

re: Geotechnical Tree Planting Recommendations

Proposed Residential Development

245 and 275 LaMarche Avenue – Ottawa, Ontario

to: Caivan Communities – **Tyler Mitchell** – tyler.mitchell@caivan.com

Caivan Communities – **Bronwyn Anderson** – Bronwyn.anderson@caivan.com

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file: PG6152-MEMO.08 Revision 1

Further to your request and authorization, Paterson Group (Paterson) has prepared the current memorandum to provide geotechnical tree planting recommendations for the proposed development to be located at the aforementioned site. The current memorandum should be read in conjunction with Paterson Group Report PG6152-1 Revision 6 dated June 10, 2025 and Geotechnical Investigation Report 1660030 dated December 2018 prepared by others.

Background

It is understood that a Minor Zoning By-Law Amendment is required due to the model of residential dwelling proposed at Lots 1, 2, 3, 6, and 220 through 224. As part of this amendment, the City of Ottawa has requested that tree planting setback recommendations be reviewed at the aforementioned lots. In preparing the current memo, Paterson completed a review of the geotechnical report prepared by others, as well as the current landscape plan for the subject lots:

- Geotechnical Investigation – Commercial and Residential Development, 3490 Innes Road, Ottawa, Ontario – 1660030 – Dated December 2018
- Streetscape Plan – Innes Road, Orleans, ON – Project No. 16-184 – Sheet No. ST3 Revision 10 dated September 30, 2025

Tree Planting Recommendations

In accordance with the City of Ottawa Tree Planting in Sensitive Marine Clay Soils (2017 Guidelines), Paterson completed a soils review of the site to determine applicable tree planting setbacks. Atterberg Limits testing was completed on a representative silty clay sample recovered from the vicinity of the aforementioned lots. Grain size distribution and hydrometer testing was also completed on the recovered soil sample. The above-noted soil samples were recovered from an elevation below the design underside of footing elevation and 3.5 m depth below anticipated finished grade.



Based on the Atterberg Limits test results, the plasticity index limit does not exceed 40% at the aforementioned lots. In addition, based on the moisture levels and consistency, the silty clay encountered at the subject site is considered low to medium sensitive clay. Therefore, the following tree planting setbacks are recommended for the low to medium sensitivity areas.

Large trees (mature height over 14 m) can be planted within the site provided a tree to foundation setback equal to the full mature height of the tree can be provided (e.g. in a park or other green space). A tree planting setback limit of **4.5 m** is applicable for small (mature tree height up to 7.5m) and medium size trees (mature tree height 7.5 m to 14 m) provided that the following conditions are met:

- The underside of footing (USF) is 2.1 m or greater below the lowest finished grade must be satisfied for footings within 10 m from the tree, as measured from the centre of the tree trunk and verified by means of the Grading Plan as indicated procedural changes below.
- A small tree must be provided with a minimum of 25 m³ of available soil volume while a medium tree must be provided with a minimum of 30 m³ of available soil volume, as determined by the Landscape Architect. The developer is to ensure that the soil is generally un-compacted when backfilling in street tree planting locations.
- The tree species must be small (mature tree height up to 7.5 m) to medium size (mature tree height 7.5 m to 14 m) as confirmed by the Landscape Architect.
- The foundation walls are to be reinforced at least nominally (minimum of two upper and two lower 15M bars in the foundation wall).
- Grading surrounding the tree must promote drainage to the tree root zone (in such a manner as not to be detrimental to the tree), be noted in a drawing as part of the Grading Plan.

Geotechnical Review

Paterson completed a review of the aforementioned streetscape plan prepared by others. Based on our review, the proposed trees are generally noted to consist of small trees with mature tree heights less than 7 m and were noted to be setback a minimum of 4.5 m away from the foundation of the existing and proposed residential dwellings. As such, the proposed tree planting is considered to be acceptable from a geotechnical perspective.



Tyler Mitchell

Page 3

PG6152-MEMO.08R1

We trust that his information satisfies your requirements.

Best Regards,

Paterson Group Inc.

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