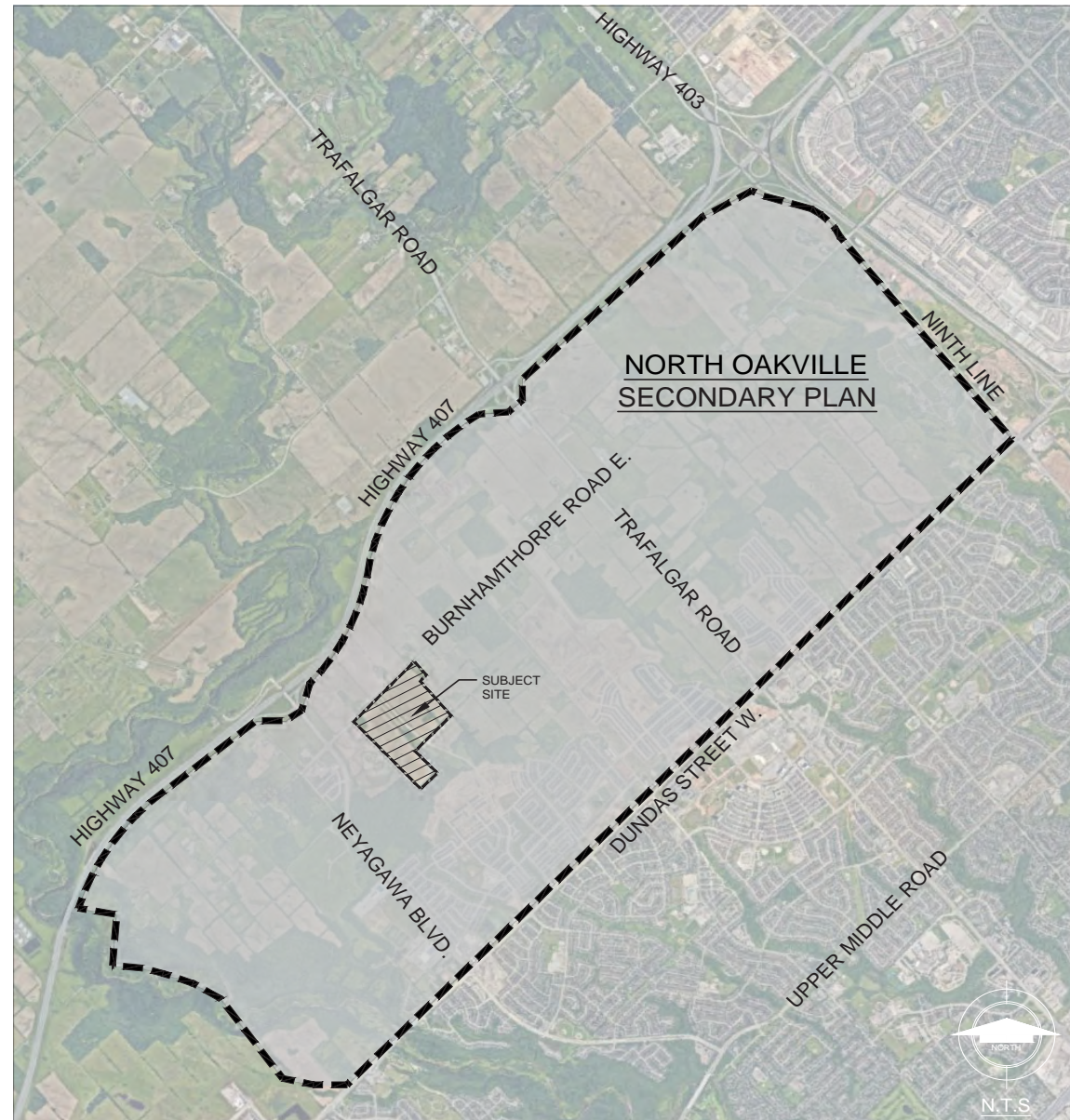
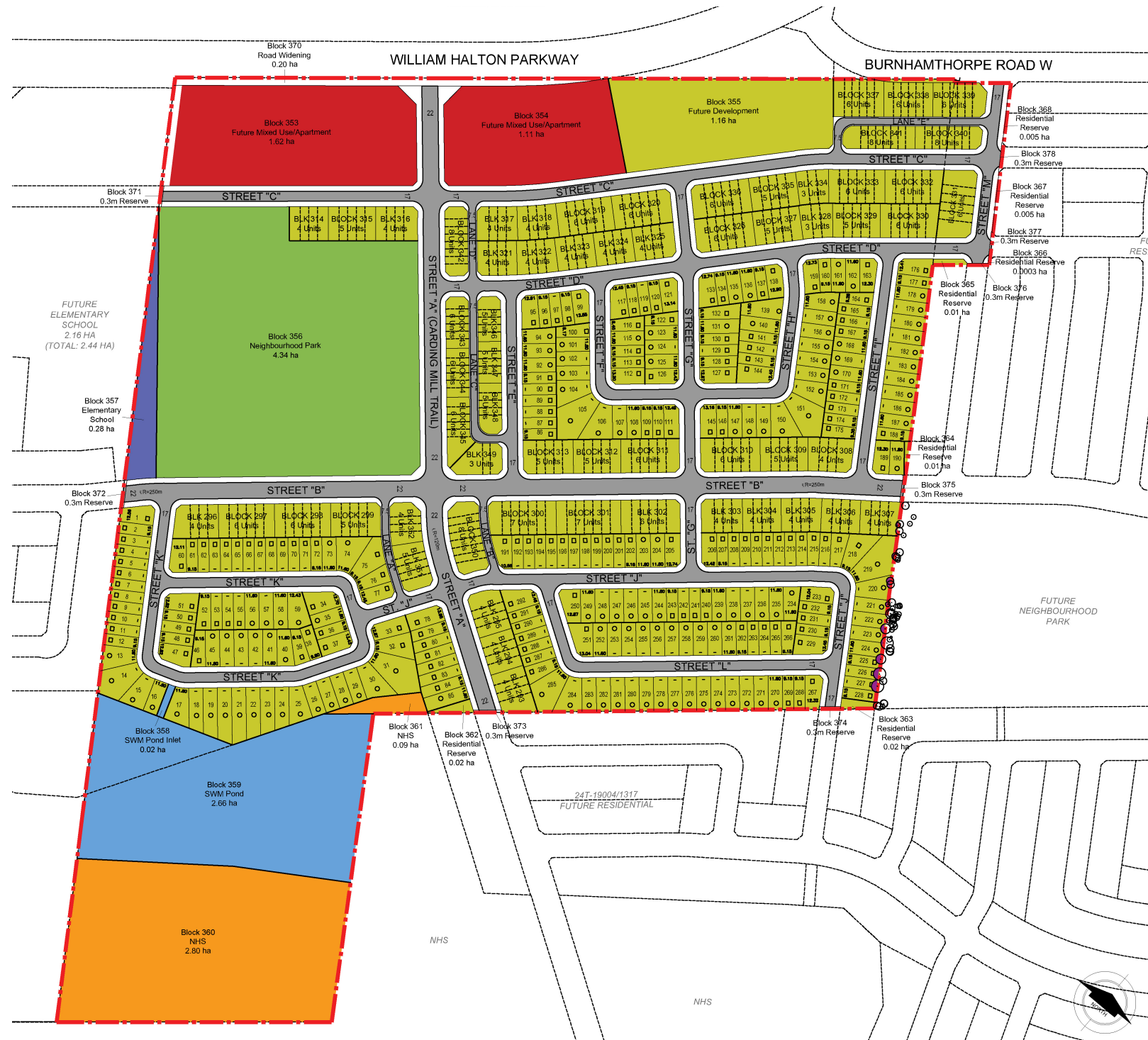


Fig 1.2a - The Eno Remington North Development within the context of the North Oakville East Secondary Plan Area



Fig 1.2b - The Eno Remington North Development within neighbouring context












-  ENO REMINGTON BOUNDARY = 38.71 ha.
-  PARKLAND / OPEN SPACE = TOTAL 4.34 ha.
-  MIXED-USE UNITS = 2.73 ha.
-  RESIDENTIAL (HIGH DENSITY, SINGLE DETACHED, TOWNHOUSES) = 16.84 ha.
-  FUTURE ELEMENTARY SCHOOL BLOCK = TOTAL 0.28 ha.
-  SWM BLOCK = TOTAL 2.68 ha.
-  NHS LANDS = TOTAL 2.89 ha.
-  PROPOSED INTERNAL ROADS & R.O.W. = 8.66 ha.
-  PROPOSED FUTURE ROAD RESERVES = 0.29 ha.

Fig 1.2c - The Eno Remington North Development Land Use Dedication





1.3 NORTH OAKVILLE URBAN FOREST STRATEGIC MANAGEMENT PLAN (NOUFSMP)

The North Oakville Urban Forest Strategic Management Plan (NOUFSMP) is a high-level strategy and planning study prepared to provide the Town of Oakville with recommendations and guidelines for achieving a sustainable, healthy urban forest for the North Oakville lands. This strategy is an extension of the Town’s Urban Forest Strategic Management Plan which provides a target goal of 40% tree canopy coverage across the North Oakville area. North Oakville is approximately 4,000 hectares in size with approximately 1,600 hectares of tree canopy coverage required to achieve the 40% target. The designated Natural Heritage System (NHS), which includes native forests, cultural woodlands, shrub lands and agricultural hedgerows, accounts for approximately 900 hectares of North Oakville’s land area, making it a significant contributor to achieving the 40% target. The remaining approximately 700 hectares of coverage is expected to be achieved through land development (residential, employment/industrial, institutional and commercial), including streetscapes, parks, buffers, storm-water management facilities, parking lots, etc.

The following is a brief summary of some of the targets, calculations, recommendations and criteria outlined in the North Oakville Urban Forest Strategic Management Plan (NOUFSMP) that are required to determine the ultimate long term tree canopy coverage within the Eno Remington North study area.

1.3.1 LAND USE CANOPY COVERAGE TARGETS

| <u>Land Use</u> | <u>Proposed Standard</u> |
|------------------------|--------------------------|
| Residential (all type) | 20% |
| Parkland | 50% |
| Arterial & Avenue | 34% |
| Roads SWM | 15% |
| Transitional | 15% |
| Commercial | 15% |

1.3.2 TREE CLASSIFICATION, SIZING & SPACING

- 1 small stature tree (3-9m spread) equals 7.0m² and depicted with a 3.0m diameter circle spaced at a minimum of 5.0m
- 1 medium stature tree (10-13m spread) equals 78.5m² and depicted with a 10.0m diameter circle spaced at a minimum of 10.0m
- 1 large stature tree (14m spread and greater) equals 154.0m² and depicted with a 14.0m diameter circle spaced at a minimum of 14.0m

1.3.3 EXISTING TREE CANOPY CALCULATIONS

- The existing canopy is measured at the current drip line of the existing tree(s)
- Existing canopy coverage from trees on the subject site can be credited with a bonus factor by multiplying the existing coverage by 1.5, which also includes canopy overhanging adjacent property(s)
- Existing canopy overhanging the subject site from trees on adjacent properties can be included as canopy coverage for the subject site. However, this overhanging canopy does not receive the bonus factor credit.



2.1 STREET TREE CANOPY COVERAGE

The Eno Remington North subject area canopy coverage will be achieved through the proposed streetscape treatment & existing canopy coverage to remain. Although not measured specifically in this analysis for the community tree coverage, a secondary contribution may be considered through front and rear yard landscape treatment for dwellings. This can account for approximately 1-2% coverage and is typically derived from smaller stature trees.

The street tree canopy coverage calculation for the Eno Remington North subject area is a preliminary estimate based on a draft plan of subdivision primarily characterized by residential land use (Single detached dwellings, townhome dwellings). Considering the type of residential development intended for the community, it is not expected that engineered soils (e.g. structural soils or cell support structures) will be utilized on residential streets.

The street tree canopy coverage corresponds with the proposed road hierarchy and all trees to be planted within grass boulevards. Street trees have been indicated, on average, at approximately one tree per lot and in accordance with the town's spacing requirements. The trees in this assessment have been designated as medium stature, until such time a more comprehensive streetscape and site planting plan can be undertaken as part of a detailed landscape plan review process. Through future canopy analysis and detailed site plan application, Large stature trees can be considered for NHS lands, Arterial roads (where larger boulevards are proposed), and throughout the parkland block.

The preliminary tree canopy coverage results are as follows:

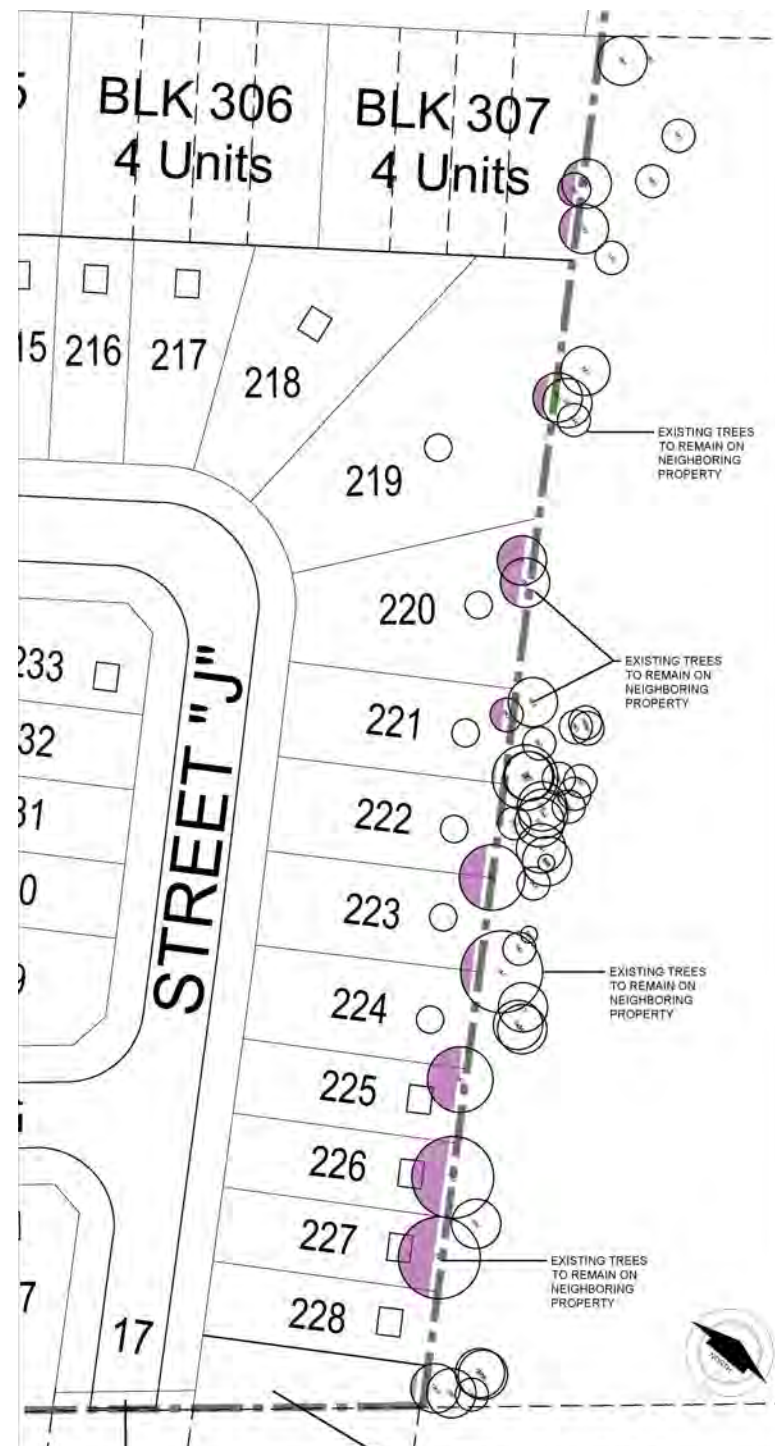
Total Eno Remington North Applicable Land Area - approx. 195,700 sq.m (not including the NHS, SWM pond, and parkland).

Total Street Tree Canopy Coverage Area (based on medium stature trees) - approx. 52,909 sq.m (not including the NHS and SWM pond, and parkland).




Total Existing Tree Canopy Coverage Area - approx. 151.70 (not including the NHS and SWM pond, and parkland).

Eno Remington North Total Street Tree Canopy Coverage (not including the NHS and SWM pond, and parkland). = 27.11 % (53,060.70/195,700)

Once a preliminary detailed design is completed for the SWM pond, Parkland, Open space and NHS, the overall site tree canopy coverage can be calculated based existing tree canopy cover & proposed tree canopy cover to meet the overall site coverage requirement of 40%. Until then, preliminary street tree calculations have been provided herein to demonstrates the Eno Remington North development meets the 20% street tree coverage required for residential developments.



LEGEND:

-  ENO REMINGTON BOUNDARY = 38.71 ha.
-  EXISTING TREE
-  EXISTING TREE CANOPY (VARIES). TREES TO BE PRESERVED WITHIN THE PROJECT BOUNDARY SUBJECT TO BONUS COVERAGE OF 1.5x THE EXISTING CANOPY.

TOTAL EXISTING TREE CANOPY COVERAGE AREA = APPROX. 151.70 Sq.m (LOCATED ON ADJACENT SITE: NOT SUBJECT TO BONUS COVERAGE CALCULATIONS)

KEY MAP:



2.2 EXISTING TREE CANOPY COVERAGE

In accordance with North Oakville Urban Forest Strategic Management Plan (NOUFSMP), existing tree canopies count towards achieving the overall tree canopy coverage of a developable site. Existing trees along the South-East portion of the site (on neighbouring property) have been outlined as to be retained and have canopies extending on to the subject lands. This analysis has been informed by the current draft subdivision plan available, as well as with a tree management plan prepared by LGL limited (dated October 2021). In accordance with the NOUFSMP, trees not directly on the subject property do not count for a calculation of 1.5m "bonus canopy" as well as any overlapping canopies have not been counted twice.

Additional trees have been documented within property boundaries and on adjacent property, but have not been calculated towards the overall canopy coverage as they conflict with future development and likely will not be able to be retained.

Furthermore, a small forested area within the NHS has been inventoried and outlined as to be entirely preserved but has not been factored into calculations herein until such a time that a more detailed site plan has been provided. This area of natural forest to be protected will factor towards achieving the overall 40% site canopy coverage target.

A preliminary calculation of existing tree canopies outlines a total of 151.70 Sq.m of canopy coverage.

Fig 2.2a - The Existing tree (to be preserved) canopy coverage area



TREE CANOPY COVERAGE PLAN & CHARTS



LEGEND:

- - - - - ENO REMINGTON BOUNDARY = 38.71 ha.
- MEDIUM STATURE TREE - SHOWN AT 10.0m CANOPY = 78.5m² CANOPY COVERAGE / TREE
- EXISTING TREE CANOPY (VARIES). TREES TO BE PRESERVED WITHIN THE PROJECT BOUNDARY SUBJECT TO BONUS COVERAGE OF 1.5x THE EXISTING CANOPY.

PRELIMINARY STREET TREE CANOPY COVERAGE

TOTAL ENO REMINGTON NORTH LAND AREA = APPROX. 195,700 Sq.m (EXCLUDING NHS, SWM PARKLAND, SCHOOL BLOCK, FUTURE ROAD RESERVES)

TOTAL STREET TREE CANOPY COVERAGE AREA = APPROX. 52,909 Sq.m (BASED ON MEDIUM STATURE TREES)

TOTAL EXISTING TREE CANOPY COVERAGE AREA = APPROX. 151.70 Sq.m (LOCATED ON ADJACENT SITE: NOT SUBJECT TO BONUS COVERAGE CALCULATIONS)

TOTAL TREE CANOPY COVERAGE AREA (PROPOSED STREET TREES + EXISTING TREES) = APPROX. 53,060.70 Sq.m

STREET TREE CANOPY COVERAGE = 27.11%

2.3 RESIDENTIAL TREE CANOPY COVERAGE

In accordance with North Oakville Urban Forest Strategic Management Plan (NOUFSMP), residential land uses are required to achieve an overall canopy cover target of 20%. Medium stature street trees have been indicated, at approximately one tree per lot and in accordance with the town's spacing requirements. This analysis has been informed by the current draft subdivision plan available, with future driveway, parking layouts and utility constraints assumed as an average based on similarly scaled residential developments in the surrounding communities.



A preliminary calculation of potential street trees demonstrates a 27.11% tree canopy coverage.

Fig 2.3a - Conceptual Tree Canopy coverage Plan for Eno Remington North Development





LEGEND:

-  ENO REMINGTON BOUNDARY = 38.71 ha.
 -  LARGE STATURE TREE - SHOWN AT 14.0m CANOPY = 78.5m² CANOPY COVERAGE / TREE
- | | |
|---|---|
| 1 | MAJOR SOCCER PITCH (105m X 68m) (2) |
| 2 | TENNIS COURTS (3) |
| 3 | ACTIVITY / PLAYGROUND AREA (550m ²) |
| 4 | SPRAY PAD (275m ²) |
| 5 | BLEACHERS |
| 6 | ASPHALT WALKWAY (2.4m WIDE) |
| 7 | OPEN GREEN SPACE |
| 8 | SECONDARY ENTRANCE NODE |
| 9 | PRIMARY ENTRANCE NODE |

PRELIMINARY TREE CANOPY COVERAGE CALCULATION

TOTAL PARK BLOCK AREA = APPROX. 43,400 Sq.m

TOTAL PARK BLOCK TREE CANOPY COVERAGE AREA = APPROX. 27,412 Sq.m
(BASED ON LARGE STATURE TREES)

TREE CANOPY COVERAGE = 63.16%

2.4 PARK BLOCK TREE CANOPY COVERAGE

In accordance with North Oakville Urban Forest Strategic Management Plan (NOUFSMP), parkland uses are required to achieve a canopy cover target of 50%. Large stature street trees have been indicated, at approximately 14m spacing in accordance with the town's spacing requirements. This analysis has been informed by the current draft park block concept available. The current design is subject to change once more detailed drawings have been prepared, however a minimum overall 50% tree coverage target will be maintained throughout the detailed drawing progression.

A preliminary calculation demonstrates a 63.16% tree canopy coverage within the proposed park block.

Fig 2.4a - Conceptual Tree Canopy coverage Plan for the Park Block Concept (DRAFT)



2.5 OPEN SPACES & UNPROGRAMMED LAND

Stormwater Management Pond

A 2.68 ha. SWM pond block and inlet is proposed along the southern boundary of the Eno Remington North subject lands. Once a preliminary pond design is complete, tree canopy coverage can be calculated based on the amount of landscape area that could potentially be covered by canopy, with the exclusion of open water and circulation areas. Calculations will be determined based on existing tree canopy cover & proposed tree canopy cover to meet the minimum 15% canopy coverage for a SWM block.

Natural Heritage System Channel

The existing 2.89 ha. NHS lands are interconnected with the SWM pond. Together, they will function as water quality and quantity control for the community, and as publicly accessible community open space amenities. Once a preliminary design is complete, tree canopy coverage within the NHS corridor can be calculated based existing tree canopy cover & proposed tree canopy cover to meet the overall site coverage of 40%. A variety of large, medium and small stature trees will be proposed throughout the NHS corridor to achieve coverage requirements.

Mixed-use / Residential

Blocks facing William Halton Parkway have been outlined as mixed-use/residential. Once preliminary design is complete for these blocks, tree canopy coverage can be calculated based on existing tree canopy cover & proposed tree canopy cover within the blocks. A variety of large, medium and small stature trees will be proposed on these lands to help screen and enhance the buildings as well as to assist in achieving the overall site goal of 40% canopy coverage.

Arterial Roads

William Halton Parkway is considered an arterial road and is subject to a tree canopy coverage requirement of 34%. Once preliminary design is complete for the blocks fronting this arterial road, tree canopy coverage can be calculated based on existing tree canopy cover & proposed tree canopy cover to meet the requirements. A variety of large, medium and small stature trees will be proposed along the arterial road to achieve 34% coverage.

2.6 CONCLUSION

There are many factors that will contribute to the health and long term sustainability of the tree canopy within Eno Remington North and the surrounding development areas. In addition to maximizing tree planting opportunities, resolving issues related to soil compaction, soil quality, soil volumes and tree species selection in an increasingly urban environment will be fundamental to reaching the overall 40% tree canopy coverage targeted for the Town of Oakville. These issues can be considered in a more comprehensive depth during the detailed landscape design process.